AGENDA
REGULAR MEETING OF THE BOARD OF DIRECTORS

January 11, 2021 — 9:00 A.M.

Board of Directors

Pat Dwyer—Division 2
President

Lori Anzini—Division 4
Vice President

George Osborne—Division 1
Director

Brian K. Veerkamp—Division 3
Director

Alan Day—Division 5
Director

Executive Staff

Jim Abercrombie
General Manager

Brian D. Poulsen, Jr.
General Counsel

Jennifer Sullivan
Clerk to the Board

Jesse Saich
Communications

Brian Mueller
Engineering

Mark Price
Finance

Jose Perez
Human Resources

Tim Ranstrom
Information Technology

Dan Corcoran
Operations

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

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.

Please take notice, as a result of the COVID-19 pandemic, California Governor Gavin Newsom issued Executive Order (EO) N-29-20, which waives certain requirements of the Ralph M. Brown Act (Brown Act) in order to prevent gatherings and slow the spread of COVID-19. Specifically, EO N-29-20 waives the requirements that local public agencies (1) notice each teleconference location from which a board member will participate, (2) make each teleconference location accessible to the public, (3) allow the public to address the agency from each teleconference location, (4) post the agenda at each teleconference location, and (5) ensure that a quorum of the board participate in locations within the boundary of the agency. EO N-29-20 requires local public agencies that conduct public meetings telephonically to allow members of the public to observe and address the meeting telephonically or otherwise electronically.

Because indoor public gatherings remain restricted under the Governor's Executive Orders, regular Board Meetings will continue to be closed to in-person attendance by the public and conducted virtually for the time being. In accordance with EO N-29-20, the public may participate in the District's Board meeting by teleconference or web conference via the instructions provided below. Members of the public who participate in the meeting via teleconference or web conference will be given the opportunity to speak and address the Board, and their comments will be included in the audio recording of the meeting. The meeting materials will be available for download from the District's website at www.eid.org.

PUBLIC PARTICIPATION INSTRUCTIONS

Instructions to join the Board Meeting by telephone only

No accompanying computer or mobile device required. This option will allow participants to listen to Board meeting audio and address the Board during public comment periods by pressing *9 on the telephone keypad.

Dial ***1.669.900.6833*** and enter Meeting ID ***945 6360 8941*** when prompted.

Instructions to join the Board Meeting from your computer or mobile device

Click the following join link or copy and paste into your browser https://zoom.us/j/94563608941.

If the device being used ***is*** equipped with a microphone and speaker, participants may view the presentation live and listen to Board meeting audio. You may address the Board during public comment periods by clicking on the "raise a hand" button.

If the device being used ***is not*** equipped with a microphone, participants may view the presentation live and listen to Board meeting audio using the link above. Participants may address the Board during public comment periods by using the call in instructions above and pressing *9 on the telephone keypad.

Additionally, please note that before joining a Zoom meeting on a computer or mobile device, you can download the Zoom app from https://zoom.us/download. Otherwise, you will be prompted to download and install Zoom when you click a join link. You can also visit https://zoom.us/test at any time to familiarize yourself with Zoom.

CALL TO ORDER

Roll Call
Pledge of Allegiance
Moment of Silence

ADOPT AGENDA

COMMUNICATIONS

General Manager's Employee Recognition

PUBLIC COMMENT

COMMUNICATIONS

General Manager

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

Clerk to the Board

Board of Directors

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

APPROVE CONSENT CALENDAR

Action on items pulled from the Consent Calendar

CONSENT CALENDAR

1. **Finance (Pasquarello)**
   Ratification of EID General Warrant Registers for the periods ending December 8, December 15, December 22 and December 29, 2020, and Board and Employee Expense Reimbursements for these periods.

   Option 1: Ratify the EID General Warrant Register 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 December 14, 2020 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. **Office of the General Manager (Abercrombie)**
   Consider ratifying Resolution No. 2020-006 to maintain emergency declaration regarding the COVID-19 pandemic.

   Option 1: Ratify Resolution No. 2020-006 to maintain emergency declaration.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1 (*four-fifths vote required*).

4. **Finance (Pasquarello)**
   Consider adopting two resolutions to certify signatures for the District's checking accounts at Bank of America and El Dorado Savings Bank.

   Option 1: Adopt two resolutions to certify signatures for the District's checking accounts at Bank of America and El Dorado Savings Bank.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1.

5. **Operations**
   Consider authorizing additional funding in the not-to-exceed amount of $42,946 for U.S. Forest Service Payments per the conditions of the Federal Energy Regulatory Commission Project 184 License Project, Project No. 07006H.

   Option 1: Authorize additional funding in the not-to-exceed amount of $42,946 for U.S. Forest Service Payments per the conditions of the Federal Energy Regulatory Commission Project 184 License Project, Project No. 07006H.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1.

6. **Operations (Odzakovic)**
   Consider awarding contracts to Sterling Water Technologies, LLC. in the not-to-exceed amount of $283,491.90 and NTU Technologies, Inc. in the not-to-exceed amount of $48,288 for the annual purchase of drinking water treatment chemicals.

   Option 1: Award contracts to Sterling Water Technologies, LLC. In the not-to-exceed amount of $283,491.90 and NTU Technologies, Inc. in the not-to-exceed amount of $48,288 for the annual purchase of drinking water treatment chemicals.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1.

7. Engineering (Carrington)

Consider awarding a contract to WaterWorks Engineers, LLC in the not-to-exceed amount of $115,095 for modeling and analysis of the Deer Creek Collection System, and authorize additional funding of $45,000 for capitalized labor, and $15,000 in contingency for a total funding request of $175,095 for the Deer Creek Collection System Modeling Project, Project No. STUDY 16.

Option 1: Award a contract to WaterWorks Engineers, LLC in the not-to-exceed amount of $115,095 for modeling and analysis of the Deer Creek Collection System, and authorize additional funding of $45,000 for capitalized labor, and $15,000 in contingency for total funding request of $175,095 for the Deer Creek Collection System Modeling Project, Project No. STUDY 16.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

8. Operations (Smith)

Consider authorizing the General Manager to execute an agreement with Sacramento County in the not-to-exceed amount of $80,000 for the disposal of wastewater grit at the Kiefer Landfill for a period of three years, and authorize the General Manager to extend the agreement for two additional one-year periods if determined to be in the best interest of the District.

Option 1: Authorize the General Manager to execute an agreement with Sacramento County in the not-to exceed amount of $80,000 for the disposal of wastewater grit at the Kiefer Landfill for a period of three years, and authorize the General Manager to extend the agreement for two additional one-year periods if determined to be in the best interest of the District.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

9. Board of Directors

Consider Board President Dwyer's recommendation of 2021 association and community organization assignments.

Option 1: Concur with Board President Dwyer's recommendation of 2021 association and community organization assignments.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

10. Engineering / Operations (Money/Crane)

Consider awarding a one-year contract to USP Technologies in the not-to-exceed amount of $65,097.50 for implementation of Carson Creek #1 Lift Station corrosion treatment program, and authorize the General Manager to extend the contract for up to two additional, single-year periods if in the District's best interests.

Option 1: Award a one-year contract to USP Technologies in the not-to-exceed amount of $65,097.50 for implementation of Carson Creek #1 Lift Station corrosion treatment program, and authorize the General Manager to extend the contract for up to two additional, single-year periods if in the District's best interests.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

11. Engineering

Consider authorizing additional funding in the amount of $18,200 for material purchase, $4,800 for a welding contract, $7,000 for an excavator rental, $80,000 for capitalized labor, and $11,000 for contingency for a total funding request of $121,000 associated with the El Dorado Main #2 Camino Heights Isolation Valve Project, Project No. 20047.

Option 1: Authorize additional funding in the amount of $18,200 for material purchase, $4,800 for a welding contract, $7,000 for an excavator rental, $80,000 for capitalized labor, and $11,000 for contingency, for a total funding request of $121,000 associated with the El Dorado Main #2 Camino Heights Isolation Valve Project, Project No. 20047.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

12. Information Technology (Ranstrom)

Consider awarding a contract to Kyocera Document Solutions Northern California, Inc. in the not-to-exceed amount of $60,000 for a term of three years to provide managed print services.

Option 1: Award a contract to Kyocera Document Solutions Northern California, Inc. in the not-to-exceed amount of $60,000 for a term of three years to provide managed print services.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

END OF CONSENT CALENDAR

DIRECTOR ITEMS

13. Board of Directors

Consider directing staff to implement the lower of current or last year's winter usage to establish the customer's 2021 residential wastewater rate.

Option 1: Direct staff to implement the lower of current or last year's winter water usage to establish the customer's 2021 residential wastewater rate.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Board preference.

14. Board of Directors

Consider adopting a resolution declaring Earth Day as a day-use free access day at Sly Park Recreation Area.

Option 1: Adopt a resolution declaring Earth Day as a day-use free access day at Sly Park Recreation Area.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Board preference.

ACTION ITEMS

15. Engineering (Mutschler)

Consider awarding a contract to MGE Engineering in the not-to-exceed amount of $299,841 for design of the Flume 45 abutment section, and authorize additional funding of $145,000 for capitalized labor and $60,000 for environmental studies for a total funding request of $504,841 for the Flume 45 Abutment Replacement Project, Project No. 17025.01.

Option 1: Award a contract to MGE Engineering in the not-to-exceed amount of $299,841 for design of the Flume 45 abutment section, and authorize additional funding of $145,000 for capitalized labor and $60,000 for environmental studies for a total funding request of $504,841 for the Flume 45 Abutment Replacement Project, Project No. 17025.01.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

16. Finance (Warden)

Consider awarding a contract to Aqua Metric in the not-to-exceed amount of $800,000 for the purchase of meters, parts and related meter reading equipment.

Option 1: Award a contract to Aqua Metric in the not-to-exceed amount of $800,000 for the purchase of meters, parts and related meter reading equipment.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

Action Item No. 17 will be considered after Closed Session A on this agenda.

17. Office of the General Manager (Abercrombie)

Consider authorizing the General Manager to execute agreements with the Regional Water Authority (RWA) and other participating RWA members for two programs: Major Projects Management Services Program in an amount not to exceed $24,000 per year and Water Resilience Program in an amount not to exceed $28,000 per year.

Option 1: Authorize the General Manager to execute agreements with the Regional Water Authority (RWA) and other participating RWA members for two programs: Major Projects Management Services Program in an amount not to exceed $24,000 per year and Water Resilience Program in an amount not to exceed $28,000 per year.
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)

Government Code Section 54956.9(d)(4)
(one potential case against the California State Water Resources Control Board regarding the Sacramento/San Joaquin River Bay Delta Water Quality Control Plan Update)

REVIEW OF ASSIGNMENTS

ADJOURNMENT

TENTATIVELY SCHEDULED ITEMS FOR FUTURE MEETINGS

Engineering

- Flume 48 Replacement design contract, Action, January 25 (Mutschler)
- Cost share agreement with El Dorado County for preparation of Environmental Impact Report for Texas Hill Reservoir Parcel Rezones and General Plan Amendment, Action, January 25 (Mueller)
- Silver Lake Dam replacement CIP funding, Consent, January 25 (Kessler)
- Emergency Out-of-District water service, APN 092-060-1055, Action, January 25 (Brink)
- Contract amendment for additional inspection services for Reservoir 2 and 2A recoating project, Consent, January 25 (Wilson)

Engineering / Office of the General Counsel

- Modification of Water Right Permit 21112 project and facilities overview, Information, January 25 (Deason/Leeper/Mueller)

Engineering / Operations

- Discharge Limits for District Issued Wastewater Discharge Permits review contract, January 25 (Graham/Crane)
- FERC-related projects CIP funding, Consent, January 25 (Deason)

Finance

- 2020 Discretionary Funds use decision, Action, January 25 (Price)
- Automated Meter Read and Meter Replacement Project CIP Funding, Consent, January 25 (Downey)

EL DORADO IRRIGATION DISTRICT
January 11, 2021

General Manager Communications

Awards and Recognitions
None

Staff Reports and Updates
a) Long-term Weather Forecast – Summary by Dan Corcoran

Summary by Dan Corcoran

General Manager Communications

January 11, 2021

Long-term Weather Forecast

Staff provided this year's initial assessment of carryover water supply conditions during the October 13, 2020 Board meeting. As forecasted, since that time the region has received below normal rainfall, and as the District and its fellow state cooperative snow surveyors prepare to participate in the first snow surveys of the season the results are not expected to be favorable. Fortunately, as we approach the new year the region is expecting some increased precipitation, but much more precipitation is necessary prior to the end of the wet season.

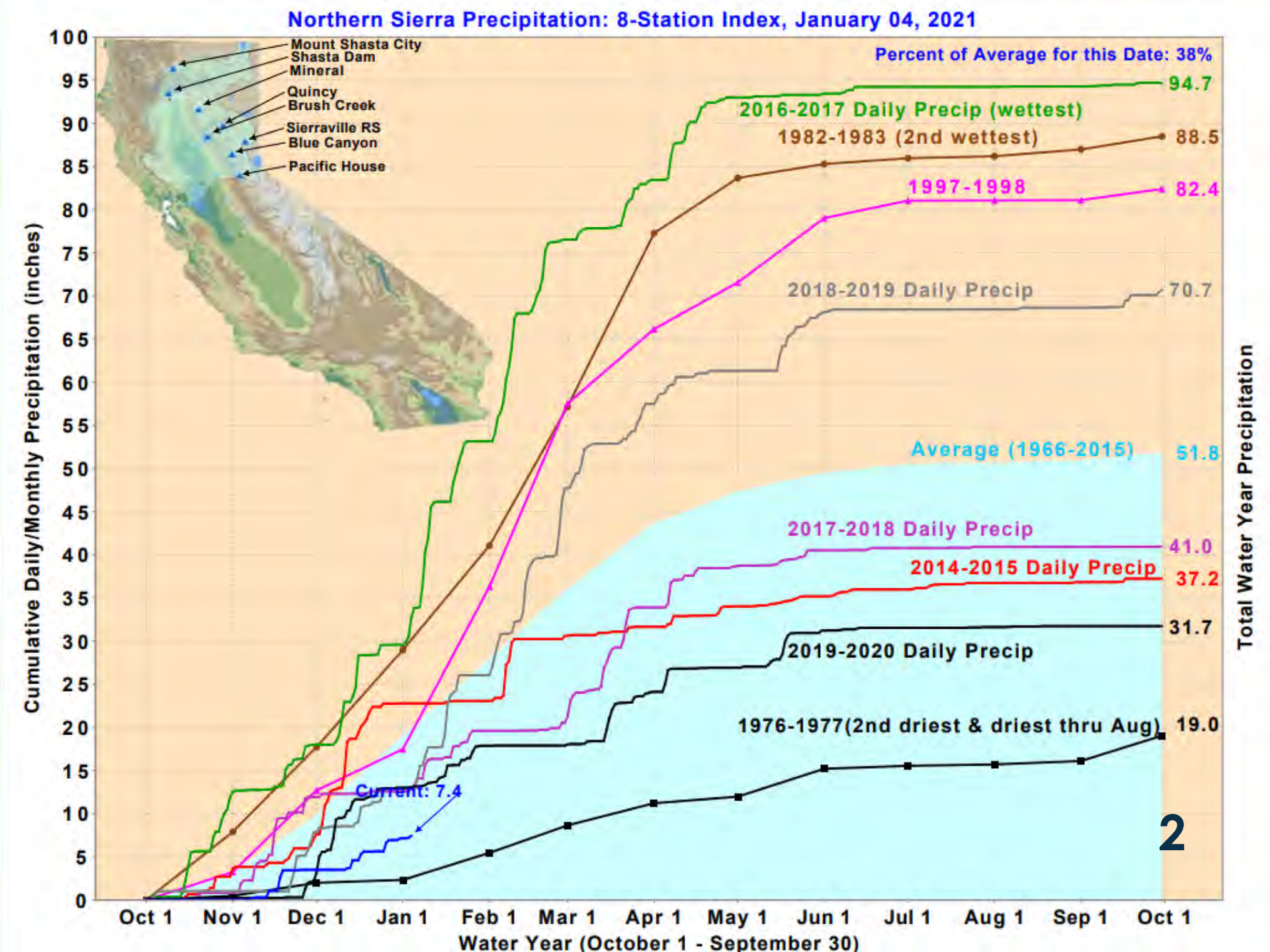
In response to the dry hydrologic conditions, staff has initiated plans to begin operation of Hazel Creek Tunnel following the resumption of Project 184 and El Dorado Canal operations in mid-January. The volume of water to be moved will depend on how the remainder of the wet season progresses while continuing the District's objective from its 2015 Drought Action Plan to "manage water supplies and conservation levels to achieve approximately 25,000 acre-feet of carry-over storage in Jenkinson Lake to guard against multiple year drought conditions."

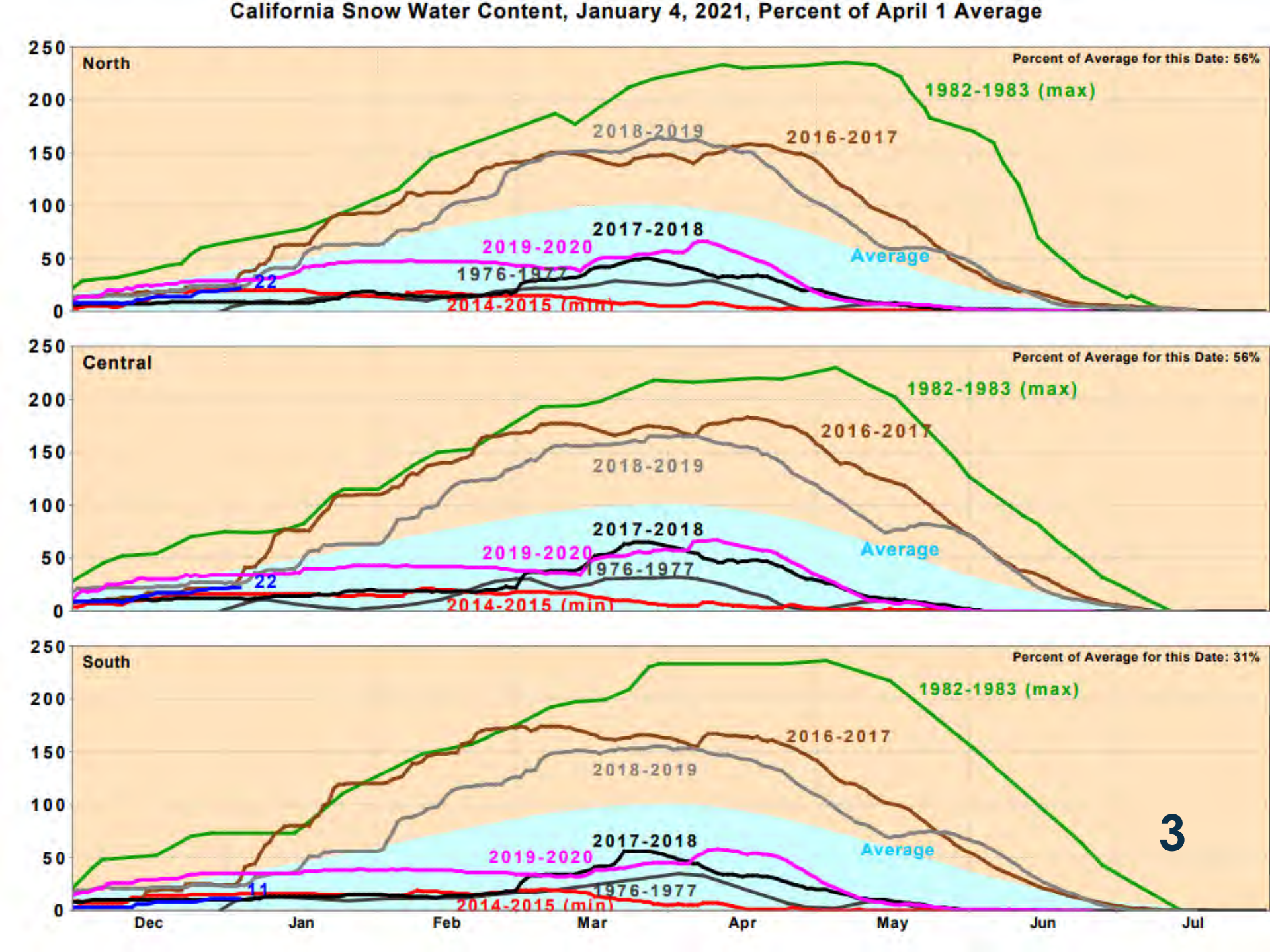
Tunnel flows will be initiated and adjusted as appropriate in response to ongoing updates to near and long-term forecasts. Currently, Jenkinson Lake is approximately two-thirds full (26,000 acre feet) and the District's overall objective is to ensure adequate water supplies for its customers while concurrently minimizing loss of potential hydropower generation revenues. One way to minimize these impacts is to move water during the spring when power prices are lower while still minimizing the risk of subsequent spill of Jenkinson Lake should late spring provide above normal precipitation. Since Hazel Creek Tunnel is fed by the El Dorado Canal, each acre foot of water moved through the tunnel is directly correlated to reduced hydropower generation at the El Dorado Powerhouse.

During the Board meeting staff will present the latest National Oceanic and Atmospheric Administration (NOAA) forecasts, DWR cooperative snow survey results (if available), and selected regional snow pillow information for the area affecting Project 184 diversions. Staff will also provide a status regarding storage levels within the District's water supply reservoirs. Because Board packets are published on the Wednesday prior to the Board meeting, several of the slides presented during the Board meeting are anticipated to be updated with more contemporary data than that available for the Board packet.

Water Supply and Forecast Update

January 11, 2021


Northern Sierra Precipitation: 8-Station Index, January 04, 2021
Mount Shasta City
Shasta Dam
Mineral
Quincy
Brush Creek
Sierraville RS
Blue Canyon
Pacific House
Percent of Average for this Date: 38%
2016-2017 Daily Precip (wettest)
94.7
1982-1983 (2nd wettest)
88.5
1997-1998
82.4
2018-2019 Daily Precip
70.7
Average (1966-2015)
51.8
2017-2018 Daily Precip
41.0
2014-2015 Daily Precip
37.2
31.7
2019-2020 Daily Precip
1976-1977(2nd driest & driest thru Aug)
19.0
Current: 7.4
2
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Oct 1
Water Year (October 1 - September 30)


California Snow Water Content, January 4, 2021, Percent of April 1 Average
North
Percent of Average for this Date: 56%
1982-1983 (max)
2018-2019
2016-2017
2017-2018
2019-2020
Average
1976-1977
22
2014-2015 (min)
Central
Percent of Average for this Date: 56%
1982-1983 (max)
2016-2017
2018-2019
2017-2018
2019-2020
Average
1976-1977
22
2014-2015 (min)
South
Percent of Average for this Date: 31%
1982-1983 (max)
2016-2017
2018-2019
2017-2018
2019-2020
Average
11
1976-1977
2014-2015 (min)
250
200
150
100
50
0
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
3

SNOWPACK – INCHES OF WATER CONTENT

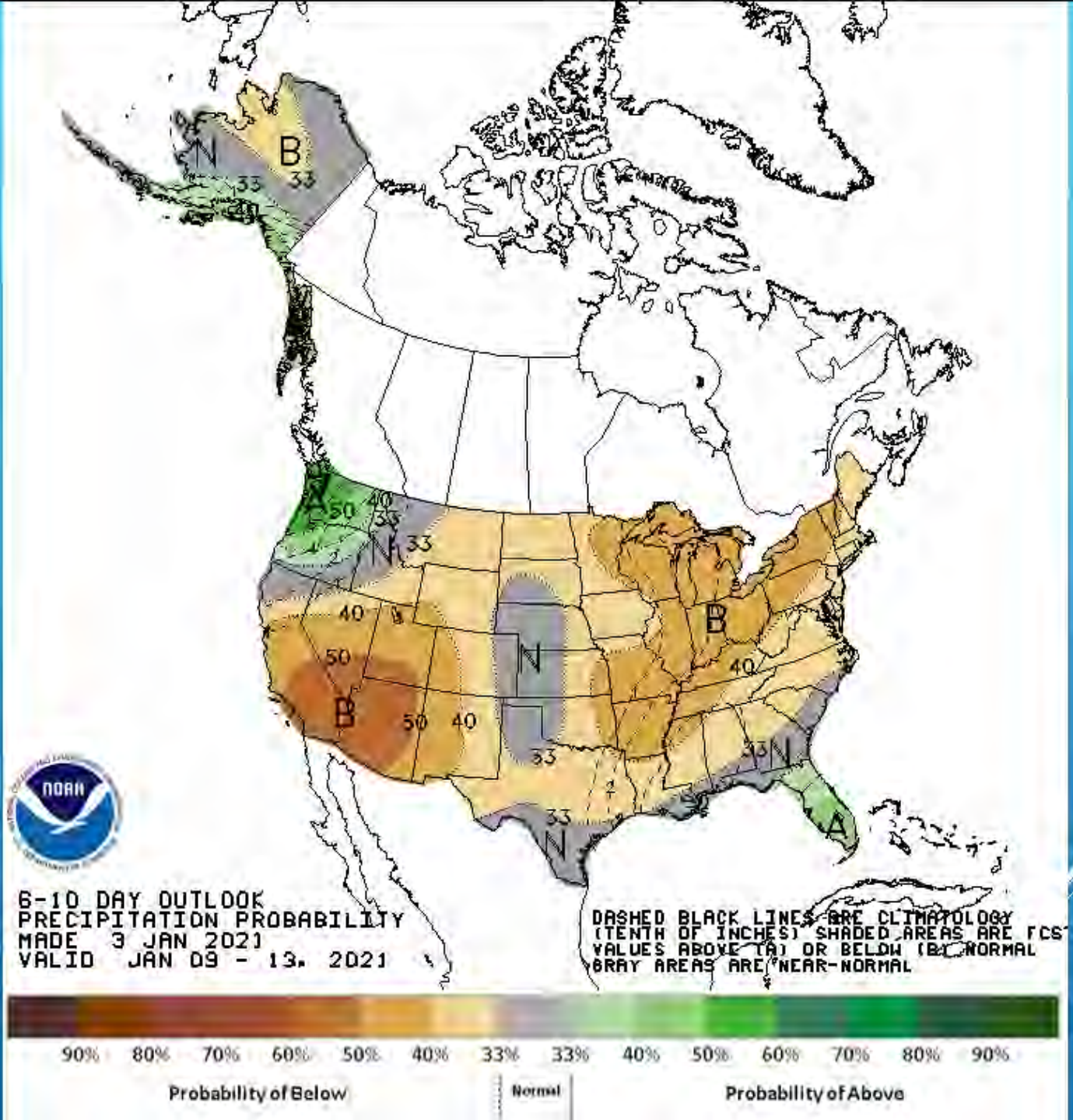
Course	Dec 30 (in)	Jan 1 Avg (in)	April 1 Avg (in)	Percent Jan 1	Percent Apr 1
107 – Caples Lake	8.5	13.0	29.1	65%	29%
106 – Upper Carson	9	14.3	33.8	63%	27%
331 – Lower Carson	10	15.9	36.8	63%	27%

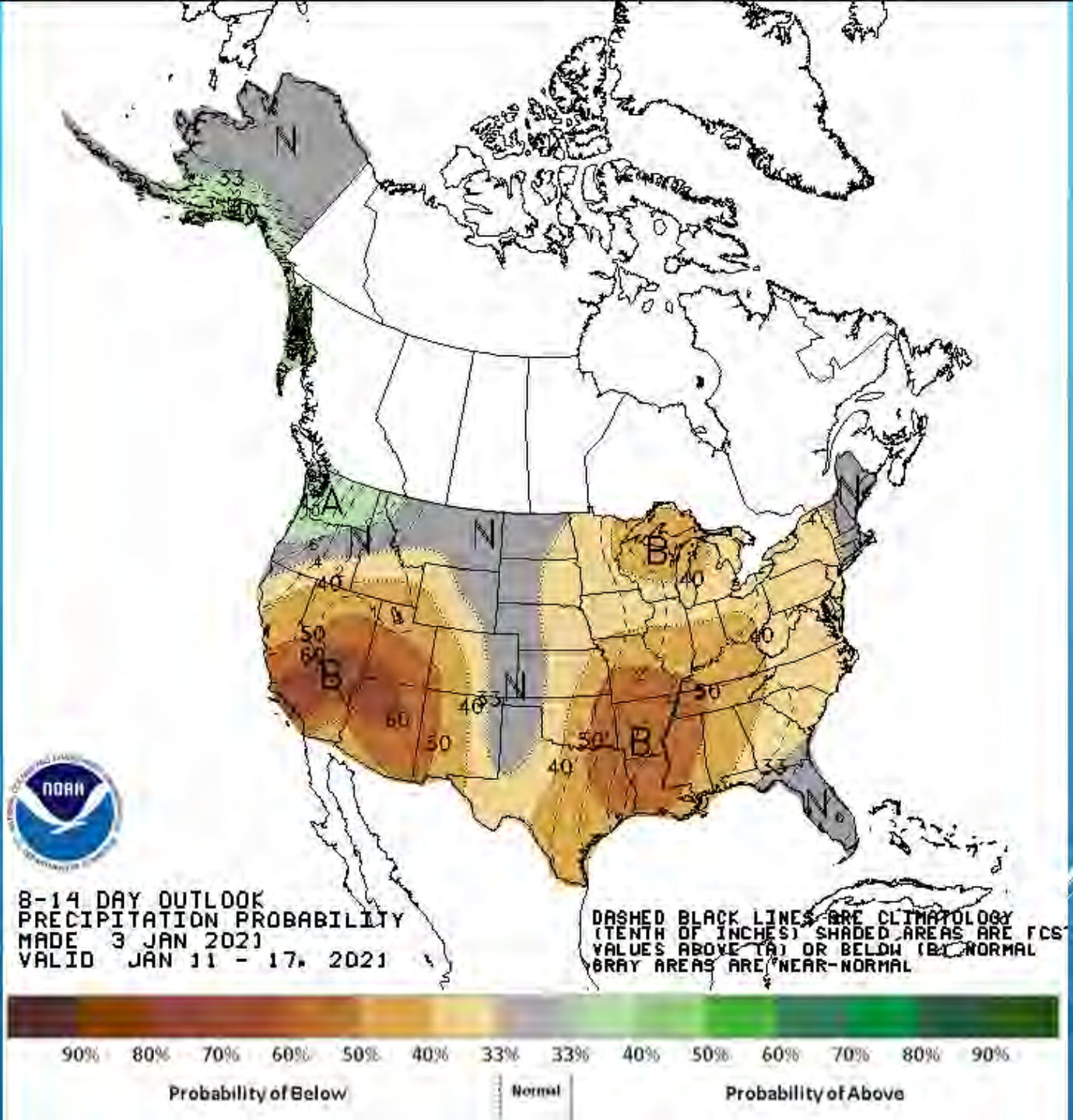
REMOTE SENSING STATIONS

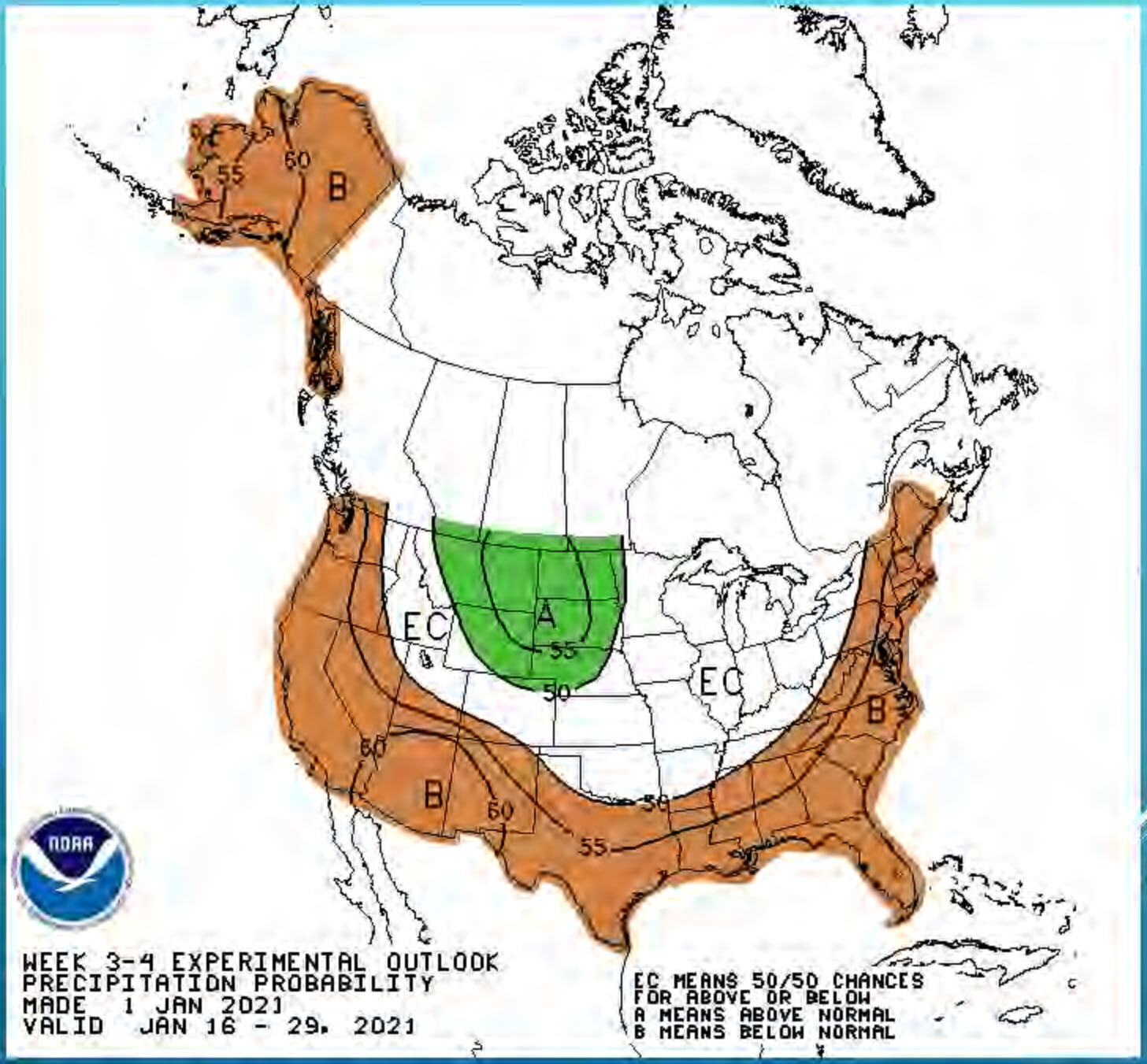
	Jan 11 (in)	Jan 4 (in)	April 1 Avg (in)	Percent Avg
Carson Pass		7.1	n/a	n/a
Caples Lake		8.7	30.9	
Silver Lake		6.8	22.7	

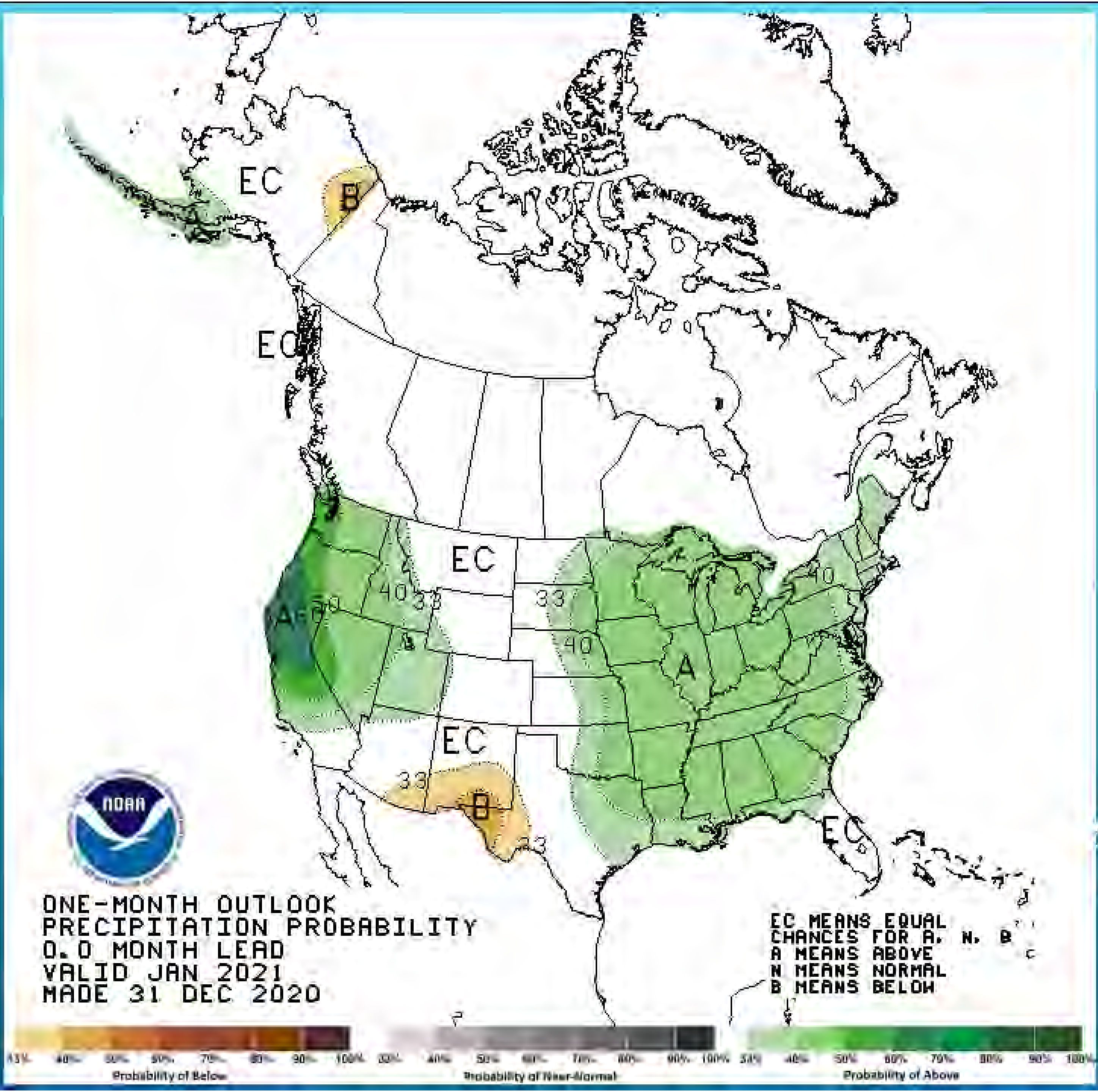
CURRENT STORAGE CONDITIONS

Reservoir	Storage (acre-feet)	Maximum Storage	Typically fills
Caples Lake	13,200	22,340	No
Silver Lake	2,350	8,640	Yes
Echo Lake	0	1,943	Yes
Lake Aloha	0	5,003	Yes
Jenkinson Lake	26,150	41,033	No
Folsom Reservoir	288,000	975,000	No
Weber Reservoir	260	1,125	Yes

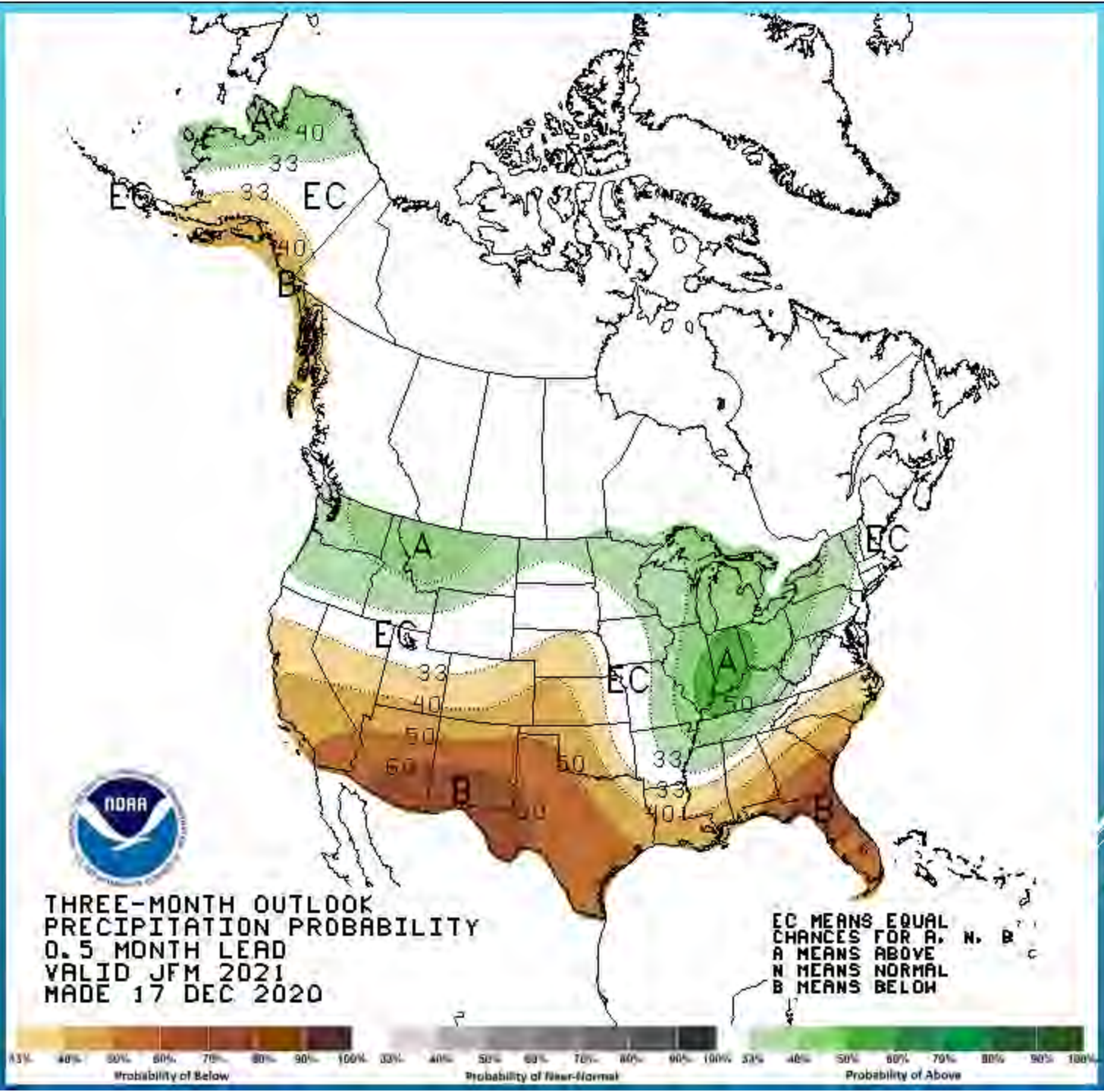

6-10 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 3 JAN 2021
VALID JAN 09 - 13, 2021
DASHED BLACK LINES ARE CLIMATOLOGY
(TENTH OF INCHES) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above


8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 3 JAN 2021
VALID JAN 11 - 17, 2021
DASHED BLACK LINES ARE CLIMATOLOGY
(TENTH OF INCHES) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above


B
55
60
EC
A
55
50
EC
B
60
B
60
55
50
WEEK 3-4 EXPERIMENTAL OUTLOOK
PRECIPITATION PROBABILITY
MADE 1 JAN 2021
VALID JAN 16 - 29. 2021
EC MEANS 50/50 CHANCES
FOR ABOVE OR BELOW
A MEANS ABOVE NORMAL
B MEANS BELOW NORMAL



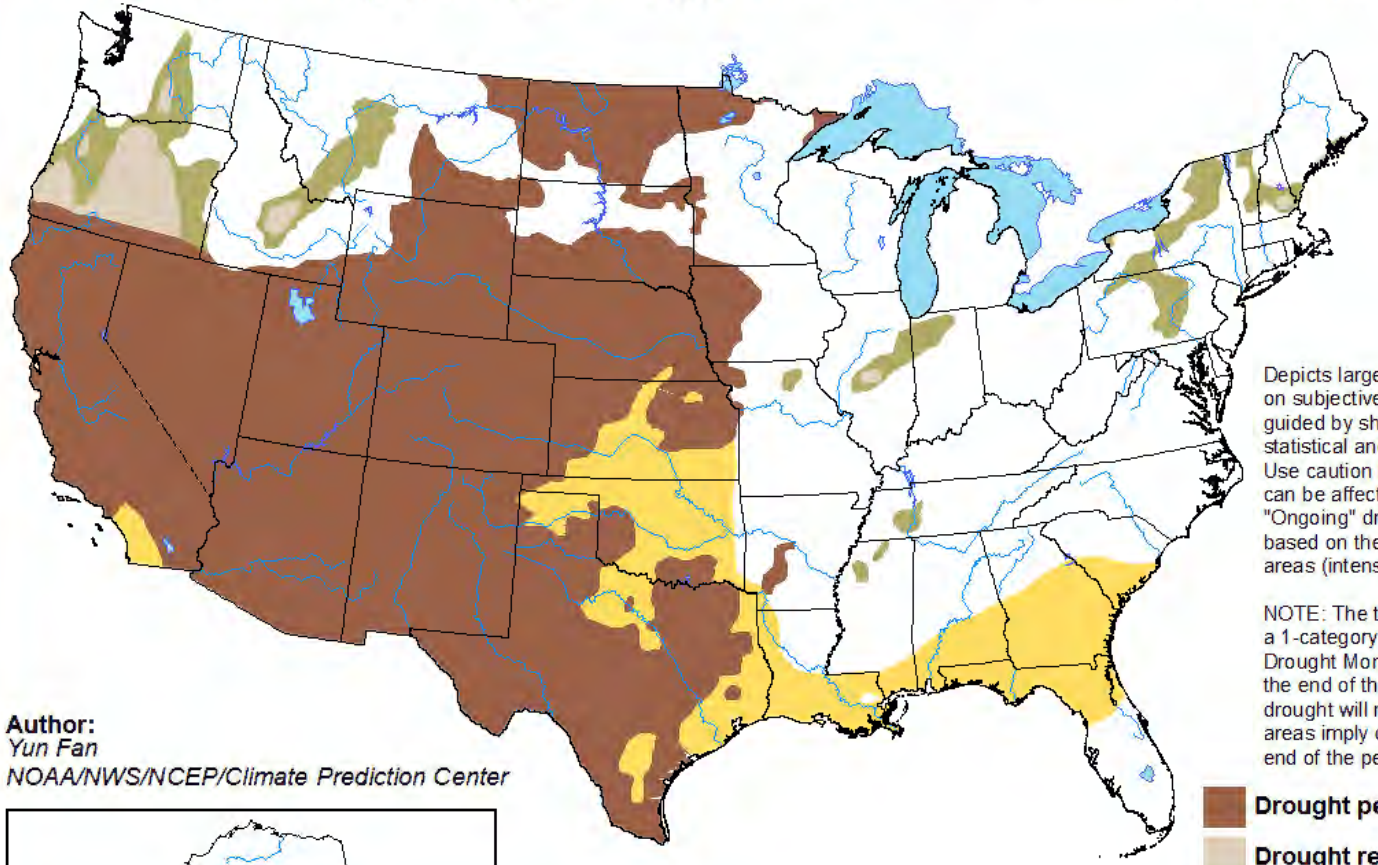
EC
B
EC
EC
40
33
A
50
EC
33
40
A
EC
33
B
EC
ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID JAN 2021
MADE 31 DEC 2020
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW
Probability of Below
Probability of Near-Normal
Probability of Above


A
40
33
EC
33
EC
40
B
A
EC
EC
33
40
50
60
50
B
A
50
33
33
40
B
NOAA
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID JFM 2021
MADE 17 DEC 2020
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW
Probability of Below
Probability of Near-Normal
Probability of Above

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for December 17, 2020 - March 31, 2021
Released December 17, 2020

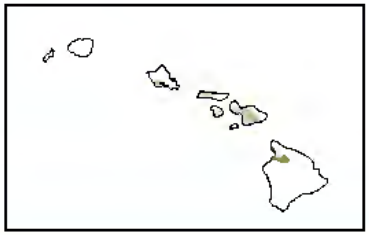


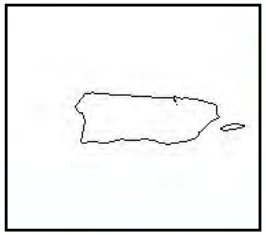
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Drought persists
Drought remains but improves
Drought removal likely
Drought development likely

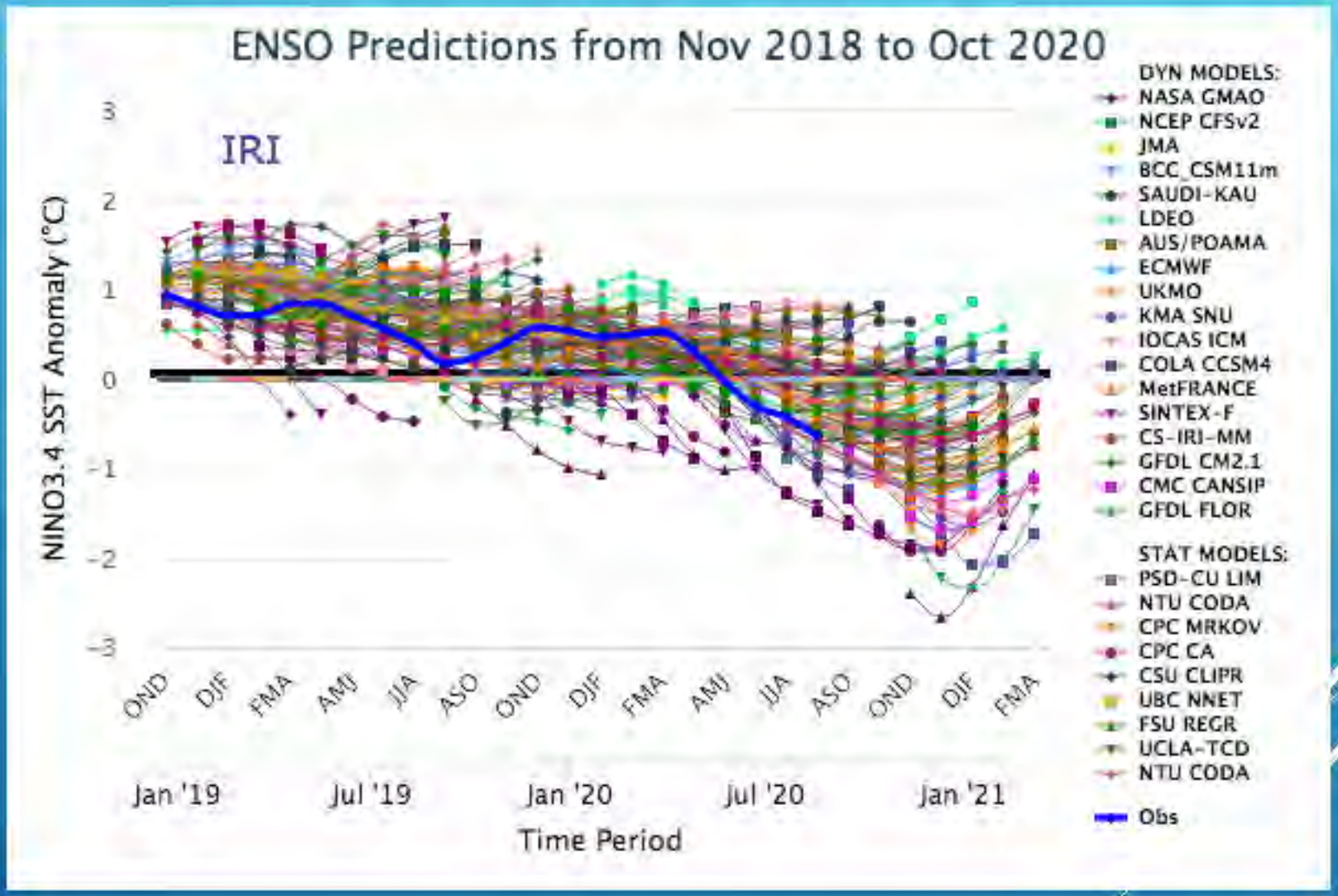
Author:
Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center



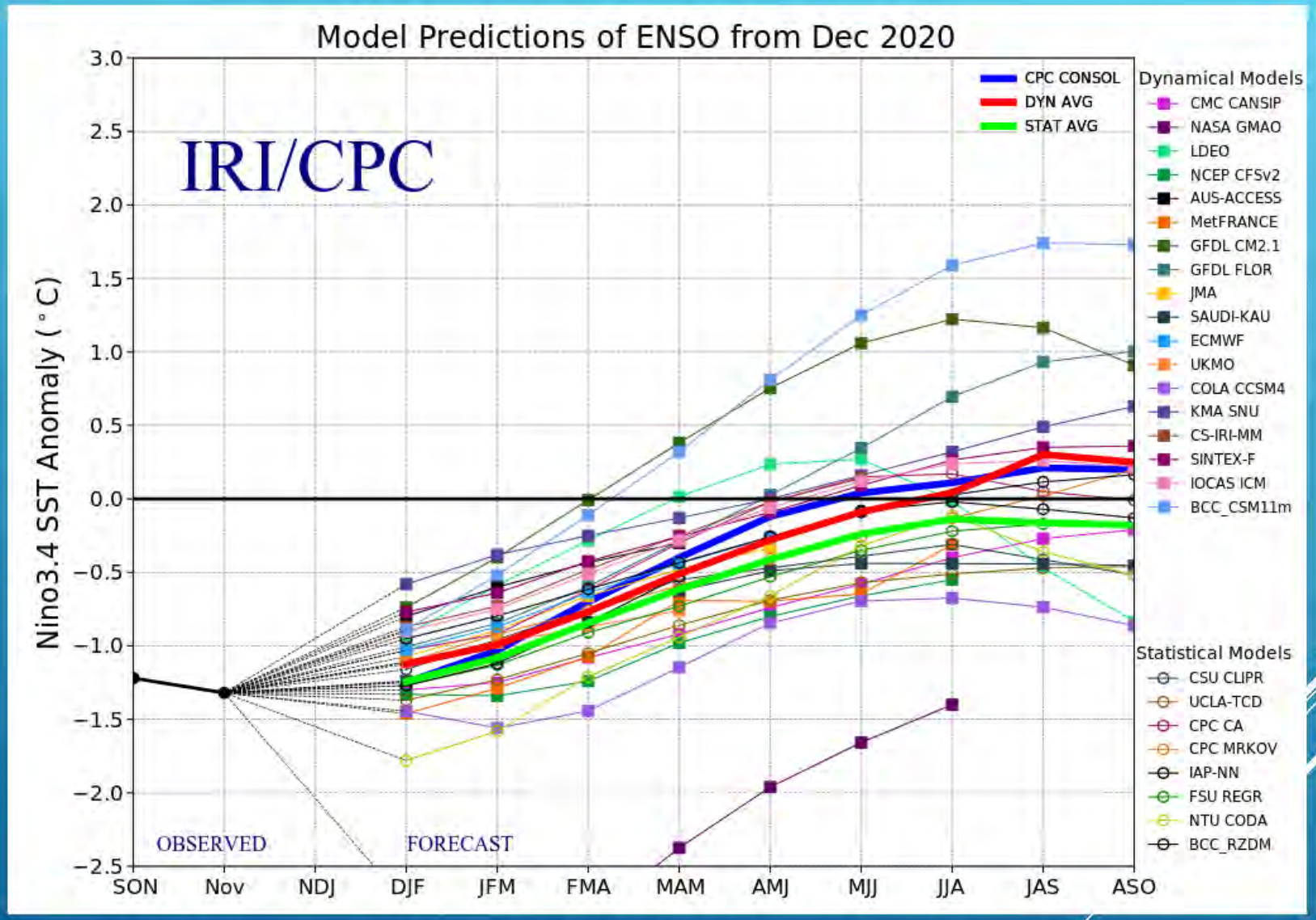


http://go.usa.gov/3eZ73

MODELED VS. ACTUAL OCEAN TEMPERATURES

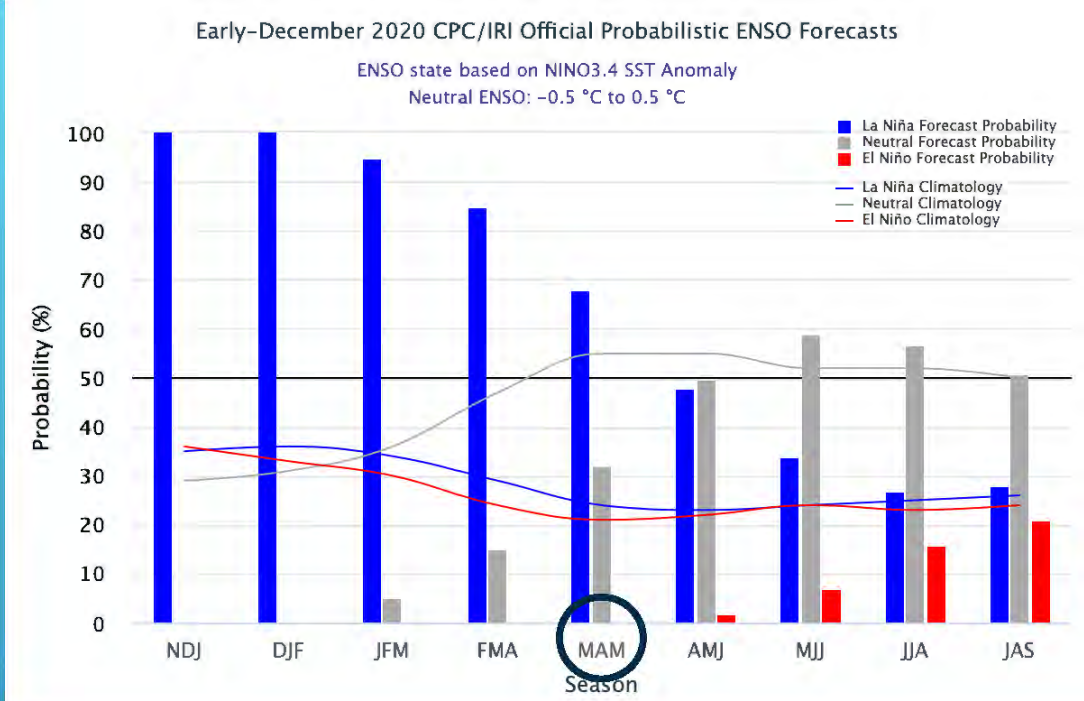


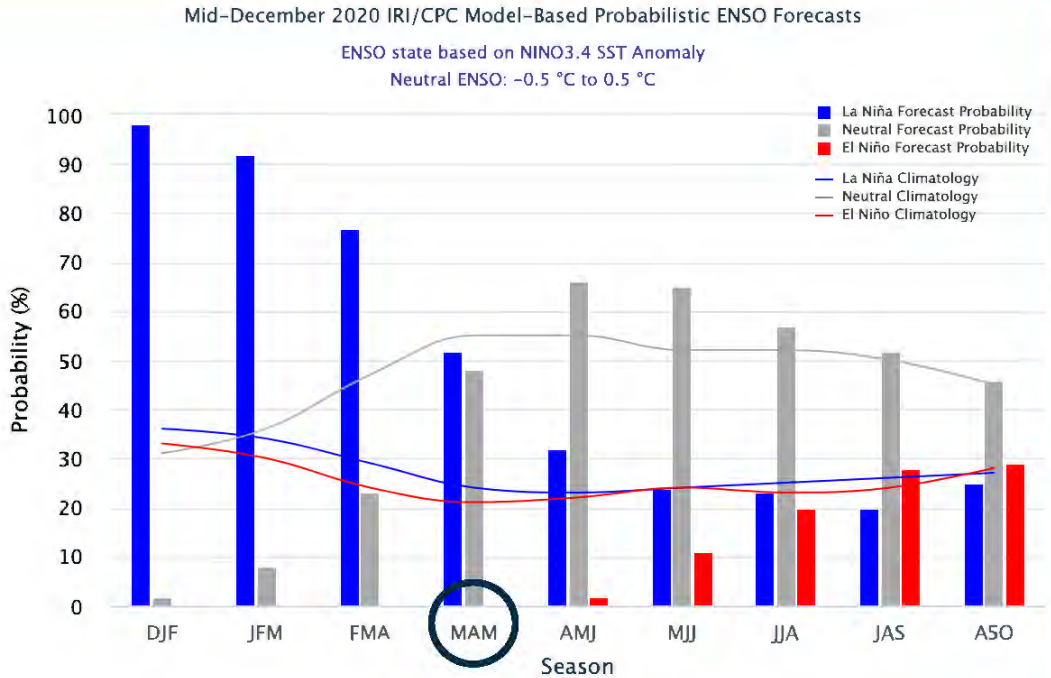
2021 MODELED OCEAN TEMPERATURES



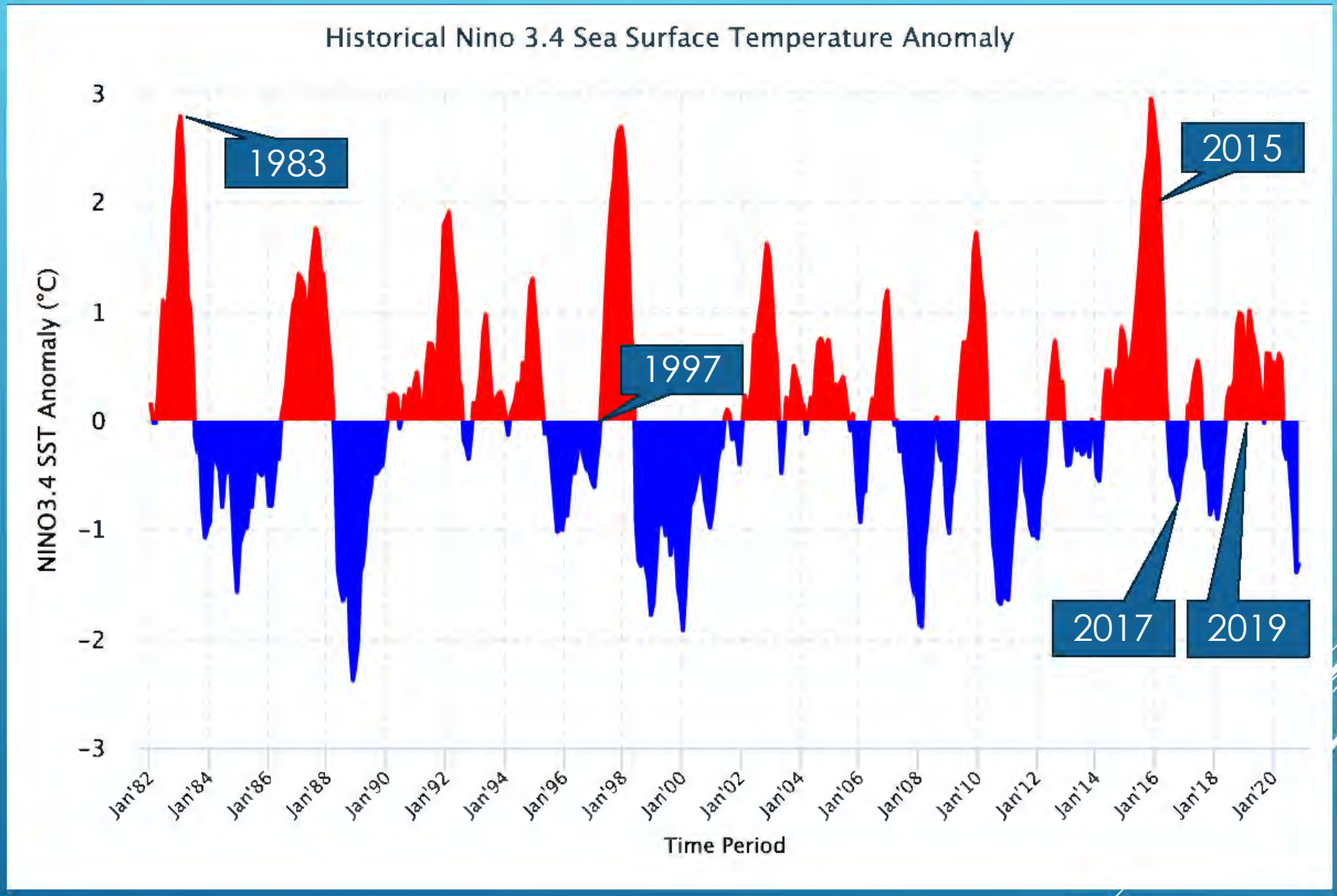
CHANGES SIGNALED

- Official December forecast indicates 2:1 chance of La Nina during March-May





- Mid-December update indicates equal chance of La Nina and El Nino during same time period



- **El Nino doesn't always mean wetter conditions**

DEMAND TRENDS

- Reservoir 1 Water Treatment Plant (WTP) to remain offline through April
  - Typical annual operation
- Extended El Dorado Hills WTP outage due to intake replacement and plant upgrades
- All demands during this time met by Reservoir A WTP (Sly Park)
  - ~3,800-4,400 AF during 1st quarter 2021

STAFF ACTIONS

- Regular review of short and long term forecasts
- Ensure adequate storage in Sly Park
  - Initiate Hazel Creek Tunnel releases if needed
- Monthly Board updates
  - First Board meeting monthly following latest hydrology data

SUMMARY

- Winter 2020-2021 has proven to be off to below average start as forecasted
- Long-term forecast indicates similar conditions predicted
  - Potential for improvements during spring
- No anticipated concerns with adequate supplies for 2021
- Continued diligence against potential for multiple year event

QUESTIONS?

EL DORADO IRRIGATION DISTRICT

SUBJECT: Ratification of EID General Warrant Registers for the periods ending December 8, December 15, December 22 and December 29, 2020, 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.

Register Date	Check Numbers	Amount
December 8, 2020	685788 – 686028	$5,853,758.81
December 15, 2020	686029 – 686193	$1,063,572.19
December 22, 2020	686194 – 686339	$2,711,508.73
December 29, 2020	686340 – 686462	$1,987,297.57

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 Register 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

_____for
Tony Pasquarello
Finance Manager

_____
Mark Price
Finance Director

_____
Jennifer Sullivan
Clerk to the Board

_____
Jim Abercrombie
General Manager

Executive Summary for December 8, 2020 -- $5,853,758.81:

This summary highlights significant disbursements made by major business activity:

General District Operations (Fund 110)

- $3,987—Bliss Power Lawn Equipment Company for a generator
- $3,313—Blue Ribbon Personnel Services for temporary labor for utility billing and contracts
- $3,684—C & H Motor Parts, Inc. for miscellaneous vehicle maintenance supplies
- $6,507—City of Placerville for water and sewer service
- $15,298—Doug Veerkamp General Engineering, Inc. for release of retention held on project 06076H.01 FERC:C38.4B Caples Lake Stabilization
- $11,789—El Dorado Union High School District for a credit balance refund on customer account
- $18,517—Hunt & Sons, Inc. for card lock fuel, motor oil, and fuel deliveries at various locations
- $3,000—ICE Safety Solutions for CPR and first aid training
- $4,397—Key2life Janitorial for November janitorial service
- $3,647—KP Martin, Inc. for a credit balance refund on customer account
- $15,067—Pace Supply Corporation for warehouse inventory
- $3,774—Pronesti Environmental, Inc. for a credit balance refund on customer account
- $3,620—Quam General Engineering, Inc. for a credit balance refund on customer account
- $9,500—Reeb Government Relations, LLC for December 2020 retainer
- $4,629—Sierra Nevada Tire and Wheel for tires and an alignment
- $3,594—Verizon Wireless for cell phone service

Engineering Operations (Fund 210)

- $3,960—Zanjero for on-call surface water hydrology consulting

Water Operations (Fund 310)

- $4,826—CLS Labs for regulatory lab testing
- $4,472—Hastie's Capitol Sand and Gravel Company for rock deliveries
- $24,453—MCS Inspection for reservoir coating inspections
- $3,419—Olin Chlor Alkali Products for sodium hypochlorite at Reservoir A
- $287,379—PG&E for electric service
- $4,050—Pipeline Diagnostic Services for conduit inspection services
- $4,138—R&B Company for nozzles, gaskets, and paint
- $3,584—Sierra Office Systems & Products, Inc. for task chairs and office supplies
- $5,469—Univar Solutions USA, Inc. for sodium hydroxide at Reservoir A

Wastewater Operations (Fund 410)

- $4,562—CLS Labs for regulatory lab testing
- $5,136—Cues, Inc. for pipeline inspection equipment repairs
- $33,353—Denali Water Solutions, LLC for sludge hauling and disposal at EDHWWTP and DCWWTP
- $4,673—Foster Flow Control for a valve

- $3,158—Grainger for miscellaneous operating and repair supplies
- $127,428—PG&E for electric service
- $8,203—Solenis, LLC for flocculant at EDHWWTP
- $106,911—State Water Resources Control Board for annual permit fees
- $4,020—Statewide Traffic Safety & Signs, Inc. for traffic control
- $7,339—Titus Industrial Group, Inc. for composite manhole covers
- $7,308—Univar Solutions USA, Inc. for sodium hydroxide at DCWWTP and EDHWWTP
- $3,125—USA Bluebook for remote displays, toggle switch, and duct pipe
- $11,924—Xylem Water Solutions USA, Inc. for pump repairs and parts

Recycled Water Operations (Fund 510)

- $14,119—PG&E for electric service
- $3,863—Olin Chlor Alkali Products for sodium hypochlorite at EDHWWTP
- $20,362—State Water Resources Control Board for annual permit fees
- $5,054—Univar Solutions USA, Inc. for sodium hydroxide at EDHWWTP

Hydroelectric Operations (Fund 610)

- $4,090—E&M Electric & Machinery, Inc. for SCADA software maintenance
- $28,618—Markit! Forestry Management, LLC for vegetation management services

Recreation Operations (Fund 710)

- $4,326—Blue Ribbon Personnel Services for temporary labor at Sly Park Recreation

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

- $331,788—Big Valley Electric for construction services ($349,250). Retention held $17,462:
  >Project #18065.01 – EDHWTP Automation Rehabilitation ($88,000)
  >Project #18048.05 – Critical Water Facility Generators – Moose Hall ($161,250)
  >Project #18048.08 – Critical Water Facility Generators – Reservoir 2 ($100,000)
- $12,476—Blackburn Consulting for geotechnical testing services – Folsom Lake Intake Improvement (Project #15024.01)
- $6,978—Cardno, Inc. for design plans and specifications – FERC:C38.4B Caples Lake Stabilization (Project #0676H.01)
- $36,615—Domenichelli and Associates, Inc. for engineering design services:
  >Project #16046.01 – Powerhouse Roof ($23,760)
  >Project #17020.01 – Wastewater Collection System Pipeline ($8,310)
  >Project #20002.01 – DOT Construction Project–Water ($1,680)
  >Project #11032.01 – Main Ditch-Forebay to Reservoir 1 ($2,865)
- $168,531— Doug Veerkamp General Engineering, Inc. for construction services ($176,676). Retention held $8,145:
  >Project #17031.01 – Forest Road Waterline Relocation ($13,770)
  >Project #06076H.01 – FERC:C38.4B Caples Lake Stabilization ($162,906)
- $45,910—E&M Electric & Machinery, Inc. for SCADA data repository software – Wonderware Tier 2 Historian (Project #20042.01)

- $311,102—Express Sewer & Drain, Inc. for construction services ($327,476) – Wastewater Collection System Pipeline (Project #17020.01). Retention held $16,374
- $3,288—Flow-Line Technology, Inc. for a skirt mount base – Promontory Village 1 Pump Replacement (Project #20033.01)
- $62,696— GEI Consultants, Inc. for engineering services:
  >Project #16044.01 – Pacific Tunnel Rehabilitation ($16,589)
  >Project #15024.01 – Folsom Lake Intake Improvement ($19,873)
  >Project #17013.01 – Forebay Dam Modifications ($26,234)
- $1,745,948—Granite Construction Company for construction services ($1,837,840) – Folsom Lake Intake Improvement (Project #15024.01). Retention held $91,892
- $54,674—Hanson Bridgett, LLP for outside legal services – Forebay Dam Modifications (Project #17013.01)
- $10,717—Industrial Water Solutions for a pressure reducing control valve – El Dorado Main #1 Pressure Reducing Station #5 Upgrade (Project #17016.01)
- $867,788—K. W. Emerson, Inc. for construction services ($913,461) – Flume 38-40 Canal Conversion (Project #16022.01). Retention held $45,673
- $6,016—Kyocera Document Solutions for DM Connect upgrades to printers – Windows Server 2016 Upgrade (Project #19027.01)
- $5,000—Sierra Pacific Industries for an easement – Flume 30 Rehabilitation Project (Project #17041.01)
- $4,323—Stantec Consulting Services, Inc. for engineering services – Main Ditch-Forebay to Reservoir 1 (Project #11032.01)
- $1,112,195—Syblon Reid for construction services ($1,170,732) – Pacific Tunnel Rehabilitation (Project #16044.01). Retention held $58,537
- $46,110—TCB Industrial, Inc. for generator bearing rehabilitation – Powerhouse Generator 1 Bearing (Project #20036.01)
- $25,060—Technical Systems, Inc. for hardware installation and configuration services:
  >Project #18048.06 – Critical Water Facility Generators-Monte Vista ($4,600)
  >Project #18048.03 – Critical Water Facility Generators-Ridgeview ($5,610)
  >Project #18048.04 – Critical Water Facility Generators-North Canyon ($6,930)
  >Project #18048.05 – Critical Water Facility Generators-Moosehall ($7,920)

Executive Summary for December 15, 2020 -- $1,063,572.19:

This summary highlights significant disbursements made by major business activity:

Development Services (Fund 105)

- $10,950—Domenichelli and Associates, Inc. for construction inspection services

General District Operations (Fund 110)

- $16,651—AT&T for phone service
- $3,680—C & H Motor Parts, Inc. for equipment fuel and miscellaneous vehicle maintenance supplies
- $7,805—California Special Districts Association for 2021 agency dues
- $9,513—Datapose, LLC for November 2020 billing services
- $3,113— Doug Veerkamp General Engineering for a credit balance refund on customer account
- $3,647—Guardian Life Insurance Company for November 2020 vision claims
- $13,947—Hunt & Sons, Inc. for card lock fuel and fuel deliveries at various locations
- $3,586—J & C Automotive for transmission repair work
- $5,040—Life Insurance Company of North America for December 2020 life insurance premiums
- $12,979—Pace Supply Corporation for warehouse inventory
- $9,781—PG&E for electric service
- $8,507—Sierra Nevada Tire and Wheel for tires and service calls
- $6,059—Ski Air Incorporated for filter changing service and a service call

Engineering Operations (Fund 210)

- $17,100—CASA for 2021 agency dues
- $6,438—Tully & Young, Inc. for water hydrology support services
- $3,852—Watereuse Association for 2021 agency dues

Water Operations (Fund 310)

- $3,172—Advanced Locking Solutions, Inc. for padlocks and lock cores
- $12,887—Aqua Tech Company for tank inspection and cleaning services
- $19,433—California Department of Tax and Fee Administration (CDTFA) for annual water rights fees
- $3,316—El Dorado County Environmental Management Department for business plan permitting
- $4,931—Frank A. Olsen Company for AUMA motors
- $3,475—Hach Company for annual calibration service contract
- $3,834—Industrial Water Solutions for a speed control and springs
- $4,265—PG&E for electric service
- $3,083—State Water Resources Control Board for annual permit fees
- $42,056—Sterling Water Technologies, LLC for polymer at Reservoir A
- $40,189—U.S. Bureau of Reclamation for Sly Park restoration fees

Wastewater Operations (Fund 410)

- $49,573—Blue Earth Products for filter cleaning agent
- $14,151—Brenntag Pacific, Inc. for acetic acid at EDHWWTP
- $11,160—Carsten Tree Service for tree removal and pruning service at CHWWTP
- $4,789—CLS Labs for regulatory lab testing
- $8,251—El Dorado County Environmental Management Department for business plan permitting
- $8,623—Hach Company for annual calibration service contract
- $77,763—PG&E for electric service

Recycled Water Operations (Fund 510)

- $7,911—PG&E for electric service
- $3,633—Univar Solutions USA, Inc. for sodium hydroxide at EDHWWTP

Hydroelectric Operations (Fund 610)

- $9,609—California Department of Tax and Fee Administration (CDTFA) for annual water rights fees
- $4,964—GEI Consultants, Inc. for dam safety engineering services
- $3,400—PG&E for electric service
- $3,916—Pollock Pines True Value for concrete, mortar, and miscellaneous hardware supplies
- $50,450—U.S. Geological Survey for the FERC 184 streamgaging program

Recreation Operations (Fund 710) none to report

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

- $21,992—Arrow Fence Company for fence installation – Town Center Lift Station Fence (Project #20041.01)
- $104,405—Auburn Constructors, LLC for engineering services ($109,900) – El Dorado Main #1 Intertie Pressure Reducing Station #5 Upgrade (Project #17016.01). Retention held $5,495
- $51,022—Downtown Ford Sales for a fleet vehicle – 2019 Vehicle Replacement (Project #19043.01)
- $239,403—GHD, Inc. for engineering and design services:
  >Project #16044.01 – Pacific Tunnel Rehabilitation ($30,464)
  >Project #20038.01 – Hydro General Bridge Design ($6,597)
  >Project #STUDY11.01 – 2020 Canal Release Point Study ($26,354)
  >Project #16022.01 – Flume 38-40 Canal Conversion ($175,988)
- $7,000—Herwit Engineering for engineering design services – DCWWTP Process Control Design (Project #17033.01)
- $12,808—ICM Group, Inc. for construction inspection services:
  >Project #06082H.01 – FERC:C50.1 Silver Lake ($2,460)
  >Project #15016.01 – FERC:C50.2 Caples Lake Campground ($660)
  >Project #06076H.01 – FERC:C38.4B Caples Lake Stabilization ($9,688)
- $22,460—Kenmar Instrumentation Services, LLC for transmitters, transducers, and monitoring software – Powerhouse Generator 1 Bearing (Project #20036.01)
- $3,415—Tully & Young, Inc. for water hydrology support services – Permit 21112 Change in Point (Project #16003.01)

Executive Summary for December 22, 2020 -- $2,711,508.73:

This summary highlights significant disbursements made by major business activity:

General District Operations (Fund 110)

- $3,900—AT&T for internet service
- $4,485—Sierra Security & Fire for Q2 2020 alarm monitoring
- $14,943—Vehicle Registration Services Today for DMV fees

Engineering Operations (Fund 210)

- $3,054—Ergodirect, Inc. for office chairs

Water Operations (Fund 310)

- $383,742—Advanced Industrial Services, Inc. for Reservoirs 2 and 2A recoating ($403,939). Retention held $20,197
- $16,405—Aqua Tech Company for tank inspection and cleaning services
- $3,426—Olin Chlor Alkali Products for sodium hypochlorite at Reservoir A
- $185,733—PG&E for electric service
- $38,521—Sterling Water Technologies, LLC for polymer at Reservoir A
- $3,447—Trench Plate Rental Company for concrete rail rental
- $37,533—U.S. Bureau of Reclamation for Sly Park restoration fees
- $5,655—Univar Solutions USA, Inc. for sodium hydroxide at Reservoir A

Wastewater Operations (Fund 410)

- $4,559—4RF USA, Inc. for narrowband radios and mounts
- $108,297—PG&E for electric service
- $5,591—Suez Treatment Solutions, Inc. for ballasts
- $4,399—Xylem Water Solutions USA, Inc. for impellers, washers, and wear rings

Recycled Water Operations (Fund 510)

- $7,286—PG&E for electric service
- $3,821—Univar Solutions USA, Inc. for sodium hydroxide at EDHWWTP

Hydroelectric Operations (Fund 610)

- $69,200—Markit! Forestry Management, LLC for vegetation management services

Recreation Operations (Fund 710)

- $4,810—Outdoor Creations, Inc. for picnic tables

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

- $54,119—Black & Veatch Corporation for preparation and design services:
  >Project #15024.01 – Folsom Lake Intake Improvements ($42,091)
  >Project #18035.01 – EDHWWTP Waste-Activated Sludge Dissolved Air Floatation Thickening Unit Rehabilitation ($12,028)
- $5,718—Blackburn Consulting for geotechnical testing services – Folsom Lake Intake Improvement (Project #15024.01)
- $47,257—Bonkowski and Associates, Inc. for evaluation of well site – FERC:C50.2 Caples Lake Campground (Project #15016.01)
- $8,921—Cardno, Inc. for design plans and specifications – FERC:C38.4B Caples Lake Stabilization (Project #0676H.01)
- $15,760—ControlPoint Engineering, Inc. for on-call design services – EDHWWTP Belt Press Replacement (Project #18053.01)
- $34,495—Domenichelli and Associates, Inc. for engineering design services:
  >Project #16046.01 – Powerhouse Roof ($19,920)
  >Project #17020.01 – Wastewater Collection System Pipeline ($5,100)
  >Project #20002.01 – DOT Construction Project–Water ($1,020)
  >Project #11032.01 – Main Ditch-Forebay to Reservoir 1 ($8,455)
- $53,429—Doug Veerkamp General Engineering, Inc. for construction services ($56,241). Retention held $2,812:
  >Project #18027.01 – El Dorado Lift Pipeline Replacement ($22,975)
  >Project #18007.01 – Pony Express Waterline Replacement ($33,266)
- $16,590—Gannett Fleming, Inc. for geotechnical investigations:
  >Project #06081H.01 – FERC:C50.8 Pacific Crest ($5,836)
  >Project #16046.01 – Powerhouse Roof ($10,754)
- $16,407—GHD, Inc. for engineering and design services – Wastewater Collection Facility Relocation (Project #17034.01)
- $3,911—Kleinfelder, Inc. for consulting services – FERC:C37.8 Water Temperature Monitoring (Project #06021H.01)
- $1,031,988—K. W. Emerson, Inc. for construction services ($1,086,303) – Flume 38-40 Canal Conversion (Project #16022.01). Retention held $54,315
- $34,732—MCK Americas, Inc. for construction management services – Main Ditch-Forebay to Reservoir 1 (Project #11032.01)
- $20,000—State Water Resources Control Board for a time extension petition fee – Permit 21112 Change in Point of Diversion (Project #16003.01)
- $81,180—Syblon Reid for construction services ($85,453) – South Pointe Lift Station Upgrade (Project #16008.01). Retention held $4,273
- $18,985—Technical Systems, Inc. for hardware installation and configuration services:
  >Project #18048.07 – Critical Water Facility Generators - Gold Ridge ($5,265)
  >Project #20007.01 – Res 2 SCADA Hardware Replacement ($13,720)
- $245,799—Telstar Instruments, Inc. for electrical instrumentation services ($258,736) – DCWWTP Process Control Design (Project #17033.01). Retention held $12,937
- $19,305—Zanjero for consulting services – Permit 21112 Change in Point of Diversion (Project 16003.01)

Executive Summary for December 29, 2020 -- $1,987,297.57:

This summary highlights significant disbursements made by major business activity:

Development Services (Fund 105)

- $14,950—Serrano Associate, LLC for a refund on a deposit payment

General District Operations (Fund 110)

- $3,736—Breault Asphalt Maintenance for a credit balance refund on customer account
- $20,685—CDW Government for email security software maintenance
- $3,496—George Reed, Inc. for a credit balance refund on customer account
- $3,540—J & C Automotive for vehicle repair services
- $6,256—Jack Nissen for a credit balance refund on customer account
- $64,433—Pace Supply Corporation for warehouse inventory
- $4,198—Riverview International Trucks, LLC for labor and materials to refinish dump bed

Engineering Operations (Fund 210) none to report

Water Operations (Fund 310)

- $6,550—Arrow Fence Company for fence repair service
- $3,409—Industrial Water Solutions for speed controls and springs
- $76,475—Macauley Construction, Inc. for asphalt patch paving
- $21,553—MCS Inspection for reservoir coating inspections
- $24,294—NTU Technologies, Inc. for polymer at Reservoir 1

Wastewater Operations (Fund 410)

- $3,710—Ferguson Enterprises, LLC for pipe patch kits
- $15,084—Polydyne, Inc. for polymer and de-foamer at EDHWWTP and DCWWTP
- $9,299—Suez Treatment Solutions, Inc. for 300 ultraviolet lamps

Recycled Water Operations (Fund 510)

- $3,947—Univar Solutions USA, Inc. for sodium hydroxide at EDHWWTP

Hydroelectric Operations (Fund 610)

- $11,236—Gemini Forest Products for lumber

Recreation Operations (Fund 710) none to report

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

- $5,800—BT Consulting, Inc. for on-call services:
  >Project #15024.01 – Folsom Lake Intake Improvement ($1,700)
  >Project #16046.01 – Powerhouse Roof ($500)
  >Project #16022.01 – Flume 38-40 Canal Conversion ($1,800)
  >Project #16044.01 – Pacific Tunnel Rehabilitation ($1,800)
- $32,200—GEI Consultants, Inc. for engineering services – Pacific Tunnel Rehabilitation (Project #16044.01)
- $15,524—Kennedy/Jenks Consultants, Inc. for consulting services – Camino Heights Wastewater Treatment Plant Study (Project #STUDY09.01)
- $1,278,614—K. W. Emerson, Inc. for construction services ($1,345,909) – Flume 38-40 Canal Conversion (Project #16022.01). Retention held $67,295
- $76,041—Macauley Construction, Inc. for asphalt patch paving – Water Service Line Replacement (Project #19036.01)
- $224,098—Mars Company for water meter test bench equipment – Meter Test Bench Replacement (Project #20011.01)

Attachment B

Board Expenses/Reimbursements
Warrant Registers dated 12/08/20 - 12/29/20

DESCRIPTION	Lori Anzini	Alan Day	Pat Dwyer	George Osborne	Michael Raffety	Total
Personal Vehicle Expense				$29.33		$29.33
Hotel						$0.00
Meals or Incidentals Allowance						$0.00
Airfare, Car Rental, Misc Travel						$0.00
Fax, Cell or Internet Service						$0.00
Meeting or Conference Registration						$0.00
Meals with Others						$0.00
Membership Fees/Dues						$0.00
Office Supplies						$0.00
Reimburse prepaid expenses						$0.00
Miscellaneous Reimbursements						$0.00
	$0.00	$0.00	$0.00	$29.33	$0.00	$29.33

Attachment C

Employee Expenses/Reimbursements
Warrant Registers dated 12/08/20 - 12/29/20

EMPLOYEE	DESCRIPTION	AMOUNT
Radenko Odzakovic	Water Distribution Operator Certification Renewal	$105.00
Jacqueline Noel	Communication Webinar Registration	$199.00
Cary Mutschler	Engineer License Renewal	$115.00
Ryan Mohondro	Water Distribution Operator Certification Renewal	$105.00
Eric Henderson	Drinking Water Operator Exam Fees	$130.00
Dan Gibson	Employee Appreciation Lunch Reimbursement	$213.94
Chris Soul	Membership Dues	$192.00
Bill Petterson	Coffee for Line Break Crew, and Employee Appreciation Lunch Reimbursement	$195.99
Jose Perez	Employee Appreciation Lunch Reimbursement	$128.82
Tony Julian	Tuition Reimbursement	$1,027.32
Renee Barragan	Employee Appreciation Lunch Reimbursement	$151.85
James Balay	Water Treatment Plant Operator Training Expenses	$168.53
Zol Whitman	Water Treatment Operator Certification Training and Certification Renewal	$229.55
Kurt Mikkola	Employee Appreciation Lunch Reimbursement	$181.86
Lelan Kay	Water Distribution Operator Maintenance Course Fees	$166.53
Peter Heape	Employee Appreciation Lunch Reimbursement	$105.26
Dan Corcoran	Hand Sanitizer and Face Coverings	$426.08
Dennis Andrews	Cross-Connection Certification Renewal	$100.00
		$3,941.73

El Dorado Irrigation District

MINUTES
REGULAR MEETING OF THE BOARD OF DIRECTORS
December 14, 2020 — 9:00 A.M.

Board of Directors

Pat Dwyer—Division 2
President

Lori Anzini—Division 4
Vice President

George Osborne—Division 1
Director

Brian K. Veerkamp—Division 3
Director

Alan Day—Division 5
Director

Executive Staff

Jim Abercrombie
General Manager

Brian D. Poulsen, Jr.
General Counsel

Jennifer Sullivan
Clerk to the Board

Jesse Saich
Communications

Brian Mueller
Engineering

Mark Price
Finance

Jose Perez
Human Resources

Tim Ranstrom
Information Technology

Dan Corcoran
Operations

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

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.

Please take notice, as a result of the COVID-19 pandemic, California Governor Gavin Newsom issued Executive Order (EO) N-29-20, which waives certain requirements of the Ralph M. Brown Act (Brown Act) in order to prevent gatherings and slow the spread of COVID-19. Specifically, EO N-29-20 waives the requirements that local public agencies (1) notice each teleconference location from which a board member will participate, (2) make each teleconference location accessible to the public, (3) allow the public to address the agency from each teleconference location, (4) post the agenda at each teleconference location, and (5) ensure that a quorum of the board participate in locations within the boundary of the agency. EO N-29-20 requires local public agencies that conduct public meetings telephonically to allow members of the public to observe and address the meeting telephonically or otherwise electronically.

Because indoor public gatherings remain restricted under the Governor's Executive Orders, regular Board Meetings will continue to be closed to in-person attendance by the public and conducted virtually for the time being. In accordance with EO N-29-20, the public may participate in the District's Board meeting by teleconference or web conference via the instructions provided below. Members of the public who participate in the meeting via teleconference or web conference will be given the opportunity to speak and address the Board, and their comments will be included in the audio recording of the meeting. The meeting materials will be available for download from the District's website at www.eid.org.

PUBLIC PARTICIPATION INSTRUCTIONS

Instructions to join the Board Meeting by telephone only

No accompanying computer or mobile device required. This option will allow participants to listen to Board meeting audio and address the Board during public comment periods by pressing *9 on the telephone keypad.

Dial ***1.669.900.6833*** and enter Meeting ID ***945 6360 8941*** when prompted.

Instructions to join the Board Meeting from your computer or mobile device

Click the following join link or copy and paste into your browser https://zoom.us/j/94563608941.

If the device being used ***is*** equipped with a microphone and speaker, participants may view the presentation live and listen to Board meeting audio. You may address the Board during public comment periods by clicking on the "raise a hand" button.

If the device being used ***is not*** equipped with a microphone, participants may view the presentation live and listen to Board meeting audio using the link above. Participants may address the Board during public comment periods by using the call in instructions above and pressing *9 on the telephone keypad.

Additionally, please note that before joining a Zoom meeting on a computer or mobile device, you can download the Zoom app from https://zoom.us/download. Otherwise, you will be prompted to download and install Zoom when you click a join link. You can also visit https://zoom.us/test at any time to familiarize yourself with Zoom.

CALL TO ORDER

President Osborne called the meeting to order at 9:00 A.M.

Roll Call
Board

Present: Directors Osborne, Dwyer, Veerkamp, Anzini and Day. All Directors participated via video conference.

Staff

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

Pledge of Allegiance and Moment of Silence

President Osborne led the Pledge of Allegiance and a Moment of Silence to reflect on the sacrifices, hard work and outstanding service from all the healthcare and other frontline workers.

ADOPT AGENDA

ACTION: Agenda was adopted.

MOTION PASSED

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

COMMUNICATIONS

Awards and Recognitions

a) The District would like to recognize Marty Humbird, Construction Inspector II for his response to an injury accident involving a contractor that occurred on the Flume 38-40 replacement project on November 12, 2020. When a contractor's employee was injured after being struck in the legs by a compactor blade, Marty's poise, knowledge and quick thinking actions resulted in the fastest emergency response possible to the remote worksite. He provided reassurance and comfort to the injured worker until emergency response arrived and his actions helped give the worker the best possible chance for recovery as a result. This was an outstanding job under very difficult circumstances and Marty's efforts are appreciated!
b) The District received an email from EID customer Andrew Hinkley in appreciation of Joe Wicks, Customer Field Technician who notified him of a potential water leak at his home. Great example of EID's Guiding Principle to deliver excellent customer service!
c) The District received an email from EID customers Mike and Sheryl Kroh in appreciation of District staff Seth Borba, Joe Breckenridge, Kevin Vandelinder, Garett Matyac, Joshua Schulz and Antero Acierto for their work on a recent water service line repair near their home. The email stated "We are incredibly pleased with the quality work and clean up. They did an awesome job." We appreciate your hard work, especially on a Sunday!

PUBLIC COMMENT

John Quinn, El Dorado Hills

COMMUNICATIONS

General Manager

General Manager Abercrombie provided an update to the Distrcit's response to COVID-19.

a) Tony Hinchcliffe, EID employee receives "H.R. LaBounty Safety Award" from Association of California Water Agencies-Joint Powers Insurance Authority for promoting safety in the workplace – Summary by Jose Perez
b) EID Wins ACWA Region 3 "Top Outreach Agency" Award for 2020 – Summary by Jesse Saich

Clerk to the Board

None

Board of Directors

Director Anzini thanked employees for their hard work and dedication to the District and its ratepayers over the last year. She also reported on her partipcation in the Association of California Water Agencies fall virtual conference.

Director Dwyer reported on his partipcation in the Association of California Water Agencies fall virtual conference.

Director Veerkamp reported on his recent onboarding as the District's newly elected Board member.

Director Osborne thanked District staff for their support during his time over the last year as Board President.

NOMINATION AND ELECTION

ACTION: Director Dwyer was elected Board President and Director Anzini was elected Board Vice President. Representative appointments will be made by Board President Dwyer at the regular Board meeting on January 11, 2021.

MOTION PASSED

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

APPROVE CONSENT CALENDAR

ACTION: Director Veerkamp pulled Item Nos. 1 and 2 and Director Dwyer pulled Item No. 13. Consent Calendar was then approved as amended.

MOTION PASSED

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

CONSENT CALENDAR

1. **Finance (Pasquarello)**
   Ratification of EID General Warrant Registers for the periods ending November 3, November 10, November 17, and November 24, 2020, and Board and Employee Expense Reimbursements for these periods.

   Director Veerkamp recused himself from the deliberations and vote on this Item.

   ACTION: Option 1: Ratified the EID General Warrant Register 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 Day, Anzini, Osborne and Dwyer

2. **Clerk to the Board (Sullivan)**
   Approval of the minutes of the November 9, 2020 regular meeting of the Board of Directors.

   ACTION: Option 1: Approved as submitted.

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

3. **Office of the General Manager (Abercrombie)**
   Consider ratifying Resolution No. 2020-006 to maintain emergency declaration regarding the COVID-19 pandemic.

   ACTION: Option 1: Ratified Resolution No. 2020-006 to maintain emergency declaration.

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

4. **Clerk to the Board (Sullivan)**
   Consider adopting the proposed 2021 Board meeting schedule.

   ACTION: Option 1: Adopted the proposed 2021 Board meeting schedule.

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

5. **Human Resources (Perez)**
   Consider adopting revised pay schedules for the Association of El Dorado Irrigation District Employees, El Dorado Irrigation District Managers and Supervisors Association, and the Confidential Non-Represented and Contract Employees as a result of the October 2020 CPI-W used to set Cost-of-Living adjustments.

   ACTION: Option 1: Adopted the revised pay schedules for the El Dorado Irrigation District Managers and Supervisors Association, the Association of El Dorado Irrigation District Employees, and the Confidential Non-Represented and Contract Employee groups.

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

6. **Clerk to the Board (Sullivan)**
   Consider supporting the nomination and appointment of Director Lori Anzini to serve on the Mountain Counties Water Resources Association Board of Directors.

   ACTION: Option 1: Supported the nomination and appointment of Director Lori Anzini to serve on the Mountain Counties Water Resources Association Board of Directors.

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

7. **Finance (Pasquarello)**
   Consider adopting a resolution for the Fiscal Year 2021 Appropriations Limit.

   ACTION: Option 1: Adopted Resolution No. 2020-020, for the Fiscal Year 2021 Appropriations Limit.

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

8. **Finance (Warden)**
   Consider awarding a contract to Hunt & Sons, Inc. in the not-to-exceed amount of $700,000 for cardlock and bulk fueling services for 2021.

   ACTION: Option 1: Awarded a contract to Hunt & Sons, Inc. in the not-to-exceed amount of $700,000 for cardlock and bulk fueling services for 2021.

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

9. Information Technology

Consider awarding a contract to Verizon Wireless in the not-to-exceed amount of $350,000 for a term of 29 months to provide wireless devices and communications services.

ACTION: Option 1: Awarded a contract to Verizon Wireless in the not-to-exceed amount of $350,000 for a term of 29 months to provide wireless devices and communications services.

MOTION PASSED

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

10. Operations

Consider authorizing additional funding in the not-to-exceed amount of $60,000 for capitalized labor and materials associated with the Powerhouse Penstock Valve Project, Project No. 18052.

ACTION: Option 1: Authorized additional funding in the amount of $60,000 for capitalized labor and materials associated with the Powerhouse Penstock Valve Project, Project No. 18052.

MOTION PASSED

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

11. Operations (Gibson)

Consider approving a contract amendment to TCB Industrial, Inc. in the not-to-exceed amount of $101,679 for rehabilitation of El Dorado Powerhouse Generator #1 and authorize additional funding of $101,679 for Powerhouse Generator #1 Rehabilitation Project, Project No. 20036.

ACTION: Option 1: Approved a contract amendment to TCB Industrial, Inc. in the not-to-exceed amount of $101,679 for rehabilitation of El Dorado Powerhouse Generator #1 and authorized additional funding of $101,679 for Powerhouse Generator #1 Rehabilitation Project, Project No. 20036.

MOTION PASSED

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

12. Operations (Smith)

Consider awarding a one-year contract to SUEZ Treatment Solutions Inc. in the not-to-exceed amount of $105,000 for the purchase of ultraviolet disinfection parts and equipment for the Deer Creek and El Dorado Hills Wastewater Treatment Plants and authorize the General Manager to extend the contract for two additional one-year periods if determined to be in the best interest of the District.

ACTION: Option 1: Awarded a one-year contract to SUEZ Treatment Solutions Inc. in the not-to-exceed amount of $105,000 for purchase of Ultraviolet disinfection parts and equipment for the Deer Creek and El Dorado Hills Wastewater Treatment Plants and authorized the General Manager to extend the contract for two additional one-year periods if determined to be in the best interest of the District.

MOTION PASSED

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

13. Finance (Price)

Consider adopting a resolution authorizing the execution of an escrow agreement to fund a payment of $5,999,106.10 for the Refunding Revenue Bonds, Series 2020C, and approving certain acts in connection therewith and certain other matters.

ACTION: Option 1: Adopted Resolution No. 2020-018, authorizing the execution of and escrow agreement to fund a payment of $5,999,106.10 for the Refunding Revenue Bonds, Series 2020C, and approving certain acts in connection therewith and certain other matters.

MOTION PASSED

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

14. Engineering

Consider authorizing additional funding in the amount of $30,000 for capitalized labor associated with the El Dorado Hills Wastewater Treatment Plant Solar Inverter Replacement Project, Project No. 18063.01.

ACTION: Option 1: Authorized additional funding in the amount of $30,000 for capitalized labor associated with the El Dorado Hills Wastewater Treatment Plant Solar Inverter Replacement Project, Project No. 18063.01.

MOTION PASSED

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

15. Engineering / Operations (Graham/ Odzakovic)

Consider awarding an on-call task to California Laboratory Services in the not-to-exceed amount of $67,826.40 for 2021 treated drinking water and source water analytical testing services.

ACTION: Option 1: Awarded an on-call task to California Laboratory Services in the not-to-exceed amount of $67,697.30 for 2021 treated drinking and source water monitoring analytical testing services.

MOTION PASSED

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

16. Clerk to the Board (Sullivan)

Consider supporting the nomination and appointment of Jim Abercrombie, General Manager to serve on the Association of California Water Agencies Region 3 Board of Directors.

ACTION: Option 1: Supported the nomination and appointment of Jim Abercrombie, General Manager to serve on the Association of California Water Agencies Region 3 Board of Directors.

MOTION PASSED

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

END OF CONSENT CALENDAR

INFORMATION ITEM

17. Engineering (Mueller)

Capital Improvement Plan Expenditures.

ACTION: None – Information only.

ACTION ITEMS

18. Engineering (Wilson)

Consider awarding contracts to James C. Cushman, Inc. in the not-to-exceed amount of $1,430,020 for construction of the Outingdale Raw Water Pump Station Replacement, Luhdorff and Scalmanini in the not-to-exceed amount of $111,765 for construction engineering services, JLR Environmental Consultants in the not-to-exceed amount of $102,000 for inspection services, and authorize additional funding of $40,000 for capitalized labor, and $166,215 in contingency for a total funding request of $1,850,000 for the Outingdale Raw Water Pump Station Upgrade Project, Project No. 16048.01.

ACTION: Option 1: Awarded contracts to James C. Cushman, Inc. in the not-to-exceed amount of $1,430,020 for construction of the Outingdale Raw Water Pump Station Replacement, Luhdorff and Scalmanini in the not-to-exceed amount of $111,765 for construction engineering services, JLR Environmental Consultants in the not-to-exceed amount of $102,000 for inspection, and authorized additional funding of $40,000 for capitalized labor, and $166,215 in contingency for a total funding request of $1,850,000 for the Outingdale Raw Water Pump Station Upgrade Project, Project No. 16048.01.

MOTION PASSED

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

REVIEW OF ASSIGNMENTS

Director Day requested staff prepare an item similar to the concept used during the 2011/2012 drought proposing the use of the lower of 2020 or 2021 for residential customer sewer commodity charges during the next Board meeting.

Director Day requested staff provide long-term weather forecasting at the next Board meeting.

Director Osborne requested staff prepare an item on increasing the general manager's spending authority at an upcoming Board meeting.

ADJOURNMENT

President Dwyer adjourned the meeting at 10:32 A.M.

_____

Pat Dwyer
Board President
EL DORADO IRRIGATION DISTRICT

ATTEST

_____

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

Approved: _____

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider ratifying Resolution No. 2020-006 to maintain emergency declaration regarding the COVID-19 pandemic.

PREVIOUS BOARD ACTION

March 23, 2020 – Board declared an emergency under applicable provisions of law and Board Policy as a result of the COVID-19 pandemic and authorized the General Manager to take all actions necessary and appropriate in response to the emergency.

April 27, May 11, May 26, June 8, June 22, July 13, August 10, August 24, September 14, October 13, October 26, November 9 and December 14, 2020 – Board ratified Resolution 2020-006 to maintain the emergency declaration.

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

BP 2050 Administrative Leeway in the Absence of Policy
BP 3060 Contracts and Procurement
Public Contract Code sections 1102, 20567 and 22050 et. seq.
Public Resources Code section 21080(b) and California Environmental Quality Act ("CEQA") Guidelines section 15269
Government Code section 54956.5
Governor Newsom's Executive Orders N-25-20 and N-29-20

SUMMARY OF ISSUE

COVID-19 has become a global pandemic. Governments at all levels including federal, state, and local have declared a state of emergency. This action is to ratify Board Resolution No. 2020-006 which declares an emergency and authorizes the General Manager to take necessary and appropriate action in response. The General Manager will provide periodic updates to the Board on the District's response to COVID-19 during his General Manager's report.

BACKGROUND/DISCUSSION

On March 4, 2020, Governor Newsom declared a state of emergency as a result of the COVID-19 pandemic. On March 12, 2020, El Dorado County declared a public health emergency. The following day, March 13, the President of the United States declared a national emergency.

The District performs a critical health and safety function for our customers—the supply of safe drinking water and wastewater services. It is imperative that the District continue to provide those critical functions during this emergency.

In order to ensure that the District is able to meet both the anticipated and unanticipated challenges that it is likely to face, the General Manager must have maximum flexibility in his ability to respond. District Board Policy 2050 authorizes the District's General Manager to act "in emergency situations where no Board Policies or Administrative Regulations exist." District Board Policy 3060, delegates to the General Manager authority to approve any and all contracts necessary to abate an emergency after first informing the President of the Board of Directors and scheduling an emergency meeting of the Board of Directors at the earliest possible opportunity.

Various provisions of law, including provisions in the Public Contracting Code, Public Resources Code, and Government Code govern aspects of the District's operations during declared emergencies.

In addition to declarations of emergency described above, Governor Gavin Newsom issued an executive order on March 12, 2020, relaxing some of the requirements of the Brown Act related to public meetings of local public agencies. The purpose of the executive order is to ensure social distance and reduce the risk of spreading the COVID-19 virus. On March 17, Governor Newsom issued a new Executive Order, N-29-20, which further relaxed certain provisions of the Brown Act with regard to conducting public meetings. As a result of these orders, and in order to protect the health and safety of District staff and the public, the General Manager closed District facilities to the public, including the headquarters facility, in March. With sectors of the economy reopening for public business, the General Manager opened the District headquarters building for customer service on June 1, 2020. On December 3, 2020, the State Public Health Officer issued a regional-stay-at-home order, under which the Greater Sacramento Region (including El Dorado County), is subject to a three-week stay-at-home order beginning on December 11, 2020. Therefore, the General Manager closed District facilities to the public, including the headquarters facility, on December 11, 2020. Because indoor public gatherings remain restricted under the Governor's Executive Order, regular Board Meetings will continue to be closed to in-person attendance by the public and conducted virtually for the time being. Consistent with the Governor's Executive Order, the public may observe and participate in all public Board meetings by teleconference or other electronic means, and each Board meeting agenda provides instructions for how to participate.

BOARD OPTIONS

Option 1: Ratify Resolution No. 2020-006 to maintain emergency declaration.

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

Option 3: Take no action.

RECOMMENDATION

Option 1 *(four-fifths vote required).*

ATTACHMENTS

Attachment A: Resolution No. 2020-006

Elizabeth Leeper for

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

Resolution No. 2020-006

RESOLUTION OF THE BOARD OF DIRECTORS OF EL DORADO IRRIGATION DISTRICT DECLARING AN EMERGENCY

WHEREAS, EL DORADO IRRIGATION DISTRICT (District) has encountered an emergency with regard to the COVID-19 pandemic, which requires prompt action to prevent or mitigate impairment to life, health, safety, property, and/or essential public services; and

WHEREAS, Government Code section 54956.5(a)(1) defines "emergency" as "a work stoppage, crippling activity, or other activity that severely impairs public health, safety, or both, as determined by a majority of the members of the legislative body;" and

WHEREAS, Government Code section 54956.5(a)(2) defines "dire emergency" as "a crippling disaster, mass destruction, terrorist act, or threatened terrorist activity that poses peril so immediate and significant that requiring a legislative body to provide one-hour notice before holding an emergency meeting may endanger the public health, safety, or both, as determined by a majority of the members of the legislative body;" and

WHEREAS, Public Contract Code section 1102 defines "emergency" as "a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services," and

WHEREAS, California Environmental Quality Act (CEQA) Guidelines section 15359 defines "emergency" as "a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services;" and

WHEREAS, Government Code section 54956.5(b)(1) and (2) authorize legislative bodies to hold emergency meetings in the case of an emergency or dire emergency involving matters upon which prompt action is necessary due to the disruption or threatened disruption of public facilities; and

WHEREAS, District Board Policy 2050 authorizes the District's General Manager to act "in emergency situations where no Board Policies or Administrative Regulations exist;" and

WHEREAS, Public Contract Code sections 22050(a)(1) and 20567 authorize irrigation districts to let contracts without notice for bids in case of an emergency; and

WHEREAS, Public Contract Code section 22050(b)(1) authorizes the Board of Directors, by a four-fifths (4/5ths) vote, to delegate to the General Manager the authority to order any action pursuant to paragraph (1) of subdivision (a) of Public Contract Code section 22050; and

WHEREAS, District Board Policy 3060, delegates to the General Manager authority to approve any and all contracts necessary to abate an emergency after first informing the President of the Board of Directors and scheduling an emergency meeting of the Board of Directors at the earliest possible opportunity; and

WHEREAS, Public Resources Code section 21080(b)(2) exempts from CEQA emergency repairs to public service facilities necessary to maintain services; and

WHEREAS, Public Resources Code section 21080(b)(4) and CEQA Guidelines section 15269(c) exempt from CEQA specific actions necessary to prevent or mitigate an emergency from CEQA;

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Directors of the El Dorado Irrigation District (Board) as follows:

1. The Board finds and declares that an emergency situation exists within the meaning of the enactments marked below:

   Public Contract Code section 1102;

   CEQA Guidelines section 15359;

   Public Contract Code section 20567;

   District Board Policy 3060;

   Public Contract Code section 22050(a)(1);

   Public Resources Code section 21080(b)(2);

   Public Resources Code section 21080(b)(4) and CEQA Guidelines section 15269(c);

2. The foregoing findings and declarations are based upon written, oral, and visual evidence, including both facts and professional opinions, presented to the Board at the hearing of this Resolution and upon the Minutes of the meeting at which this Resolution was adopted.
3. The Board hereby ratifies all actions taken by the District General Manager and his designees, prior to the adoption of this Resolution, which the General Manager and his designees reasonably deemed necessary to respond to the emergency declared herein.
4. The Board hereby delegates, authorizes, and directs the District General Manager and his designees to take all further actions reasonably deemed necessary to respond to the emergency declared herein. The General Manager or his designees shall report to and seek ratification of the Board of Directors for each action taken in excess of their normal authority, at the first regular Board of Directors meeting held after each such action.

5. This Resolution shall take effect immediately upon adoption. Subject to the ratification required by Public Contract Code sections 22050(b)(3), (c)(1), and (c)(2), and by Board Policy 3060, this Resolution shall remain in full force an effect until rescinded by a subsequent Resolution of the Board of Directors.

The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 23rd day of March 2020, by Director Osborne who moved its adoption. The motion was seconded by Director Raffety and a poll vote taken which stood as follows:

AYES: Directors Osborne, Raffety, Dwyer, Anzini and Day

NOES:

ABSENT:

ABSTAIN:

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

George Osborne, President
Board of Directors
EL DORADO IRRIGATION DISTRICT

ATTEST:

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

(SEAL)

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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 23rd day of March 2020.

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

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EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider adopting two resolutions to certify signatures for the District's checking accounts at Bank of America and El Dorado Savings Bank.

PREVIOUS BOARD ACTION

The Board annually adopts resolutions certifying signatures on the District's checking accounts to reflect any changes in Board officers and District executive staff.

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

AR 3091.9 Investment

SUMMARY OF ISSUE

The Board adopts resolutions as necessary to maintain accurate authorized signers for the District's bank accounts. The District maintains four checking accounts at Bank of America for which money is drawn from in the name of El Dorado Irrigation District: Public Funds Checking Account, Controlled Disbursement Account, Non-analyzed Investment Account (Leasing account), and Flexible Spending Health Claims Checking Account. The District also maintains one checking account at El Dorado Savings Bank for the Sly Park recreation facility.

BACKGROUND/DISCUSSION

Effective December 14, 2020, Director Pat Dwyer became the District's new Board President, replacing Director George Osborne. Therefore, Director Dwyer's signature needs to be added to the bank signature cards, and Director Osborne's signature needs to be removed from the bank signature cards. Two signatures are required on all checks for payment in the name of El Dorado Irrigation District on the District's Bank of America and El Dorado Savings Bank checking accounts. The new Board President, General Manager Jim Abercrombie, and Finance Director Mark Price are approved signers on the accounts. Separate draft resolutions are offered for each of the two banks.

BOARD OPTIONS

Option 1: Adopt two resolutions to certify signatures for the District's checking accounts at Bank of America and El Dorado Savings Bank.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: Proposed Resolution for Certification of Signatures – Bank of America Checking Accounts

Attachment B: Proposed Resolution for Certification of Signatures – El Dorado Savings Bank Checking Account

Tony Pasquarello
Finance Manager

Mark Price
Finance Director

Jim Abercrombie
General Manager

**RESOLUTION OF THE BOARD OF DIRECTORS OF
EL DORADO IRRIGATION DISTRICT
CERTIFICATION OF SIGNATURES – BANK OF AMERICA
CHECKING ACCOUNTS**

BE IT RESOLVED that the EL DORADO IRRIGATION DISTRICT has established in its name accounts with the BANK OF AMERICA, N.A. ("Bank"), upon such terms and conditions as may be agreed upon between the parties, and that the General Manager of the District or his/her designee be and hereby is authorized to establish and maintain such accounts; and

BE IT FURTHER RESOLVED that the persons of the EL DORADO IRRIGATION DISTRICT named below be and hereby are authorized to sign checks on behalf of the EL DORADO IRRIGATION DISTRICT; provided, however that the authorized signatories of checks for the Health Claims Checking Accounts and Flexible Spending Account are the insurance carrier's administrator for those programs.

BE IT FURTHER RESOLVED that the Bank is hereby requested, authorized and directed to honor all checks for payment of money drawn in the name of the El Dorado Irrigation District on its Controlled Disbursement Account and Non-analyzed Investment Account (Leasing Account), including those drawn to individual orders of any person or persons whose names appear thereon as signer(s) thereof, when such checks bear the signatures of any two of the persons of EL DORADO IRRIGATION DISTRICT named below, and further that the facsimile signatures for Board President Roger "Pat" Dwyer, General Manager Jim Abercrombie, and Director of Finance Mark Price shall be deemed good and sufficient signatures for such purpose.

BE IT FURTHER RESOLVED that the Bank is hereby requested, authorized and directed to honor all checks for payment of money drawn in the name of the El Dorado Irrigation District on its Health Claims Checking Accounts and Flexible Spending Account when such checks bear the signatures of the insurance carrier's administrator for those programs, and further that the facsimile signatures of such insurance carrier's administrator shall be deemed good and sufficient signatures for such purpose.

BE IT FURTHER RESOLVED that the specimen signatures appearing opposite the names and titles below are the genuine signatures of such persons:

/ / /

/ / /

/ / /

Signatures

Roger "Pat" Dwyer	President, Board of Directors	_____
Jim Abercrombie	General Manager	_____
Mark Price	Director of Finance	_____

BE IT FURTHER RESOLVED that Clerk to the Board Jennifer Sullivan duly certifies the genuineness of said signatures of the foregoing persons of EL DORADO IRRIGATION DISTRICT.

BE IT FURTHER RESOLVED that this Resolution shall take effect and be effective immediately upon its adoption.

The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 11th day of January 2021, by Director who moved its adoption. The motion was seconded by Director and a poll vote taken which stood as follows:

AYES:

NOES:

ABSENT:

ABSTAIN:

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

_____
Roger "Pat" Dwyer, President
Board of Directors
EL DORADO IRRIGATION DISTRICT

ATTEST:

_____
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

(SEAL)

I, the undersigned, Clerk to the Board of EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 11th day of January 2021.

_____
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

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**RESOLUTION OF THE BOARD OF DIRECTORS OF
EL DORADO IRRIGATION DISTRICT
CERTIFICATION OF SIGNATURES – EL DORADO SAVINGS BANK
CHECKING ACCOUNT**

BE IT RESOLVED that the EL DORADO IRRIGATION DISTRICT has established in its name an account with EL DORADO SAVINGS BANK, upon such terms and conditions as may be agreed upon between the parties, and that the General Manager of the District be and hereby is authorized to establish and maintain such account; and

BE IT FURTHER RESOLVED that the persons of the EL DORADO IRRIGATION DISTRICT named below be and hereby are authorized to sign checks on behalf of the EL DORADO IRRIGATION DISTRICT.

BE IT FURTHER RESOLVED that the bank is hereby requested, authorized and directed to honor all checks for payment of money drawn in the name of the El Dorado Irrigation District on its SLY PARK RECREATION AREA checking account, including those drawn to individual orders of any person or persons whose names appear thereon as signer(s) thereof, when such checks bear the signatures of any two persons of EL DORADO IRRIGATION DISTRICT named below, and further that the facsimile signatures for Board President Roger "Pat" Dwyer, General Manager Jim Abercrombie, and Director of Finance Mark Price shall be deemed good and sufficient signatures for such purpose.

BE IT FURTHER RESOLVED that the specimen signatures appearing opposite the names and titles below are the genuine signatures of such persons:

		Signatures
Roger "Pat" Dwyer	President, Board of Directors	_____
Jim Abercrombie	General Manager	_____
Mark Price	Director of Finance	_____

BE IT FURTHER RESOLVED that Clerk to the Board Jennifer Sullivan duly certifies the genuineness of said signatures of the foregoing persons of EL DORADO IRRIGATION DISTRICT.

BE IT FURTHER RESOLVED that this Resolution shall take effect and be effective immediately upon its adoption.

/ / /

The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 11th day of January 2021, by Director who moved its adoption. The motion was seconded by Director and a poll vote taken which stood as follows:

AYES:

NOES:

ABSENT:

ABSTAIN:

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

_____
Roger "Pat" Dwyer, President
Board of Directors
EL DORADO IRRIGATION DISTRICT

ATTEST:

_____
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

(SEAL)

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I, the undersigned, Clerk to the Board of EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 11th day of January 2021.

_____
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

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EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider authorizing additional funding in the not-to-exceed amount of $42,946 for U.S. Forest Service Payments per the conditions of the Federal Energy Regulatory Commission Project 184 License Project, Project No. 07006H.

PREVIOUS BOARD ACTION

The Board annually authorizes funding for the payment to the U.S. Forest Service applicable to the current Federal Energy Regulatory Commission (FERC) license requirements.

October 26, 2020 – Board adopted the 2021-2025 Capital Improvement Plan (CIP), subject to available funding.

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

Staff advised that each CIP project would be presented to the Board for funding approval.

SUMMARY OF ISSUE

Board approval is required to authorize CIP funding prior to staff proceeding with work on the projects.

BACKGROUND/DISCUSSION

FERC Project 184 License U.S. Forest Service (USFS) 4(e) Conditions 51.5 and C51.7 require the District to perform monitoring and permit compliance assurance for the campground concessionaire special use permits at Caples Lake Campground and Silver Lake East Campground; patrol and operation of non-concessionaire developed and dispersed recreation facilities, as well as trails and other locations utilized by visitors to the Project, within and adjacent to the Project boundary; and provide a boat and operator at least twice each season on Caples Lake and Silver Lake to share with the USFS in patrolling the shoreline along Silver Lake and Caples Lake, and to clean up litter.

Table 1-1
CIP Funding Request

	Project Name and Number	2021-2025 CIP Plan[1]	Funded to Date	Actual Costs to date[2]	Amount Requested	Funding Source
1.	FERC C51.5 & C51.7 RM USFS Payments 07006H	$854,392	$535,216	$530,891.12	$42,946	100% Water Rates
	TOTAL FUNDING REQUEST				$42,946	

[1] Includes all existing costs plus any expected costs in the 5-year CIP Plan.
[2] Actual costs include encumbrances.

CIP Funding

Project No.	07006H	**Board Date**	01/11/2021
Project Name	FERC: C51.5 and C51.7 RM USFS Payments		
Project Manager	Greg Hawkins		

Budget Status	**$**	**%**
Funded to Date	$ 535,216	--
Spent to Date (including encumbrances)	530,891	99%
Current Remaining	$ 4,325	1%

Funding Request Breakdown	**$**
Annual Payment	$ 42,946
Total	$ 42,946

Funding Source
100% Water Rates

Description

"This CIP is a requirement of the FERC License, Settlement Agreement, and USFS 4(e) Condition 51, which, in part, requires the District to provide funding for the following activities:

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

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

Funding is requested to pay the 2021 annual fees to the USFS for special use administration and dispersed area patrol on USFS lands affected by the Project and for staff time for the annual policing and litter cleanup around the shorelines of Silver Lake and Caples Lake in 2021.

BOARD OPTIONS

Option 1: Authorize additional funding in the not-to-exceed amount of $42,946 for U.S. Forest Service Payments per the conditions of the Federal Energy Regulatory Commission Project 184 License Project, Project No. 07006H.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: CIP Summary

Greg Hawkins
Parks and Recreation Manager

for
Dawn Noceti
Accountant

Dan Corcoran
Operations Director

Mark Price
Finance Director

Jim Abercrombie
General Manager

2021 CAPITAL IMPROVEMENT PLAN Program: FERC

Project Number: 07006H

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

Project Category: Regulatory Requirements

Priority: 1 **PM:** Hawkins **Board Approval:** 10/26/20

Project Description:

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

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

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

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

Basis for Priority:

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

Project Financial Summary:			
Funded to Date:	$ 535,216	Expenditures through end of year:	$ 580,891
Spent to Date:	$ 530,891	2021 - 2025 Planned Expenditures:	$ 273,501
Cash flow through end of year:	$ 50,000	Total Project Estimate:	$ 854,392
Project Balance	$ (45,675)	Additional Funding Required	$ 319,176

Description of Work	Estimated Annual Expenditures					
	2021	2022	2023	2024	2025	Total
Fees	$47,762	$49,195	$50,671	$52,191	$53,682	$ 253,501
Staff time	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 20,000
						$ -
						$ -
TOTAL	$ 51,762	$ 53,195	$ 54,671	$ 56,191	$ 57,682	$ 273,501

Estimated Funding Sources	Percentage	2021 Amount
Water Rates	100%	$97,437
		$0
		$0
Total	100%	$97,437

Funding Comments:

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding contracts to Sterling Water Technologies, LLC. in the not-to-exceed amount of $283,491.90 and NTU Technologies, Inc. in the not-to-exceed amount of $48,288 for the annual purchase of drinking water treatment chemicals.

PREVIOUS BOARD ACTION

December 9, 2019 – Board awarded a contract to Sterling Water Technologies, LLC in the not-to-exceed amount of $283,491.90 and awarded a contract to NTU Technologies, Inc. in the not-to-exceed amount of $48,288 for the purchase of drinking water treatment chemicals for calendar year 2020.

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

BP 3060 Contracts and Procurement
AR 3061.04 Procurement and Contract Authority

SUMMARY OF ISSUE

The purpose of this item is to purchase chemicals necessary for drinking water treatment including coagulant polymer, pipeline corrosion inhibitors, and other treatment chemicals appropriate for the District's requirements on an as-needed basis. Staff is requesting the Board award contracts to Sterling Water Technologies, LLC (SWT) and NTU Technologies, Inc (NTU) to meet the District's drinking water chemical purchase needs during 2021.

BACKGROUND/DISCUSSION

Successful water treatment requires the use of a combination of chemicals that have performance characteristics to enable the treatment process and allow EID to meet water quality standards, both functionally and to meet regulatory standards. These chemicals were selected based upon the treatment process for each facility and chemical composition of source waters; each facility has specific needs tailored to the configuration of the facility and source water quality, which also varies during the course of the year under differing hydrologic conditions. The selected primary coagulant formulation, the filter aid, and corrosion inhibitor / corrosion control chemicals used are proprietary to the two companies of SWT and NTU, and therefore no equivalent alternatives are available. These formulations were selected based upon a rigorous evaluation process requiring an extraordinary amount of District staff time to validate effectiveness of the chemicals and gather approval from the Division of Drinking Water (DDW) for use in the treatment processes.

Currently, EID purchases a selection of proprietary products from Sterling Water Technologies, the most significant being the primary coagulant 8809, filter aid 2995, backwash treatment coagulants LT27 and LT20, and corrosion control orthophosphate CP25 and CP35 that are used at four of the District's surface water treatment plants. These products were designated over ten years ago as a primary coagulant and coagulant aid for the District's treatment plants based on performance studies conducted at the bench top trial levels. These proprietary chemicals were subsequently approved as treatment additives in each water treatment plant's Operational Plan approved by DDW.

NTU Technologies has also been identified as a having a primary coagulant needed for the drinking water treatment process, which is also listed in District's operational plans approved by DDW. Operational staff determines the optimal primary coagulant between the two products based on raw water quality change and dosages required to obtain required finished water quality while maintaining fiscal responsibility and fiscal optimization.

The charts below is a list of the chemicals as well as a projection of how much the District estimates will be needed to ensure proper drinking water treatment during 2021.

SWT Products for 2021			
Chemical Name	lbs/year	$/lbs	$/year
8809	244,040	0.94	229,397.60
OP35	13,300	0.58	7,714.00
OP25	71,200	0.57	40,228.00
2995	110	3.29	361.90
LT27	1,210	3.29	3,980.90
LT20	550	3.29	1,809.50
		Total Estimate	**283,491.90**

NTU Technology Products for 2021			
Chemical Name	lbs/year	$/lbs	$/year
911	100,600	0.48	48,288.00
		Total Estimate	**48,288.00**

Staff recognizes the importance of competitive bid procurements and periodically solicits chemical companies to supply samples of comparable products for evaluation through bench top studies. However, the only two companies that can and have met performance standards are SWT and NTU Technologies. In addition, use of these chemicals has already been approved by DDW for use in the District's treatment processes. Therefore, staff recommends award to both SWT and NTU.

FUNDING

Staff is requesting the Board award a contract to SWT in the not-to-exceed amount of $283,491.90 and award a contract to NTU in the not-to-exceed amount of $48,288 for drinking water chemical purchases during 2021. The costs for these chemicals will be paid from the Drinking Water Operations budget.

BOARD OPTIONS

Option 1: Award contracts to Sterling Water Technologies, LLC. In the not-to-exceed amount of $283,491.90 and NTU Technologies, Inc. in the not-to-exceed amount of $48,288 for the annual purchase of drinking water treatment chemicals.

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

Option 3: Take no action.

RECOMMENDATION
Option 1

ATTACHMENTS
Attachment A: Sterling Water Technologies Quote
Attachment B: NTU Technology Quote

Radenko Odzakovic
Drinking Water Operations Manager

Ryan Deakyne
Sr. Buyer

Dan Corcoran
Operations Director

Mark Price
Finance Director

Elizabeth Leeper
Senior Deputy General Counsel

Jim Abercrombie
General Manager

Effective Date: 1 JANUARY 2021
Customer#: 9ELD40

Quotation
1 of 1

Attachment A

Sterling Water Technologies LLC

Administrative Address	Delivery Address
EL DORADO IRRIGATION DISTRICT 2890 MOSQUITO ROAD PLACERVILLE, CA 95667	VARIOUS
Attention: RADENKO ODZAKOVIC	Ship to #: VARIOUS
Phone: 530 642 4125	Email: rodzakovic@eid.org
Fax:	

Sterling Water Technologies
P. O. Box 602, Columbia, TN 38402-0602
Phone-931-540-1334 Fax-931-540 1338

Product Description	Product #	Package Description	PRICE, $US/POUND	Quantity per Delivery		
CP 25 BULK	CP25-BULK	>15,540 #	$ 0.565	MIN 15,540 #		
CP 35 BULK	CP35-BULK	>9,000 #	$ 0.580	MIN 9,000 #		
CP 70 DRUM - 55 GALLON	CP70-S055N	720 #	$ 1.160	MIN 1 DRUM		
MAGNAFLOC LT20	M20-FB55	55.12 #	$ 3.290	MIN 1 BAG		
MAGNAFLOC LT27	M27-FB55	55.12 #	$ 3.290	MIN 10 BAGS		
SWT 8809 BULK	S8809	>44,000 #	$ 0.940	MIN FULL BULK LOAD		

ALL PREVIOUS QUOTES ARE CANCELLED EFFECTIVE 31 DEC 2020 **DOES NOT INCLUDE ANY APPLICABLE TAXES OR FEES.**

Designated Carrier: COMMON	Expiration Date: 31 DEC 2021
Shipping Location: VARIOUS	

Pricing is subject to change without notice unless a Purchase Order is issued or contract entered into.
A returnable container handling fee is deducted from container deposits when refunded.
Orders for packaged goods and mini-bulk are subject to the current Fuel/Reg/Security surcharge.
Third Party and bulk shipments have incorporated this surcharge into the quoted price.
Containers on MEMO basis carry a value which may be charged if not returned within sixty (60) days from date of shipment.

F.O.B. CWT = 100 lbs.

Sterling Water Technologies

Environmental Services Group

Robert E. Whalen

ROBERT E WHALEN
MANAGER, STERLING WATER TECHNOLOGIES LLC

P. O. Box 1107 Davis, CA 95617
Orders: (800) 342-6733 Fax: (844) 270-1688

Quote

El Dorado Irrigation District

Kurt Mikkola

5575 Gilmore Road
Pollock Pines, CA 95726

1835 Francisco Drive
El Dorado Hills, CA 95762

5560 Sly Park Road
Pollock Pines, CA 95726

kmikkola@eid.org

November 5, 2020

PRICE QUOTE
Effective January 1, 2021 – December 31, 2021

PRODUCT	PACKAGING	PRICE	QUANTITY	AVAILABILITY
911	Bulk Tanker Truck	$0.48/lb/del[1]	4,000 Gallons Minimum	ARO 7 – 15 Business Days
925	Bulk Tanker Truck	$0.62/lb/del[2]	4,000 Gallons Minimum	ARO 7 – 15 Business Days

[1]911 weighs 11 lbs per gallon.
[2]925 weighs 10.3 lbs per gallon
**Price does not include 3.5% tariff and fuel surcharge.

Please call our office to place all orders at (800) 342-6733
- or -
EMAIL: evie@ntutechnologies.com

This quote supersedes any and all prior quotes

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding a contract to WaterWorks Engineers, LLC in the not-to-exceed amount of $115,095 for modeling and analysis of the Deer Creek Collection System, and authorize additional funding of $45,000 for capitalized labor, and $15,000 in contingency for a total funding request of $175,095 for the Deer Creek Collection System Modeling Project, Project No. STUDY 16.

PREVIOUS BOARD ACTION

October 26, 2020 – Board adopted the 2021-2025 CIP, 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 Deer Creek wastewater collection system that identified pipe segments and lift stations that are potentially at or near capacity to inform replacement schedules, support CIP planning efforts, and identify areas with high sources of infiltration and inflow (I/I). This project intends to update the model with current infrastructure, additional flow calibration and additional loading to ensure the most accurate and contemporary information is used to support the District's planning efforts.

BACKGROUND/DISCUSSION

In 2009, the District completed its first iteration of the Sewer System Management Plan (SSMP) as required by the State Water Resources Control Board. The SSMP includes an evaluation of sewer system capacity and development of enhancement measures needed to reduce the likelihood of capacity-induced sanitary sewer overflows. The District hired HDR Engineering, Inc. to develop the original collection system hydraulic models for both the El Dorado Hills and Deer Creek systems. Since each of these systems function independently, there are two similar, but independent wastewater models.

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 Deer Creek Collection System model was last updated in 2013 and the results identified several locations that should be considered for current and/or future capacity upgrades. 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 intends to update the Deer Creek hydraulic model in a two-phased approach. The first phase will be to update the model with changes to sewer infrastructure that have occurred between the years 2013 and 2020, 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 analysis 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 during phase 1 and then re-calibrate the model once

data from the upcoming wet-weather season 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 (I/I), then the District could focus its investment in the localized area where I/I is occurring and achieve a substantially more cost-effective solution.

The end result of the two-phased approach will be a calibrated wastewater collection system model as well as identification of pipeline and lift station capacity needs in the Deer Creek system for incorporation into future CIP updates. This professional services contract includes both project phases; first phase to be completed by June 2021, and second phase to be completed by April 2022.

Request for Proposals

A Request for Proposals (RFP) was publically advertised in November 2020. Three consultants submitted proposals to the District. The proposal costs are summarized below:

Consultant	**Fee Proposal**
Water Works Engineers, LLC	$115,095
GHD, Inc.	$139,646
HydroScience Engineers, Inc.	$184,095

The WaterWorks proposal was found to be the best value based on the criteria of the RFP. Staff confirmed the scope of work can be completed within the proposed level of effort. Therefore, staff is recommending contract award to WaterWorks Engineers, LLC.

FUNDING

Funding for this project was identified in the 2021-2025 CIP. The funding source is 100% wastewater rates.

Water Works Engineers LLC – Professional Services contract	$115,095
Capitalized labor	$45,000
Project contingency (10%)	$15,000
Total Funding Requested	**$175,095**

BOARD OPTIONS

Option 1: Award a contract to WaterWorks Engineers, LLC in the not-to-exceed amount of $115,095 for modeling and analysis of the Deer Creek Collection System, and authorize additional funding of $45,000 for capitalized labor, and $15,000 in contingency for total funding request of $175,095 for the Deer Creek Collection System Modeling Project, Project No. STUDY 16.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: WaterWorks Engineers, LLC Proposal
Attachment B: CIP Summary

Liz Carrington
Senior Civil Engineer

Elizabeth Dawson
Engineering Manager

Brian Mueller
Engineering Director

Tracy Crane
Wastewater/Recycled Water Manager

Dan Corcoran
Operations Director

Mark Price
Finance Director

Elizabeth Leeper
Senior Deputy General Counsel

Jim Abercrombie
General Manager

COVER LETTER

December 21, 2020

Attachment A

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

Subject: Proposal for RFP20-10 – Deer Creek Collection System 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. RFP20-10 for the Deer Creek Collection System 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, Healdsburg, and recently for EID as well. ***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 its low-overhead structure that allows for us to be nimble, responsive to the needs of our clients, and cost-effective. ***EID has experienced Water Works' high level of client service on the recently completed El Dorado Hills Wastewater Hydraulic Modeling project.*** WWE took a highly interactive approach with both District Engineering and Operations Staff that yielded invaluable data and anecdotal information to ensure that the hydraulic model results and recommendations addressed the major concerns of Operators.

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.***

> "Drinking Water Operations and Water Works – Your presentation of the Water Treatment Plant O&M Manuals and what you do for PCWA was exceptional. Clearly the group was engaged and excited. **This was one of our best project spotlights ever!"**
> Tony Firenzi, Director, PCWA

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. ***We commit that the project team for the Deer Creek Modeling Project will include the same core team of Joe Ziemann and Anthony Baltazar which performed the El Dorado Hills Modeling project.*** If you have any questions regarding this proposal, please contact Joe Ziemann at: (916) 238-1460 ; joez@wwengineers.com

Very Truly Yours,
Joseph M. Ziemann
Senior Engineer/Project Manager, WaterWorks Engineers, LLC

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. **Joe Ziemann, P.E.** (15 years of experience, Water Works Senior Engineer and Project Manager) will lead the Project Team in our Roseville, CA office with **Mike Fisher, P.E.** serving as Principal in Charge. Joe has led and been involved with every sewer collection system hydraulic modeling project completed out of our Roseville office. Joe has a diverse background that includes gravity sewer, sewer pump station, and wastewater treatment plant design that allows him to understand how the collection system affects and is affected by pump station and treatment plant operations. Joe will be committed to this project from start to finish and will ensure District Staff are continually updated on project status. Joe 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 Joe possess these abilities. **Tim Durbin, P.E.**, who is our company-wide QA/QC manager, will provide review of all deliverables in accordance with WWE's QA/QC policy to ensure consistency of all deliverables. **Mike Fisher** will also be involved in QA/QC reviews and provide technical assistance as needed.

Phase 1

Task 2 – Model Update

Starting with the District's most recent GIS data of the Deer Creek 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 2019. 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.

The model update will also include confirmation of lift station operating parameters such as pump curves and pump station level operating setpoints, and identification of any special operating strategies currently employed by Operations Staff that may affect model results and accuracy. Water works has already performed a substantial portion of this work on our previous Motherload Force Main (MLFM) modeling effort and we have a very strong base understanding of this system and will hit the ground running on further analysis.

Further, Water Works will continue to develop its AFT Fathom model of the MLFM system that was previously developed and operate this model in tandem with the InfoWorks ICM collection system model. The MLFM system is an extremely complex pressurized model with 7 lift stations pumping into the same pipeline, which results in all lift station operations affecting one-another, and InfoWorks ICM is sometimes not the best software for modeling complex pressurized flow systems like this. Water Works' previous AFT Fathom model of the MLFM did not include the approximately 6,000 LF of 12" gravity pipe downstream of the first gravity manhole in Strolling Hills. An appropriate transition from pressurized to gravity flow will be a major focus of our modeling effort as we understand this complexity and will utilize both software platforms to ensure the most accurate possible results.

Task 3 – Validation of Existing Flow Data

WWE shall perform analysis of the District's flow monitoring data from at least 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, Deer Creek Wastewater Treatment Plant (WWTP) flow data, and rain gauge data (either publicly available or supplied by the District). As the District will remember from the recent El Dorado Hills Collection System Wastewater Modeling Project, the local storm event that occurred in January 2017 was utilized as the basis for the analysis of the collection system's response to wet weather storm events. Due to the continued lack of more recent significant storm events, WWE assumes that the data set for analysis on this project will contain data from approximately December 2016 through December 2020 (about 4 years) to ensure that January 2017 data is included for consideration during the analysis.

WWE assumes that the District will supply all requested WWTP flow data, lift station flow data, and rain gauge data in Excel format from its SCADA Historian at the Project Kickoff Meeting or as soon as practicable thereafter. WWE can download Hach flow meter data from the District's Hach FS Data website directly.

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. 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:

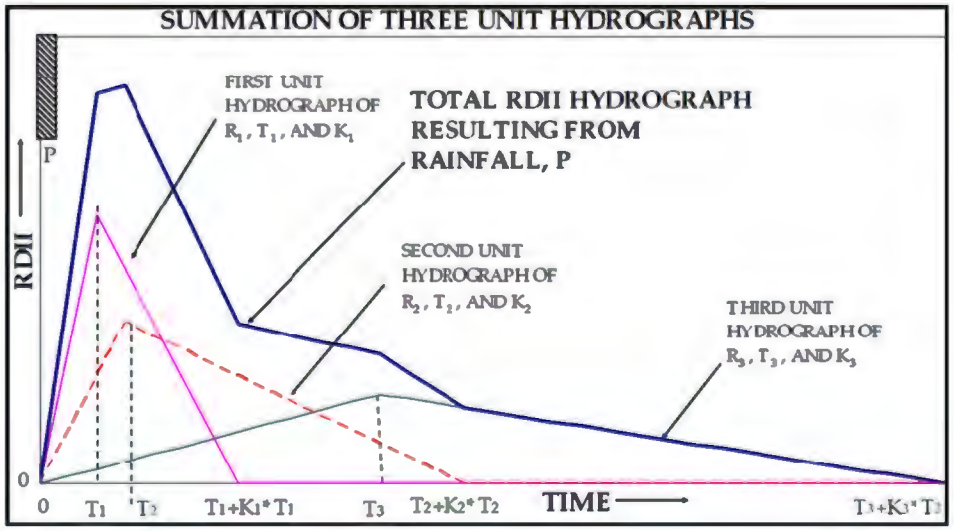
<u>Dry Weather Flow Analysis</u>

- 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 straight forward 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.
- Diurnal curves for different land use types (residential, commercial, etc.) 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 at least the last four 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. ***Similar to the previous El Dorado Hills Collection System Wastewater Modeling Project, WWE shall also discuss with EID Operation Staff observations from these storm events (such as lift station performance) that can be incorporated into the hydraulic model effort.*** We feel these discussions with District staff, who have in-depth knowledge of the collection system, were insightful and led to many important updates to the hydraulic model that refined its calibration and overall accuracy.
- 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 events larger than a 10-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 1-2yr event is used as the basis for developing hydrographs and projecting to a no larger than 10-yr event, if a 10-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 10-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 3-4 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.
- 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 2021/2022 rainy season at new flow monitoring locations. WWE intends to analyze and process any and all recorded wet weather flow monitoring data 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.

At the District's option, WWE would be willing to complete Tasks 5, 6 and/or 7 in 2021 with existing data so that the District can have in idea of the impacts of future developments and possible Capital Improvement Projects sooner rather than later, and further refine the results following additional 2021/2022 flow monitoring.

Task 5 – Hydraulic Model of Existing Wastewater System

Water Works shall utilize the flow monitoring analysis results from Task 3 (and Task 4 when complete) to update and further calibrate the District's hydraulic model under existing conditions. Water Works shall then 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.

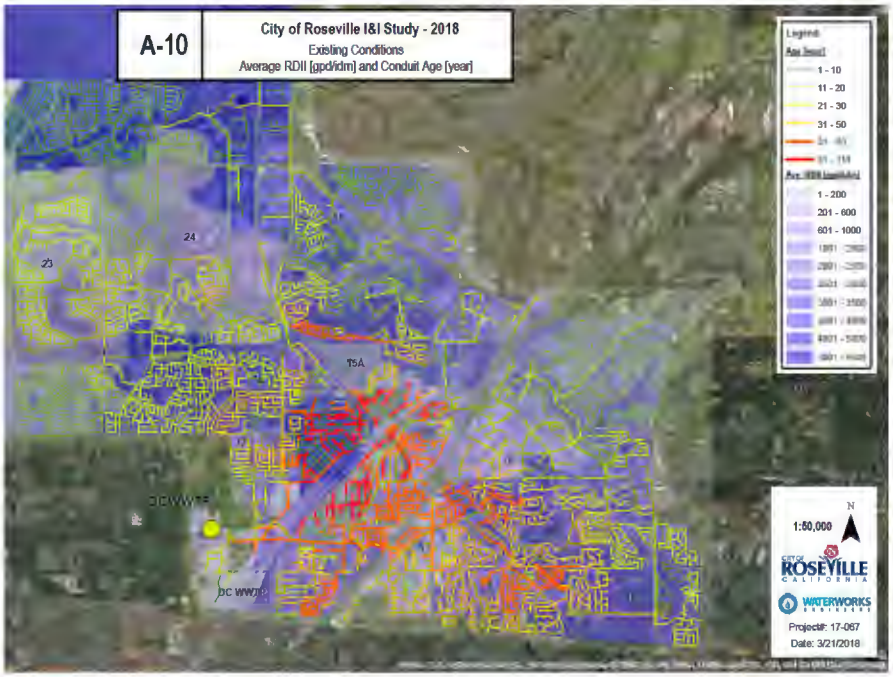
- Analyze model results to identify capacity deficiencies based on agreed upon capacity evaluation criteria under the various Existing Conditions model scenarios.
    - Close attention will be paid to the Strolling Hills trunk pipeline, which is recognized as a crucial asset in the District's overall Deer Creek 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, 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
        - ***WWE recognizes that timing of improvements to various sections of the MLFM system and improvements and growth at contributing lift stations will be key to this project***
    - 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 model files / data
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 ***and AFT Fathom software results (MLFM)***



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 contributing upstream areas as agreed upon with District input. ***WWE is familiar with the District's Facility Improvement Letter (FIL) process and typical content and will work efficiently with the District to collect and analyze new information.*** WWE will add additional future sewer loads to the hydraulic model 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 developed 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 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, text descriptions, alternatives analysis (where applicable), and conceptual level cost.
- WWE will perform closer analyses for the Strolling Hills trunk pipeline. Taking into account all foreseeable development growth in the trunk pipeline's upstream areas, WWE will determine the number of additional EDUs (based on the updated wastewater generation rates) that the trunk pipeline can receive while still adhering to District capacity design standards relating to pipe capacity. Based on an assumed growth rate for the contributing upstream areas (as agreed upon beforehand with the District), Water Works will determine estimated dates of any and all required upgrades to the trunk pipeline. Recommendations for construction timeframe and growth-based triggers 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 Deer Creek wastewater collection system's ability to sufficiently serve its residents' 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.

SECTION 2 – RELEVANT EXPERIENCE AND EXPERTISE

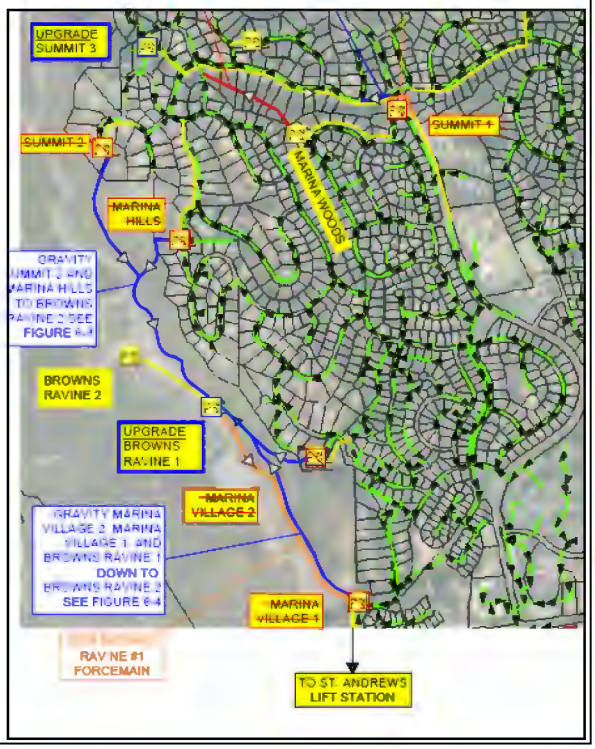
The following is a summary of sewer collection system Hydraulic Modeling Professional Services and projects performed by the Water Works Team over the past 5 years for local agencies that are similar in size and operational activities to El Dorado Irrigation District.

Comparable Clients	Operations	Customers
City of Healdsburg		
Public Agency	Sewer Collections and Wastewater Treatment	12,000 Customers
Salt Lake City		
Public Agency	Sewer Collections and Wastewater Treatment	200,000 Customers
City of Folsom		
Public Agency	Sewer Collections	72,000 Customers
City of Roseville		
Public Agency	Sewer Collections and Wastewater Treatment	135,000 Customers
City of Woodland		
Public Agency	Sewer Collection and Wastewater Treatment	60,000 Customers

El Dorado Irrigation District	**2019-2020 El Dorado Hills Sewer System Hydraulic Model**
Role: Prime Consultant – Hydraulics, Master Planning **Project Fee:** $113,000	**Team Members** Joe Ziemann, Senior Project Engineer / Manager Anthony Baltazar, Associate Engineer

Water Works Engineers was retained by El Dorado Irrigation District for hydraulic modeling and master planning services for the El Dorado Hills sewer collection system. Services provided included:

1) Update the GIS for the collection system to include recent developments and capital improvement projects
2) Create a hydraulic model of the system based on the GIS using Innovyze InfoWorks ICM
3) Review sewer flow monitoring data and develop calibrated dry weather and peak wet weather design storm scenarios to evaluate the hydraulic capacity of the collection system
4) Identify areas with infiltration and inflow above industry standards and develop an I/I reduction strategy
5) Identify sewer flows from anticipated future developments and add to hydraulic model
6) Develop a capital improvement program for improvements necessary to provide adequate hydraulic capacity under both current conditions and future development conditions



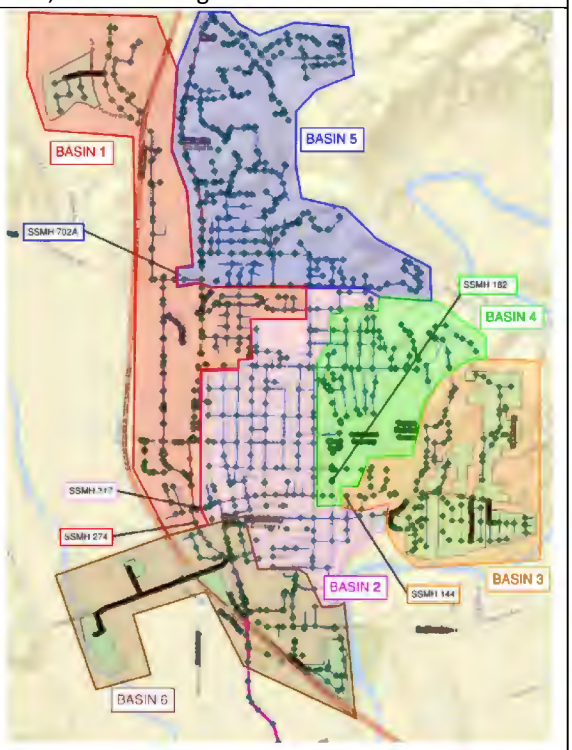
Water Works also worked collaboratively with District Staff to develop a Lift Station Elimination plan to help consolidate several smaller lift stations into a centralized lift station located at Brown's Ravine. Additionally, Water Works Engineers developed a computerized hydraulic model of the 9-mile long Mother Load Force Main in the District's Deer Creek sewer collection system using AFT Fathom. This hydraulic model was extremely complicated with 7 different sewer lift stations pumping into the same force main. ***The model will be a useful tool to model the impact of making improvements to various sections of the pipeline over time and Water Works proposes to continue using this tool for the Deer Creek sewer hydraulic modeling project.***

City of Healdsburg, CA	2019-2020 Sewer System Master Plan
Role: Prime Consultant – Hydraulics, Master Planning **Project Fee:** $275,000	**Team Members** Mike Fisher, Principal-in-Charge Joe Ziemann, Senior Project Engineer / Manager Anthony Baltazar, Associate Engineer

Water Works Engineers was selected by the City of Healdsburg to update the City's Sewer System Management Plan (SSMP) and develop a Sewer Collection System Master Plan. The City had never had a hydraulic model or master plan completed for their collection system. Water Works started the project by updating the City's GIS with recent improvement projects and new developments, and surveyed areas of the system with critical missing data (such as manhole rims and inverts).

Water Works retained a sub-consultant to deploy 5 temporary flow meters in the collection system in the winter of 2019-2020 to measure wet weather flow in 5 sewer basins defined by Water Works. Water Works used this data in combination with WWTP influent flow data to develop a calibrated 10-year/24-hour peak wet weather flow model of the system under both existing conditions and future buildout conditions consistent with the City's 2030 General Plan. Water Works also developed a model in AFT Fathom of the City's complex WWTP influent pump station and conducted a capacity analysis of the station under both free flowing and surcharged conditions in the upstream trunk sewer.

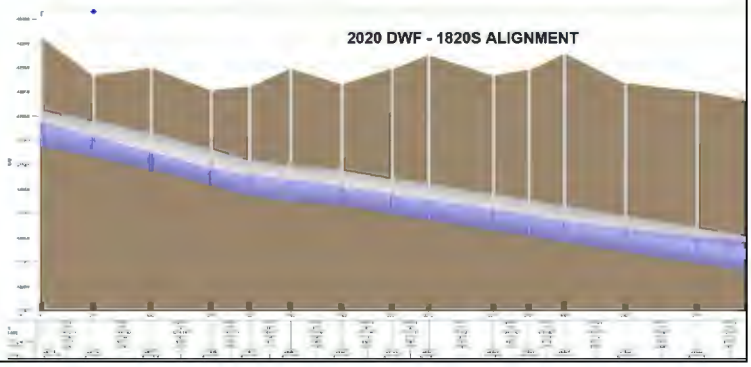
Water Works identified hydraulic capacity deficiencies and developed a capital improvement plan that includes an I/I reduction strategy to help reduce the City's high peak wet weather flows.



Salt Lake City, UT	2015-2018 Wastewater Master Plan, Hydraulic Model, Permanent Flow Metering
Role: Prime Consultant – Planning, Preliminary Design **Project Fee:** $450,000 (all phases of work)	**Team Members** Mike Fisher, Project Manager / Principal-in-Charge Anthony Baltazar, Modeler / Analyst Mohsen Karbakhsh, Modeler / Analyst / GIS

From 2015 to 2018, Water Works updated the City's existing Innovyze 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 upsize that Water Works is currently designing.



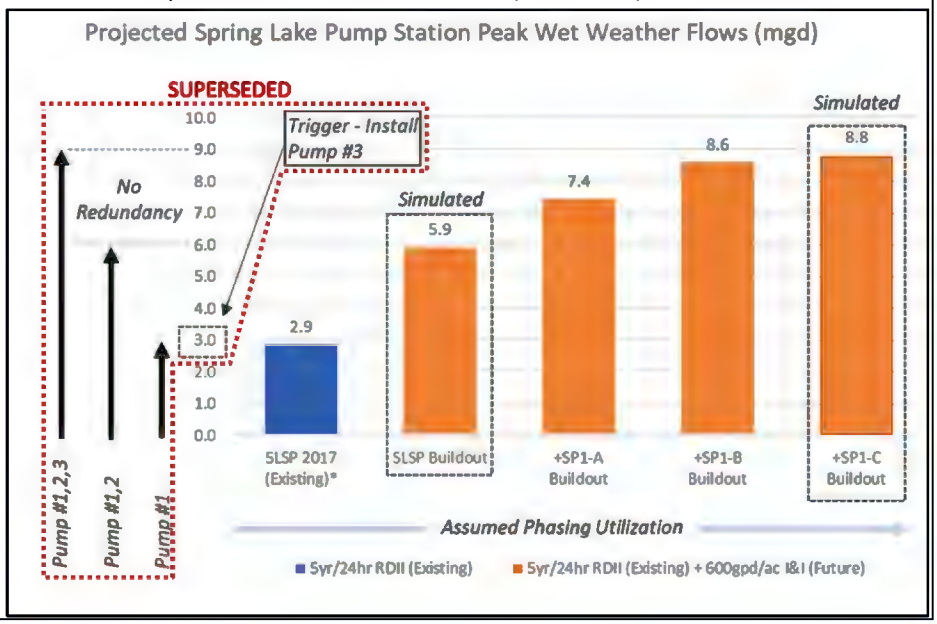
City of Roseville, CA	2018 Wastewater Collection System Master Plan Addendum
Role: Prime Consultant, Planning **Project Fee:** $15,000	**Team Members** Mike Fisher, Project Manager / Principal-in-Charge Joe Ziemann, Sr. Modeler Mohsen Karbakhsh, Modeler / Analyst

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

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:

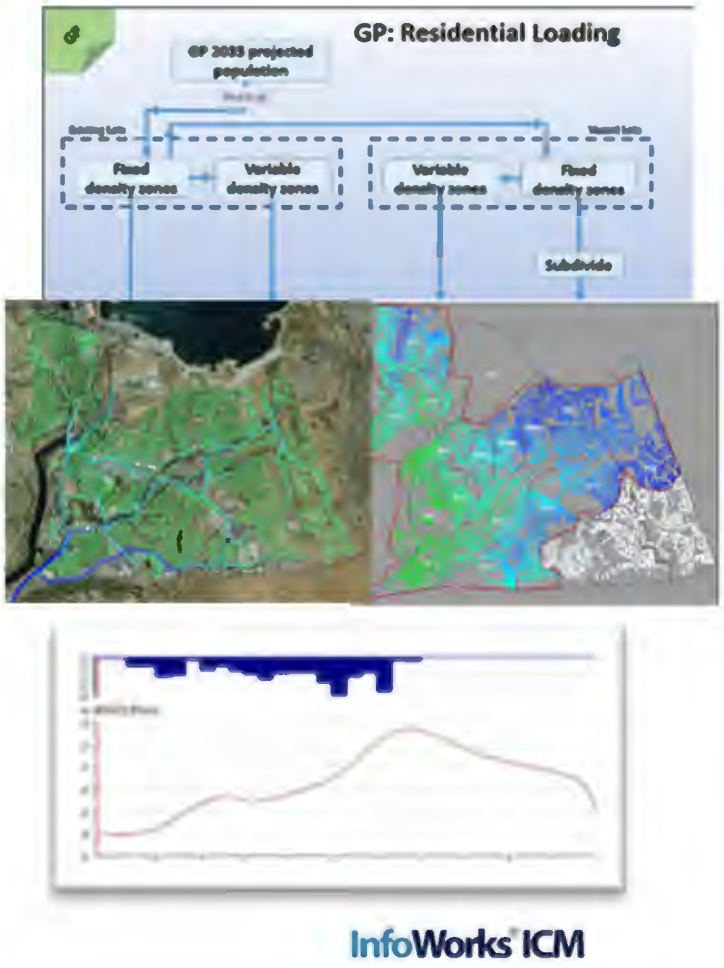
- SECAP / Hydraulic Model Expansion, incorporated Spring Lake and SP1A Specific Plan Collection System, (2018)
- 2016-2046 General Plan Hydraulic Model Update and Master Plan Review, (2015-2016)
- Sewer Main Condition and Capacity Assessment Services, added all pipes to model (2014-2015)
- Wastewater Collection System Hydraulic Model Update, added 8-10" pipes (2013-2014)
- Wet Weather Flow Monitoring, 20 temporary and 3 permanent flow meters (2011-2012)
- SECAP Hydraulic Model Development (pipes >10"), SSMP Audit and Update (2009 – 2010)



City of Folsom	2016 & 2018 Hydraulic Model & Capacity Assurance Plan
Role: Prime Consultant - Planning, Preliminary Design **Project Fee:** $225,000	**Team Members** Mike Fisher, Project Manager / Principal-in-Charge Joe Ziemann, Sr. Modeler Mohsen Karbakhsh, Modeler / Analyst

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. This service has been particularly valuable to the City recently with the high level of development occuring on the HWY 50 corridor.

EXHIBIT B SUPPLEMENTAL QUESTIONS

1. ***Provide a brief history and description of your firm:*** Water Works Engineers, LLC was formed in 2005 by three founders focused solely on water, recycled water and wastewater treatment, distribution and collection systems infrastructure. This focus makes us efficient, keeps us up to date, and allows us to provide the highest level of service. We take great pride in the fact that we don't just create documents, we facilitate projects. This focus and approach have fueled a consistent increase in our clients and projects, whereby over the past five years we have grown from 4 offices and 45 employees with about $10M in revenue to 7 offices and 85 employees with just under $20M in revenue. By focusing exclusively on water and wastewater engineering, Water Works provides focused expertise rather than the overall umbrella approach of many civil engineering firms.
2. ***How many staff members are available to answer questions, and how readily available are they?*** For hydraulic modeling projects, we tend to keep a focused, lean team. EID is familiar with Joe and Anthony, and that is who will be working on this project. Joe prides himself on responding to client requests almost immediately, and is always available at all times to interact with District Staff.
3. ***Who are some of your other clients?*** Joe works closely with the City of Roseville, City of Folsom, and Placer County Water Agency (PCWA) locally. Water Works remains on-call for the City of Folsom for hydraulic model updates. Joe has produced PCWA's water treatment plant and water distribution site Operations and Maintenance manuals and enjoys working with and solving problems for Operators.
4. ***What distinguishes your firm from similar firms? Specifically, what is your value proposition? What are your major strengths? Describe your consulting approach and how you feel it varies from your competitors?*** At Water Works, we do not have project managers in the same sense that many traditional consulting firms do. We have senior engineers that also manage the project budget, billing, and client interactions. Our most senior engineers remain highly technically competent and involved in the execution of their projects, which results in quality control and quality assurance being built into our work products. You will see a higher amount of hours from senior staff for projects done by Water Works than is typical in the industry, but we feel this approach actually makes us more cost-efficient because projects are "done right the first time" because of the constant involvement of our experts.
5. ***Describe your proposed fee structure for consulting services, including a detailed break-out of services included.*** Please refer to our fee proposal on the following page. Our rate schedule is provided below.

15 YEARS 2005-2020 WATERWORKS ENGINEERS

Water Works 2021 Rate Schedule

Classification	Title	Hourly Rate
AA1	Administrative Assistant	$77
AA2	Senior Administrative Assistant	$108
E0	Jr Engineer / Jr Field Engineer	$108
E1	Staff Engineer	$135
E2	Associate Engineer	$165
E3	Project / Structural Engineer	$185
E4	Senior Project Engineer / Manager	$215
E5	Principal Engineer	$249

Rates effective through December 31, 2021. 3% increase will be added for any services performed in 2022.

El Dorado Irrigation District
Deer Creek Sewer Collection System
Collection System Modeling Professional Services
Cost Proposal

Task		WWE 2021 Rate Schedule					Project Budget Totals		
	Team Member Classification	E5	E4	E3	E2	E1			
	Team Member Name	Mike F.	Joe Z. / Tim D.	Anthony B.	Mohsen K.	Staff Engineer			
No.	**Description**	$249	$215	$185	$165	$135	**Sub-Task**	**Task**	**Hours**
1.0	**Project Management**							**$8,238**	**38**
1.1	Project Management and QA/QC	2	36				$8,238		38
2.0	**Model Update**							**$6,080**	**40**
2.1	As-Built / Background Document Collection and Review				4	4	$1,200		8
2.2	GIS Physical Model Update			4	12	16	$4,880		32
3.0	**Validation of Existing Flow Data**							**$31,400**	**176**
3.1	Update Land Use Table and EDUs in Collection System				8	8	$2,400		16
3.2	Update/Calibrate Dry Weather Loading in Hydraulic Model			16			$2,960		16
3.3	Analyze 3 Years of Flow Monitoring Data		4		12	12	$4,460		28
3.4	Develop Sub-Area I/I Hydrographs and Design Storm		24				$5,160		24
3.5	Load Design Storm I/I into Hydraulic Model and Run / Calibrate			8			$1,480		8
3.6	Summarize Model Results and Identify Capacity Deficiencies		8	16	8	8	$7,080		40
3.7	Update Motherload Forcemain AFT Fathom Model and Results		8		8	4	$3,580		20
3.8	Workshop Presentation - Recommend New Flow Meter Locations		4	12	4	4	$4,280		24
4.0	**Calibration of Peak Wet Weather Flow**							**$6,380**	**36**
4.1	Analyze Winter 2019/2020 Flow Monitoring Data				8	12	$2,940		20
4.2	Update Sub-Area I/I Hydrographs and Design Storm		16				$3,440		16
5.0	**Hydraulic Model of Existing Wastewater System**							**$28,329**	**153**
5.1	Load Updated Design Storm I/I into Hydraulic Model and Run			8	8		$2,800		16
5.2	Update Model Results and Update Capacity Deficiencies		2	8	8		$3,230		18
5.3	Develop Existing Condition Capital Improvement Projects	1	16	24	24		$12,089		65
5.4	Develop I/I Reduction Plan		16	16			$6,400		32
5.5	Workshop Presentation of Required Deliverables		2	4	16		$3,810		22
6.0	**Hydraulic Model of Future Wastewater System**							**$18,059**	**103**
6.1	Update Hydraulic Model with Future Developments			24		16	$6,600		40
6.2	Re-run Hydraulic Model and Identify new Capacity Deficiencies			8			$1,480		8
6.3	Develop Future Development Capital Improvement Projects	1	8	12	12		$6,169		33
6.4	Workshop Presentation of Required Deliverables		2	4	16		$3,810		22
7.0	**Final Report**							**$16,609**	**89**
7.1	Final Report	1	24	32	32		$16,609		89
BUDGET TOTALS		**5**	**170**	**196**	**180**	**84**		**$ 115,095**	**635**

SECTION 3 – PROJECT TEAM

All team members will be working out of our Roseville, CA office. Refer to resumes in **Appendix 1**.

Joe Ziemann, P.E. - Senior Hydraulic Modeler / Project Manager

Location	Yrs Exp.	Education	Registration
Roseville	15	M.S. – Environmental Engineering, Lehigh University B.S. – Environmental Engineering, Lehigh University	P.E.: CA C76172
Special Expertise: Hydraulic Modeling, I/I Analysis, Model Calibration, Lift Station Design/Operations			

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.

Mike Fisher, P.E. – Principal in Charge / QA-QC / Technical Resource

Location	Yrs Exp.	Education	Registration
Roseville	23	B.S. Civil/Environmental Engineering, Cal Poly, SLO	P.E.: CA C67194
Special Expertise: Pipeline Design, Hydraulic Modeling, Trenchless Technology			

Mike has over 23 years of experience and leads the California Collections and Distribution Linear Infrastructure Design Group. Mike will provide a valuable resource when it comes to developing the capital improvement projects to address any hydraulic capacity deficiencies.

Anthony Baltazar, P.E. - Hydraulic Modeler / GIS Specialist

Location	Yrs Exp.	Education	Registration
Roseville	8	B.S. Civil Engineering, UC Davis	P.E.: CA C87494
Special Expertise: Hydraulic Modeling, GIS, Operations and Maintenance, Condition Assessment			

Anthony has many years of experience operating InfoWorks ICM hydraulic models and has spent a large percentage of the last 2 years operating models for EID, Healdsburg, and City of Salt Lake.

Mohsen Karbakhsh, P.E. - Hydraulic Modeler / Analyst

Location	Yrs Exp.	Education	Registration
Roseville	4	Ph.D./M.S. Environmental Engineering, New Mexico St.	P.E.: CA C91008
Special Expertise: Hydraulic Calculations, Data 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 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. Mohsen is also experienced operating AFT Fathom pressure system models.

Tim Durbin, P.E. – QA/QC

Location	Yrs Exp.	Education	Registration
Roseville	19	M.S. – Civil/Environmental Engineering, UC Berkeley B.S. – Chemical Engineering, Penn State	P.E.: CA C75456
Special Expertise: Water Works Engineers Company Wide QA/QC Manager			

Tim is Water Works' dedicated quality control / quality assurance manager. His sole focus is providing third party reviews for Water Works deliverables and ensuring all work products have consistent quality and content.

WWE Staff Engineers (Analytical Support)

The project team may also be supported by WWE's E-1 Staff Level Engineers with analysis tasks as needed under

the direct supervision of our licenses P.E. staff members.

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.

Quality Control Reviews

All technical work products are reviewed by the Project QA/QC Reviewer in an internal workshop setting prior to finalizing Project Deliverables. Our QA/QC Reviewer Tim Durbin, P.E. is a highly experienced senior engineer whose sole function at Water Works is to ensure that our high level of quality is maintained for all deliverables.

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 professional services.

SECTION 5 – CLIENT REFERENCES

Water Works is proud of our consulting 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.***

Reference Agency	Contact / Title	Address	Phone
City of Folsom	Vaughn Fleischbein Senior Engineer	50 Natoma Street Folsom, CA 95630	(916) 461-6165
City of Roseville	Todd Jordan Senior Engineer	1800 Booth Road Roseville, CA 95747	(916) 746-1829
City of Healdsburg	Patrick Fuss, Utility Engineering Manager	401 Grove St. Healdsburg, CA 95448	(707)-217-3218

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 – 1.2 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.

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

SECTION 7 – ADDENDA

Water Works Engineers acknowledges receipt and review of Addendum No. 1 posted on 12/15/2020 and that the clarifications made therein are understood within our proposed scope of work.

APPENDIX 1 – PROJECT TEAM RESUMES

JOE ZIEMANN, P.E.

Senior Engineer / Project Manager

Education	Experience	Registration	Memberships
M.S. – Environmental Eng. Lehigh University (2006) B.S. – Environmental Eng., Lehigh University (2005)	15 years	Registered Civil Engineer California - C76172	AWWA CWEA

REPRESENTATIVE PROJECT EXPERIENCE

Wastewater Collection Infrastructure

City of Healdsburg – Sewer System Management Plan Update and Sewer System Master Plan - Mr. Ziemann served as senior engineer for the project which involved updating the City's out-of-date Sewer System Master Plan to ensure regulatory compliance. The Team worked with the City's collection systems operation and maintenance division to accurately portray current programs and suggest improvements. The project also involved developing a new InfoWorks ICM hydraulic model of the sewer collection system and conducting a capacity analysis for existing conditions and buildout of the City's 2030 General Plan. Water Works coordinated the work of its sub-consultant Total Flow Inc. to complete temporary flow monitoring at 5 sites defined by Water Works to create sewer sub-basins that would allow for identification and location of areas of excessive I/I in the system. Water Works created the City's first comprehensive Master Plan based on the results of the model.

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.

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 Treatment

City of Shasta Lake Wastewater Treatment Plant Final Design – Shasta Lake, CA - Mr. Ziemann was the lead design engineer for improvements at an existing wastewater treatment plant required to meet new nutrient limits in the facility's discharge permit. Mr. Ziemann completed construction drawings and specifications for retrofit of the existing headworks screens, conversion of an oxidation ditch into an equalization basin, a self-cleaning trench style influent pump station, 5-stage Bardenpho aeration basins, and a new secondary clarifier. Mr. Ziemann developed the BioWIN model of the plant that was used for final design.

Ironhouse Sanitary District WRF Reliability Study and Capital Plan – Oakley, CA - Ironhouse Sanitary District desired to develop a long-term capital improvement and equipment replacement plan that could be used in the financial planning and rate-setting process to ensure that funding is available in the future to make improvements at the wastewater recycling facility necessary to maintain plant reliability, and to rehabilitate and replace treatment equipment as it reaches the end of its useful life. Mr. Ziemann completed an analysis of the last 12 months of plant operations data and identified gaps in equipment reliability, and also updated the District's CMMS including equipment cost and useful life data to allow for creation of a combined capital project / equipment rehab cost curve 25 years in to the future.

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.

MIKE FISHER, P.E.

Principal In Charge

Education	Experience	Registration	Memberships
B.S. – Civil/Environmental Eng. CA State Polytechnic University, San Luis Obispo	23 years	Registered Civil Engineer California - C67194	AWWA CWEA

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 **i**ntegrating 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.

ANTHONY BALTAZAR, P.E.

Associate Engineer

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

Experience
8 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.

City of Healdsburg – Sewer System Management Plan Update and Sewer System Master Plan – Anthony served as project engineering and hydraulic model operator working with joe Ziemann on the project which involved updating the City's out-of-date Sewer System Master Plan to ensure regulatory compliance. The Team worked with the City's collection systems operation and maintenance division to accurately portray current programs and suggest improvements. The project also involved developing a new InfoWorks ICM hydraulic model of the sewer collection system and conducting a capacity analysis for existing conditions and buildout of the City's 2030 General Plan. Water Works coordinated the work of its sub-consultant Total Flow Inc. to complete temporary flow monitoring at 5 sites defined by Water Works to create sewer sub-basins that would allow for identification and location of areas of excessive I/I in the system. Water Works created the City's first comprehensive Master Plan based on the results of the model.

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.

MOHSEN KARBAKHSH, P.E.

Staff Engineer

Education
Ph.D./M.S. – Environmental. Eng.,
New Mexico State University
M.S. – Civil Eng., K. N. Toosi University of Technology
B.S. – Civil Eng., S. B. University of Kerman

Experience
4 years

Registration
Registered Civil Engineer
California - C91008

Mr. Karbakhsh is a civil/environmental engineer with four 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 AFT Fathom.

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 an 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 Design

City of Morro Bay WRF Lift Station and Offsite Pipelines – Morro Bay, CA - Mr. Karbakhsh provided engineering design services for the Morro Bay Water Reclamation Facility Influent Lift Station and associated offsite pipelines. The project included design of an 8MGD (peak wet weather flow) triplex submersible pump station with provisions to turndown all the way to 0.3 - 1 MGD during typical daily flow conditions. The unique system layout required the WRF be moved out of California Coastal Commission regulated beachfront property resulting in TDH conditions ranging between 150' and 300'. Site improvements included self-cleaning wet well with deep foundation; MCC, SCADA and controls building with deep foundation; emergency generator; odor control; by-pass pumping connections; pig launching facilities; and approximately 17,0000-LF of dual 14" and 20" HDPE forcemains and a 16" FPVC effluent/brine discharge line. The offsite pie alignment required one elevated creek crossing, an 800-ft long HDD of a critical highly impacted roundabout intersection, and a 500-LF auger bore and jack crossing of Highway 1. 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.

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.

Tim Durbin, P.E.

QAQC Manager

Education	Experience	Registration
B.S. – Chemical Engineering, The Pennsylvania State University (200) M.S. – Civil/Environmental Engineering, University of California, Berkley (2002)	20 years	Registered Civil Engineer California - 75456

Mr. Durbin is a civil/environmental engineer with 20 years of experience in the field of water and wastewater treatment and pumping systems. He has specialized in wastewater chemistry, and his research focused on strategies to minimize the formation of disinfection by-products, particularly N-nitrosodimethylamine (NDMA). He has since applied his knowledge of chemistry and treatment processes to the design of water and wastewater treatment facilities. Mr. Durbin has worked on projects in California and Arizona related to pumping of water and wastewater, chlorination, chemical storage and feed system design, and screening facility design.

Representative Project Experience

Stillwater WWTP Waste Activated Sludge Transfer Pump Station - Redding, CA - Mr. Durbin was responsible for the preliminary design (including initial pump selection) and detailed design for a 350 gpm pump station to pump waste activated sludge from the Stillwater WWTP through a 6-mile pipeline to the Clear Creek WWTP, also operated by the City of Redding. The new pump station will include WAS screening facilities and a storage tank. Sludge will be pumped through the transfer pipeline for approximately 6 hours per day. Following sludge pumping, recycled water will be run through the pipeline to flush solids and minimize solids settling and gasification in the line.

Alameda Bay Farm Island Sewer Lift Station Upgrade - Alameda, CA - Mr. Durbin is the project engineer on a project to upgrade the existing Bay Farm Island (BFI) sewage lift station. The lift station is designed for a build-out flow of 3.5 mgd. The existing dry-pit/wet-pit wetwell is being modified to combine the two cells as a single wet-pit pump station, with submersible pumps and internal configuration to conform to the HI standards for a self-cleaning wetwell. The soil surrounding the existing structure will be grout-injected to stabilize the foundation for liquefaction.

North Market Lift Station - Redding, CA - Mr. Durbin was responsible for the following aspects of this lift station replacement and system expansion project; Hydraulic modeling of the future dual Sacramento River crossing force mains and downstream sewer system, vertical turbine solids-handling pump selection and wet well design. The project also includes HVAC system design and Title 24 compliance, noise and odor control equipment selection, and pump removal and maintenance planning.

Southeast Geysers Effluent Pipeline Chlorination Facility - Lake County, CA - Mr. Durbin assisted in the design of a chlorination facility to improve the hydraulics of this 28-mile effluent pipeline. His primary responsibilities were: Determination of the optimal dosing strategy and chlorine concentration, selection of the chlorine feed point, sizing of the hypochlorite storage tanks, estimating the autocatalytic loss of active chlorine during storage, and suggesting ways to minimize hypochlorite loss and chlorate formation.

Pukalani Wastewater Lift Station Rehabilitation - Pukalani, Maui, HI - WWE designed an upgrade of the existing Pukalani Wastewater Treatment plant to replace an existing extended aeration plant with a membrane bioreactor. Mr. Durbin assisted with the civil design and cost estimating for the project, and designed the upgrades to two sewer lift stations.

Sacramento Municipal Utility District, Carson Digester Gas Project - Elk Grove, CA - Mr. Durbin was the project engineer on the Design-Build team for the treatment of 2,500 scfm of municipal digester gas with moisture and sulfur removal equipment. New processes included iron sponges, refrigerated dryers and desiccant dryers, along with analytical instruments for sulfur, moisture and gas BTU content.

Bear Canyon Zero Booster Pump Station - Middletown, CA - Mr. Durbin was responsible for the following aspects of this 6,800 gpm booster pump station design and construction project: Design of the piping system, including pig-launching capabilities, selection of piping, valves, piping fixtures, and appurtenances for high pressure service, quality control reviews of the civil and mechanical drawings, preparation of specifications for procurement of the packaged pump station for construction of the facility, construction cost estimation, and review of construction contract submittals.

Nogales International Wastewater Plant Upgrade - City of Nogales, AZ - WWE was part of the Design-Build team that was selected to design and construct the 15 mgd activated sludge process for the Nogales International Wastewater Plant Upgrade. The existing lagoon plant has been upgraded to treat 15 mgd of domestic/industrial wastewater coming from Nogales, Arizona and Nogales, Mexico. Mr. Durbin led the design and submittal review for the pumping systems on the project including the RAS pumps (four low-head centrifugal end suction pumps with a capacity of 3,600 gpm each) and the non-potable water pumps (2 vertical turbine can pumps, 150 gpm at 225 ft TDH each).

Deer Creek WWTP O&M Manual – El Dorado Irrigation District - Placerville, CA - Mr. Durbin prepared an electronic operations and maintenance manual for a 3.6 mgd ADWF water reclamation facility. The plant was constructed in many different phases, so the O&M manual is the only document that ties information from all of the different phases together. The plant processes include headworks, grit removal, primary sedimentation, biological nutrient (phosphorus and nitrogen) removal, gravity thickening, aerobic sludge digestion, belt filter press dewatering, tertiary filtration and UV disinfection.

Surprise TTHM Control Project - Surprise, AZ - The City of Surprise has been challenged with meeting its effluent limits for total trihalomethanes (TTHMs) at its South Plant Waste Water Treatment Facility (SPA1) at both its point of compliance discharge point and more recently in a groundwater compliance monitoring well. Mr. Durbin led the evaluation of potential strategies to reduce TTHM concentrations in the final effluent and avoid formation of NDMA. Mr. Durbin performed bench testing of stepped-chlorination, stepped-chloramination, and peracetic acid as alternative disinfection strategies. In addition, he developed a conceptual analysis and cost estimates for other treatment technologies, including airstripping of THMs at the end of the chlorine contact chamber, ozone disinfection, and UV disinfection, with an emphasis on minimizing formation of NDMA.

Trucked Waste Impact Simulator, EBMUD - Oakland, CA - WWE developed a model that tracks chemical constituents of trucked waste shipments at the East Bay Municipal Utility District's Main Plant. The model includes limits for controlling worker exposure as well as air emissions limits. Mr. Durbin performed a literature review to determine the Henry's Law constants and volatilization fractions of hundreds of compounds and to document the origin of the exposure and emissions limits. He also developed an empirical relationship that estimates the volatilization fraction of compounds for which there is no literature value. The product of this work is an expanded simulator that estimates for hundreds of constituents the air emissions and the potential for worker exposure.

Paradise Irrigation District Disaster Recovery Management Services – Paradise, CA – Mr. Durbin was responsible for quality control management of recovery procedures for the Paradise Irrigation District (PID) water distribution system following unprecedented damage resulting from the 2018 Camp Fire. He worked in conjunction with PID operations and management staff, as well as mutual aid partners from throughout the region to establish, oversee, and troubleshoot execution of new standards for system-wide testing volatile organic compounds (VOCs) and analysis resulting in over 200,000 individual test results. Tim supplied engineering recommendations for detailed water quality and hydraulic analysis supporting a careful step-wise clearing of the District-issued water quality advisory following the fire. He provided support in development of recovery project applications, justifications, and cost estimates for state and federal funding assistance including Emergency Response, Permanent Work, and Hazard Mitigation efforts.

2021 CAPITAL IMPROVEMENT PLAN **Program:** **Wastewater**

Project Number: PLANNED

Project Name: Deer Creek Collection System Modeling

Project Category: Reliability & Service Level Improvements

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

Project Description:

The 2013 Wastewater Facility Master Plan (WWMP) identified several pipes and lift stations in he Deer Creek collection system as nearing capacity. 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 will be incorporated into the District collection system model to determine remaining pipeline capacity. The hydraulic mo eling update in 2021 will include a refinement of necessary pipeline sizing as well as a list of improvement projects.

Basis for Priority:

The collection system model will identify gravity sewerlines that have capacity limitations. If he capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limi .

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2021 - 2025 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2021	2022	2023	2024	2025	Total
Stu y/Planning	$ 150,000					$ 150,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000

Funding Sources	Percentage	2021	Amount
Wastewater R tes	100%		$150,000
			$0
			$0
Total	100%		$150,000

Fun ing Comm nts:

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider authorizing the General Manager to execute an agreement with Sacramento County in the not-to-exceed amount of $80,000 for the disposal of wastewater grit at the Kiefer Landfill for a period of three years, and authorize the General Manager to extend the agreement for two additional one-year periods if determined to be in the best interest of the District.

PREVIOUS BOARD ACTION

November 9, 2020 – Board adopted the 2021-2022 Operating Budget.

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

BP 3060 Contracts and Procurement
AR 3061.04 Procurement and Contract Authority

SUMMARY OF ISSUE

El Dorado Irrigation District currently owns and operates wastewater systems that separate and dispose of approximately 190 tons of inorganic matter (grit) from the wastewater influent on an annual basis. The grit is disposed at Kiefer landfill, owned and operated by Sacramento County, under a service contract with Waste Management. In September 2020 the Sacramento County Board of Supervisors approved a 520% increase in the fees associated with disposal of the grit as part of an overall increase in disposal fees for the landfill. District staff negotiated a significant reduction of the fees in consideration of the annual volume and nature of grit sent to the landfill by the District. Those fees are included in this proposed agreement for the Board's consideration.

BACKGROUND/DISCUSSION

Inorganic material is separated and removed from the District's wastewater collection system and treatment plants on a daily basis. This material, referred to as grit, is composed of sand, gravel and other solid matter commonly found in wastewater. Removing grit from the wastewater stream protects moving mechanical equipment from abrasion and abnormal wear, reduces clogging from grit deposition in pipes or channels and prevents loading the treatment plants with inert material. Once removed, the grit is washed to remove organic matter and then sent to the landfill for disposal. Currently, the District's wastewater operation removes and disposes of approximately 190 tons of grit annually.

According to landfill regulations, the grit must be buried upon arrival and is therefore classified as "Hard-to-Handle waste". On September 22, 2020, the County of Sacramento Board of Supervisors approved Resolution No. 2020-0617 effective November 1, 2020, which increased the disposal (tipping) fees from $60.00 to $300.00 per ton for grit disposal.

Due to the nature of this waste generated by the District facilities, staff successfully negotiated a 60% reduction of the new tipping fee to $120 per ton for grit disposal services at Kiefer Landfill. In consideration for the reduced tipping fee the County is seeking a commitment from the District to deliver a minimum volume of 100 tons per year, which is approximately 52% of the volume of grit disposed of by the District at Kiefer Landfill on an annual basis. Utilizing historical quantities and applying the reduced tipping fee, staff estimates that annual grit disposal

costs would be approximately $22,800. Applying an additional 15% contingency brings the total not to exceed cost of this three year agreement to $80,000. Following completion of the initial three-year contract, costs during the two single-year extensions, if exercised, would not exceed $27,000 annually. A review of operational data demonstrates that there is little to no risk in meeting the minimum volume requirement in the County's proposed agreement. Therefore, staff recommends that the Board authorize the General Manager to execute the agreement.

The agreement would be retroactive to November 1, 2020, become effective upon approval from the Board of each agency and remain in effect until June 30, 2024. Two (2) additional one-year extensions of the negotiated reduced rates may be approved by mutual agreement of both parties.

FUNDING

Grit disposal would continue to be funded through the Operations Department Wastewater Division annual operations budget.

BOARD OPTIONS

Option 1: Authorize the General Manager to execute an agreement with Sacramento County in the not-to exceed amount of $80,000 for the disposal of wastewater grit at the Kiefer Landfill for a period of three years, and authorize the General Manager to extend the agreement for two additional one-year periods if determined to be in the best interest of the District.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: Retroactive Agreement for Reduced Tipping Fees

Cody Smith
Operations and Maintenance Supervisor

Tracy Crane
Wastewater/Recycled Water Operations Manager

Ryan Deakyne
Senior Buyer

Dan Corcoran
Operations Director

Mark Price
Finance Director

Elizabeth Leeper
Senior Deputy General Counsel

Jim Abercrombie
General Manager

COUNTY OF SACRAMENTO
PUBLIC WORKS AND INFRASTRUCTURE

RETROACTIVE AGREEMENT FOR REDUCED TIPPING FEES AT KIEFER LANDFILL

THIS AGREEMENT is made and entered into on November 1, 2020, by and between the COUNTY OF SACRAMENTO, a political subdivision of the State of California, hereinafter referred to as "COUNTY," and (EL DORADO IRRIGATION DISTRICT), a (SPECIAL DISTRICT), hereinafter referred to as "CUSTOMER."

RECITALS

WHEREAS, COUNTY owns, operates, and provides waste disposal services at the Sacramento County Landfill (hereinafter "Kiefer Landfill"), a licensed class III landfill that may accept Municipal Solid Waste (hereinafter "MSW"); and

WHEREAS, CUSTOMER desires to dispose of MSW at Kiefer Landfill; and

WHEREAS, COUNTY and CUSTOMER have negotiated a reduced price or tipping fee relative to those charged to the general public at the gate for disposal services at Kiefer Landfill in consideration of the volume of MSW CUSTOMER will dispose at Kiefer Landfill which will generate revenue to COUNTY; and

WHEREAS, COUNTY and CUSTOMER desire to enter into this Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, COUNTY and CUSTOMER agree as follows:

1. SCOPE OF SERVICES

CUSTOMER shall deliver MSW in the amount, type and manner described in Exhibit A, which is attached hereto and incorporated herein.

2. TERM

This Agreement shall be effective and commence as of the date first written above and shall remain in effect until June 30, 2024. Up to two (2) one-year extensions may be approved by mutual agreement of both parties.

COUNTY'S Director is authorized to amend this Agreement with CUSTOMER to extend its term under the same terms and conditions provided herein.

3. NOTICE

Any notice, demand, request, consent, or approval that either party hereto may or is required to give the other pursuant to this Agreement shall be in writing and shall be either personally delivered or sent by mail, addressed as follows:

TO COUNTY:	TO CUSTOMER:
Department of Waste Management and Recycling 10863 Gold Center Dr. Rancho Cordova, CA 95670 Attn: Doug Sloan	El Dorado Irrigation District 2890 Mosquito Road Placerville, CA 95667

Either party may change the address to which subsequent notice and/or other communications can be sent by giving written notice designating a change of address to the other party, which shall be effective upon receipt.

4. COMPLIANCE WITH LAWS

CUSTOMER shall observe and comply with all applicable Federal, State, and County laws, regulations and ordinances.

5. GOVERNING LAWS AND JURISDICTION

This Agreement shall be deemed to have been executed and to be performed within the State of California and shall be construed and governed by the internal laws of the State of California. Any legal proceedings arising out of or relating to this Agreement shall be brought in Sacramento County, California.

6. LICENSES AND PERMITS

A. CUSTOMER shall possess and maintain all necessary licenses, permits, certificates and credentials required by the laws of the United States, the State of California, County of Sacramento and all other appropriate governmental agencies, including any certification and credentials required by COUNTY. Failure to maintain the licenses, permits, certificates, and credentials shall be deemed a breach of this Agreement and constitutes grounds for the termination of this Agreement by COUNTY.

A. CUSTOMER further certifies to COUNTY that it and its principals are not debarred, suspended, or otherwise excluded from or ineligible for, participation in federal, state or county government contracts. CUSTOMER certifies that it shall not contract with a subcontractor that is so debarred or suspended.

7. PERFORMANCE STANDARDS

CUSTOMER shall perform its services under this Agreement in accordance with the industry and/or professional standards applicable to CUSTOMER'S services.

8. STATUS OF CUSTOMER

A. It is understood and agreed that CUSTOMER (including CUSTOMER'S employees) is an independent contractor and that no relationship of employer-employee exists between the parties hereto. CUSTOMER'S assigned personnel shall not be entitled to any benefits payable to employees of COUNTY. COUNTY is not required to make any deductions or withholdings from the compensation payable to CUSTOMER under the provisions of this Agreement; and as an independent contractor, CUSTOMER hereby indemnifies and holds COUNTY harmless from any and all claims that may be made against COUNTY based upon any contention by any third party that an employer-employee relationship exists by reason of this Agreement.

B. If, in the performance of this Agreement, any third persons are employed by CUSTOMER, such person shall be entirely and exclusively under the direction, supervision, and control of CUSTOMER. All terms of employment, including hours, wages, working conditions, discipline, hiring, and discharging, or any other terms of employment or requirements of law, shall be determined by CUSTOMER, and the COUNTY shall have no right or COUNTY over such persons or the terms of such employment.

C. It is further understood and agreed that as an independent contractor and not an employee of COUNTY, neither the CUSTOMER nor CUSTOMER'S assigned personnel shall have any entitlement as a COUNTY employee, right to act on behalf of COUNTY in any capacity whatsoever as agent, nor to bind COUNTY to any obligation whatsoever. CUSTOMER shall not be covered by worker's compensation; nor shall CUSTOMER be entitled to compensated sick leave, vacation leave, retirement entitlement, participation in group health, dental, life and other insurance

programs, or entitled to other fringe benefits payable by the COUNTY to employees of the COUNTY.

9. CUSTOMER IDENTIFICATION

CUSTOMER shall provide the COUNTY with the following information for the purpose of compliance with California Unemployment Insurance Code section 1088.8 and Sacramento County Code Chapter 2.160: CUSTOMER'S name, address, telephone number, social security number, and whether dependent health insurance coverage is available to CUSTOMER.

10. BENEFITS WAIVER

If CUSTOMER is unincorporated, CUSTOMER acknowledges and agrees that CUSTOMER is not entitled to receive the following benefits and/or compensation from COUNTY: medical, dental, vision and retirement benefits, life and disability insurance, sick leave, bereavement leave, jury duty leave, parental leave, or any other similar benefits or compensation otherwise provided to permanent civil service employees pursuant to the County Charter, the County Code, the Civil Service Rule, the Sacramento County Employees' Retirement System and/or any and all memoranda of understanding between COUNTY and its employee organizations. Should CUSTOMER or any employee or agent of CUSTOMER seek to obtain such benefits from COUNTY, CUSTOMER agrees to indemnify and hold harmless COUNTY from any and all claims that may be made against COUNTY for such benefits.

11. NONDISCRIMINATION IN EMPLOYMENT, SERVICES, BENEFITS AND FACILITIES

A. CUSTOMER agrees and assures COUNTY that CUSTOMER and any subcontractors shall comply with all applicable federal, state, and local Anti-discrimination laws, regulations, and ordinances and to not unlawfully discriminate, harass, or allow harassment against any employee, applicant for employment, employee or agent of COUNTY, or recipient of services contemplated to be provided or provided under this Agreement, because of race, ancestry, marital status, color, religious creed, political belief, national origin, ethnic group identification, sex, sexual orientation, age (over 40), medical condition (including HIV and AIDS), or physical or mental disability. CUSTOMER shall ensure that the evaluation and treatment of its employees and applicants for employment, the treatment of COUNTY employees and agents, and recipients of services are free from such discrimination and harassment.

B. CUSTOMER represents that it is in compliance with and agrees that it will continue to comply with the Americans with Disabilities Act of 1990 (42 U.S.C. § 12101 et seq.), the Fair Employment and Housing Act (Government Code § 12900 et seq.), and regulations and guidelines issued pursuant thereto.

C. CUSTOMER agrees to compile data, maintain records and submit reports to permit effective enforcement of all applicable anti-discrimination laws and this provision.

D. CUSTOMER shall include this nondiscrimination provision in all subcontracts related to this Agreement.

12. LOBBYING AND UNION ORGANIZATION ACTIVITIES

A. CUSTOMER shall comply with all certification and disclosure requirements prescribed by Section 319, Public Law 101-121 (31 U.S.C. § 1352) and any implementing regulations.

B. If services under this Agreement are funded with state funds granted to COUNTY, CUSTOMER shall not utilize any such funds to assist, promote or deter union organization by employees performing work under this Agreement and shall comply with the provisions of Government Code Sections 16645 through 16649.

13. INDEMNIFICATION

To the fullest extent permitted by law, CUSTOMER shall indemnify, defend, and hold harmless COUNTY, its governing Board, officers, directors, officials, employees, and authorized volunteers and agents, (individually an "Indemnified Party" and collectively "Indemnified Parties"), from and against any and all claims, demands, actions, losses, liabilities, damages, and all expenses and costs incidental thereto (collectively "Claims"), including cost of defense, settlement, arbitration, expert fees, and reasonable attorneys' fees, resulting from injuries to or death of any person, including the property of either party hereto, arising out of, pertaining to, or resulting from the acts or omissions in connection with this Agreement of CUSTOMER, its officers, employees, or agents, or the acts or omissions of anyone else directly or indirectly acting on behalf of CUSTOMER, or for which CUSTOMER is legally liable under law except only such injury, death, or damage, to the extent it is caused by the negligence of an Indemnified Party. CUSTOMER shall not be liable for Claims caused by the sole negligence or willful misconduct of an Indemnified Party.

The right to defense and indemnity under this Section arises upon occurrence of an event giving rise to a Claim and, thereafter, upon tender in writing to CUSTOMER. CUSTOMER shall defend the Indemnified Parties with counsel reasonably acceptable to COUNTY. Notwithstanding the foregoing, COUNTY shall be entitled, on its own behalf, and at the expense of CUSTOMER, to assume control of its defense or the defense of any Indemnified Party in any legal action, with counsel reasonably selected by it. Should COUNTY elect to initially assume control of its defense, or the defense of any Indemnified Party, it does so without prejudice to its right to subsequently request that CUSTOMER thereafter assume control of the defense and pay all reasonable attorneys' fees and costs incurred thereby.

This indemnity obligation shall not be limited by the types and amounts of insurance or self-insurance maintained by CUSTOMER, or CUSTOMER's subconsultants or subcontractors at any tier.

Nothing in this Indemnity obligation shall be construed to create any duty to, any standard of care with reference to, or any liability or obligation, contractual or otherwise, to any third party.

The provisions of this Indemnity obligation shall survive the expiration or termination of the Agreement.

14. INSURANCE AND SELF-INSURANCE

Each party, at its sole cost and expense, shall carry insurance -or self-insure- its activities in connection with this Agreement, and obtain, keep in force and maintain, insurance or equivalent programs of self-insurance, for general liability, workers compensation, property, professional liability, cyber liability, and business automobile liability adequate to cover its potential liabilities hereunder. Each party agrees to provide the other thirty (30) days' advance written notice of any cancellation, termination, or lapse of any of the insurance or self-insurance coverages. Failure to maintain insurance as required in this Agreement is a material breach of contract and is grounds for termination of the Agreement.

15. COMPENSATION AND PAYMENT OF INVOICES

Compensation and payment under this Agreement shall in accordance with Exhibit B, or Exhibit B as modified by COUNTY in accordance with express provisions in this Agreement.

16. SUBCONTRACTS, ASSIGNMENT

A. CUSTOMER remains legally responsible for the performance of all contract terms including work performed by third parties under subcontracts. Any subcontracting will be subject to all applicable provisions of this Agreement. CUSTOMER shall be held responsible by COUNTY for the performance of any subcontractor.

B. This Agreement is not assignable by CUSTOMER in whole or in part, without the prior written consent of COUNTY.

17. AMENDMENT AND WAIVER

Except as provided herein, no alteration, amendment, variation, or waiver of the terms of this Agreement shall be valid unless made in writing and signed by both parties. Waiver by either party of any default, breach or condition precedent shall not be construed as a waiver of any other default, breach or condition precedent, or any other right hereunder. No interpretation of any provision of this Agreement shall be binding upon COUNTY unless agreed in writing by DIRECTOR and counsel for COUNTY.

18. SUCCESSORS

This Agreement shall bind the successors of COUNTY and CUSTOMER in the same manner as if they were expressly named.

19. INTERPRETATION

This Agreement shall be deemed to have been prepared equally by both of the parties, and the Agreement and its individual provisions shall not be construed or interpreted more favorably for one party on the basis that the other party prepared it.

20. DIRECTOR

As used in this Agreement, "Director" shall mean the Director of the Department of Waste Management and Recycling for County of Sacramento or his/her designee. Director shall administer this Agreement on behalf of the COUNTY, and has authority to make administrative amendments to this Agreement on behalf of the COUNTY including, but not limited to, scope of services, pricing, management practices, etc. Unless otherwise provided herein or required by applicable law, Director shall be vested with all the rights, powers, and duties of COUNTY herein. With respect to matters herein subject to the approval, satisfaction, or discretion of COUNTY or Director, the decision of the Director in such matters shall be final.

21. DISPUTES

In the event of any dispute arising out of or relating to this Agreement, the parties shall attempt, in good faith, to promptly resolve the dispute mutually between themselves. Pending resolution of any such dispute, CUSTOMER shall continue without delay to carry out all its responsibilities under this Agreement unless the Agreement is otherwise terminated in accordance with the Termination provisions herein. If the dispute cannot be resolved within 15 calendar days of initiating such negotiations or such other time period as may be mutually agreed to by the parties in writing, either party may pursue its available legal and equitable remedies, pursuant to the laws of the State of California. Nothing in this Agreement or provision shall constitute a waiver of any of the government claim filing requirements set forth in Title 1, Division 3.6, of the California Government Code or as otherwise set forth in local, state and federal law.

22. TERMINATION

A. CUSTOMER may terminate this Agreement without cause upon providing the COUNTY not less than six (6) months' written notice.

B. Either party may terminate this Agreement for cause upon the other party's breach of this Agreement and its failure to cure such breach within thirty (30) days (ten (10) days in the case of nonpayment of monies owed) of receiving written notice from the other party of such breach.

C. The Director has authority to terminate this Agreement on behalf of the COUNTY.

23. REPORTS

CUSTOMER shall, without additional compensation therefor, make fiscal, program evaluation, progress, and such other reports as may be reasonably required by DIRECTOR concerning CUSTOMER'S activities as they affect the contract duties and purposes herein. COUNTY shall explain procedures for reporting the required information.

24. AUDITS AND RECORDS

Upon COUNTY'S request, COUNTY or its designee shall have the right at reasonable times and intervals to audit, at CUSTOMER'S premises, CUSTOMER'S financial and program records as COUNTY deems necessary to determine CUSTOMER'S compliance with legal and contractual requirements and the correctness of claims submitted by

CUSTOMER. CUSTOMER shall maintain such records for a period of four years following termination of the Agreement, and shall make them available for copying upon COUNTY'S request at COUNTY'S expense. COUNTY shall have the right to withhold any payment under this Agreement until CUSTOMER has provided access to CUSTOMER'S financial and program records related to this Agreement.

25. PRIOR AGREEMENTS

This Agreement constitutes the entire contract between COUNTY and CUSTOMER regarding the subject matter of this Agreement. Any prior agreements, whether oral or written, between COUNTY and CUSTOMER regarding the subject matter of this Agreement are hereby terminated effective immediately upon full execution of this Agreement.

26. SEVERABILITY

If any term or condition of this Agreement or the application thereof to any person(s) or circumstance is held invalid or unenforceable, such invalidity or unenforceability shall not affect other terms, conditions, or applications which can be given effect without the invalid term, condition, or application; to this end the terms and conditions of this Agreement are declared severable.

27. FORCE MAJEURE

Neither CUSTOMER nor COUNTY shall be liable or responsible for delays or failures in performance resulting from events beyond the reasonable control of such party and without fault or negligence of such party. Such events shall include but not be limited to acts of God, strikes, lockouts, riots, acts of war, epidemics, acts of government, fire, power failures, nuclear accidents, earthquakes, unusually severe weather, acts of terrorism, or other disasters, whether or not similar to the foregoing, and acts or omissions or failure to cooperate of the other party or third parties (except as otherwise specifically provided herein).

28. SURVIVAL OF TERMS

All services performed and deliverables provided pursuant to this Agreement are subject to all of the terms, conditions, price discounts and rates set forth herein, notwithstanding the expiration of the initial term of this Agreement or any extension thereof. Further, the terms, conditions and warranties contained in this Agreement that by their sense and context are intended to survive the completion of the performance, cancellation or termination of this Agreement shall so survive.

29. AUTHORITY TO EXECUTE

Each person executing this Agreement represents and warrants that he or she is duly authorized and has legal authority to execute and deliver this Agreement for or on behalf of the parties to this Agreement. Each party represents and warrants to the other that the execution and delivery of the Agreement and the performance of such party's obligations hereunder have been duly authorized.

30. DUPLICATE COUNTERPARTS

This Agreement may be executed in duplicate counterparts. The Agreement shall be deemed executed when it has been signed by both parties.

Signatures scanned and transmitted electronically shall be deemed original signatures for purposes of this Agreement, with such scanned signatures having the same legal effect as original signatures. This Agreement may be executed through the use of an electronic signature and will be binding on each party as if it were physically executed.

(SIGNATURE PAGE FOLLOWS)

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first written above.

COUNTY OF SACRAMENTO, a political subdivision of the State of California	EL DORADO IRRIGATION DISTRICT, a special district in the State of California
By: _____ Douglas A. Sloan Department of Waste Management and Recycling	By: _____ Name: _____ Title: _____
"COUNTY"	"CUSTOMER"
Date: _____	Date: _____

Agreement approved by Board of Supervisors:

Agenda Date:_____

Item Number:_____

Resolution No:_____

Contract Reviewed and Approved by County Counsel

By:_____ Date:_____

Prepared by: _____
Richard Shaw, Senior Contract Services Officer
Department of General Services
Contract & Purchasing Services Division
Phone: (916) 876-6373

EXHIBIT A to Agreement

SCOPE OF SERVICES

1. DEFINITIONS

A. Acceptable Waste is grit and screenings waste (a type of MSW), with a minimum of 20% solids and no free moisture, generated from a wastewater treatment facility consisting of larger organic particles, sanitary products, rags, and bits of paper and plastic which is non-digestible through the waste water treatment system.

Acceptable Waste requires a COUNTY approved Waste Clearance Decision form.

Acceptable Waste does not include Unacceptable Waste as described elsewhere in this Agreement.

B. Designated Waste is as defined in California Water Code section 13173.

C. Direct Haul is the hauling of waste in a roll-off truck or packer truck from the source to the tipping facility.

D. Gate Tipping Fee shall be those applicable fees and charges contained in the most recent resolution adopted by the County of Sacramento Board of Supervisors establishing tipping fees at the Kiefer Landfill and the North Area Recovery Station (NARS) currently in effect. For informational purposes, at the time of execution of this Agreement, the effective resolution is Resolution No. 2020-0617, adopted September 22, 2020, approving the gate tipping fees for Hard-to-Handle Waste (Special Handling) of $300.00 per ton at Kiefer Landfill effective November 1, 2020.

E. Hard to Handle Waste shall be as defined in the most recent resolution adopted by the County of Sacramento Board of Supervisors currently in effect. For informational purposes, at the time of execution of this Agreement, the effective resolution is Resolution No. 2020-0617 adopted September 22, 2020 and effective November 1, 2020.

F. Hazardous Waste is as defined by State of California under section 66261.3 of title 22of the California Code of Regulations (22 C.C.R. § 66261.3).

G. Municipal Solid Waste ("MSW") shall be as defined in section 243.101(y) of title 40 of the Code of Federal Regulations (contained in 40 C.F.R. Part 243, Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste). MSW includes Acceptable Waste.

H. Packer Truck is a vehicle such as a front loader, side loader, or rear loader capable of hauling solid waste and recyclable materials.

I. Reduced Tipping Fee represents the discounted fee that will be applied to the Acceptable Waste as described in Exhibit B, section 1.

J. Roll-Off Truck is a vehicle capable of transporting one or more bins, each with a capacity of containing 10 cubic yards or more of solid waste or recyclable materials.

K. Transfer Haul is the hauling of waste in a transfer truck.

L. Transfer Truck is a truck and trailer combination capable of hauling solid waste and recyclable materials up to a gross vehicle weight of 80,000 pounds.

M. Unacceptable Waste is hazardous waste and any waste that is designated as unacceptable under the County's Solid Waste Facilities Permits for Kiefer Landfill and the North Area Recovery Station and the current Waste Discharge Requirements for Kiefer Landfill. Copies of these permits are available upon request.

2. SERVICES

A. Minimum Tonnage Commitment: CUSTOMER shall commit an annual minimum tonnage amount of 100 tons of Acceptable Waste per fiscal year (July 1 – June 30).

The tonnage commitment for July 1, 2020-June 30, 2021 shall be prorated to reflect the commencement date of November 1, 2020.

B. Acceptance of Waste by COUNTY. CUSTOMER may deliver, and COUNTY shall accept, transfer, place, compact and cover Acceptable Waste at Kiefer Landfill according to standard solid waste landfill practices, the terms and conditions of the Solid Waste Facilities Permits issued by the local enforcement agency

for Kiefer Landfill, and the State of California Minimum Standards for landfill and transfer station operations.

C. Rejection of Waste.

i. Any Class I or Class II waste, as such waste is defined in titles 22 and 27 of the California Code of Regulations delivered by CUSTOMER shall be rejected by COUNTY, and CUSTOMER shall be solely responsible for all costs associated with the cleanup and removal of any such waste.

ii. Designated waste delivered by CUSTOMER may be rejected by COUNTY at COUNTY'S discretion.

D. County's Right to Deny Access. COUNTY shall have the right, in its sole and absolute discretion, to immediately deny access to the landfill to any employee or SUBCONTRACTOR of CUSTOMER for any reason, and in the event COUNTY exercises such right, COUNTY shall provide written notification thereof to CUSTOMER as soon after the denial as is reasonable.

3. PRIMARY CONTACTS

In the performance of the services hereunder, CUSTOMER and COUNTY shall provide, and update as necessary, the primary contact person responsible for regular communications related to these services under this Agreement. These contacts shall be as follows:

COUNTY: NAME: Kelli Sequest
PHONE: 916-876-5393
E-MAIL: sequestk@saccounty.net

CUSTOMER: NAME: Tracy Crane
PHONE: 530-642-4059
EMAIL: tcrane@eid.org

EXHIBIT B to Agreement

COMPENSATION

1. DISPOSAL FEES

A. Reduced Tipping Fee. A reduced tipping fee for waste delivered by CUSTOMER to Kiefer Landfill shall apply to Acceptable Waste.

The Reduced Tipping Fee shall be set at $120.00/ton and applied according to the Minimum Tonnage Commitment as defined in Exhibit A, section 2.A.

B. If CUSTOMER in a given period fails to deliver to COUNTY, in accordance with this Agreement, the Minimum Tonnage Commitment for that period, then COUNTY shall invoice CUSTOMER for, and CUSTOMER shall pay, an amount equal to (i) the number of tons by which actual tons fell short of the Minimum Tonnage Commitment, multiplied by (ii) the then-applicable per-ton Reduced Tipping Fee.

C. No Reduced Tipping Fee for Delinquent Disposal Account. If any portion of the CUSTOMER'S disposal account is past due for more than thirty (30) days after the due date, COUNTY shall charge CUSTOMER the then-current Gate Tipping Fee for Hard-to-Handle Waste (Special Handling) and shall continue to charge such gate tipping fee until CUSTOMER effects full, current payment on its disposal account, and no reduced tipping fee shall later be applied for those charges. In the event CUSTOMER'S disposal account is delinquent for three (3) consecutive months, CUSTOMER shall be required to pay the then-current Gate Tipping Fee for Hard-to-Handle Waste (Special Handling) at the gate immediately (cash basis) when making deliveries, and such requirement shall continue until CUSTOMER effects full, current payment on its delinquent disposal account. Tonnages delivered during this time of delinquency will be counted toward the Minimum Tonnage Commitment as set forth in Exhibit A, section 2.A.

2. MONTHLY INVOICING

A. COUNTY will invoice CUSTOMER each month for waste deliveries made by CUSTOMER to Kiefer Landfill. COUNTY will mail each invoice by U.S. Mail, and simultaneously email each invoice to an email address provided by CUSTOMER.

B. Upon COUNTY'S transmittal, both electronically and via U.S. Mail, of the monthly invoice to CUSTOMER, CUSTOMER will generate a check for the invoiced amount.

C. CUSTOMER shall pay the invoice in full within thirty (30) days from the date of the invoice.

D. COUNTY and CUSTOMER shall mutually agree to any adjustments made to the invoice. Adjustments shall be made on the following month's invoice.

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider Board President Dwyer's recommendation of 2021 association and community organization assignments.

PREVIOUS BOARD ACTION

The Board President annually acts on nominations, appointment, and ongoing participation in associations and community organizations.

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

BP 12100 Representative Appointments
AR 12101 Board Representative Appointments

SUMMARY OF ISSUE

Listed below are current appointments and ongoing participation in association and community organizations. Board President Dwyer wishes to have a public discussion of any prospective changes before taking action.

- **Association of California Water Agencies (ACWA)**
  Director Anzini

- **ACWA/Joint Powers Insurance Authority (JPIA)**
  Director Osborne

- **ACWA Region 3**
  Jim Abercrombie, General Manager

- **Mountain Counties Water Resources Association (MCRWA)**
  Director Anzini

- **El Dorado County Water Agency (EDCWA)**
  Director Osborne
  Director Veerkamp, Alternate

- **Regional Water Authority (RWA)**
  Director Dwyer
  Jim Abercrombie, General Manager, Alternate
  Brian Mueller, Engineering Director, Alternate

- **El Dorado Local Agency Formation Commission (LAFCO)**
  Director Day
  Director Veerkamp, Alternate

BOARD OPTIONS

Option 1: Concur with Board President Dwyer's recommendation of 2021 association and community organization assignments.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

None

Jennifer Sullivan
Board Clerk

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

for
Pat Dwyer
Board President

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding a one-year contract to USP Technologies in the not-to-exceed amount of $65,097.50 for implementation of Carson Creek #1 Lift Station corrosion treatment program, and authorize the General Manager to extend the contract for up to two additional, single-year periods if in the District's best interests.

PREVIOUS BOARD ACTION

November 9, 2020 – Board adopted the 2020-2021 Operating Budget.

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

BP 3060 Contracts and Procurement
AR 3061 Procurement and Contracts

SUMMARY OF ISSUE

The sanitary sewer force main that conveys sewer flow from Carson Creek #1 lift station (CC1LS) to the Business Park 1 Lift Station (BP1LS) was designed and constructed to accommodate flows for full build-out of the surrounding area. Since much of the growth has yet to occur, the wastewater that flows through this pipeline is subject to increased detention time causing excessive levels of hydrogen sulfide (H_2S) gas to accumulate at BP1LS. H_2S gas is a poisonous, highly corrosive, and flammable gas with a unique "rotten egg" smell. Implementation of a corrosion treatment program will chemically precipitate sulphur compounds, limit H_2S gas from forming, prolong the useful life of BP1 equipment, and reduce H_2S levels to a non-hazardous level helping to protect District staff working at that facility.

BACKGROUND/DISCUSSION

H_2S has long been recognized as one of the most costly issues for municipal wastewater systems. Sewers with low velocities and increased retention time encourage the growth of anaerobic bacteria that generate hydrogen sulfide as a part of the decomposition process creating the "rotten egg" odor associated with septic wastewater.

The presence of hydrogen sulfide can lead to rapid and extensive damage to concrete and metals used in the wastewater collection system. H_2S corrosion occurs from acid attack resulting from the biological conversion of hydrogen sulfide gas to sulfuric acid in the presence of moisture in the sewer sysem. This can result in costly, premature replacement and/or rehabilitation of collection system infrastructure. The Water Environment Federation estimates that nationally H_2S corrosion causes $14 billion per year in sewer asset losses.

In addition to its nusaince smell, H_2S is a major health and safety concern for operations personnel and is the leading cause of gas inhalation deaths in the United States according to the Bureau of Labor Statistics. As part of its safety program, the District utilizes gas detectors to guard against the risk of such gas exposure, amongst other inhalation hazards.

Construction of CC1LS was completed in January 2016. The lift station was sized and built to accommodate build-out wastewater flows from three Carson Creek developments. Currently, the Carson Creek 1 subdivision has been completed, Carson Creek 2 is under construction, and Heritage

at Carson Creek is in the final stages of planning. Therefore, it is anticipated to be several years before the design flow is achieved at this facility, which is currently operating at less than fifty percent of its capacity. The lack of flow currently being conveyed by the CC1LS force main leads to excessive detention times, which allows organic solids to settle and decompose as they slowly travel almost 4,000 feet to BP1LS. As organic material decomposes, H_2S is released into solution and eventually becomes airborne when discharged at BP1LS. H_2S is highly corrosive and will lead to premature failure of piping and lift station equipment if left unchecked.

In late 2018, EID staff worked with USP Technologies to measure H_2S levels at BP1LS and to complete pilot testing of various chemical H_2S control strategies including SulFelox™ addition. SulFelox™ is an iron-based product that has been designed with safety in mind, and carries 1/10,000 the acidity of traditional iron salt solutions. As such, it has the benefits of traditional iron solutions (i.e., efficient durational control, natural regeneration and long-term effects in downstream gravity sewers and treatment plant processes) without the downsides (no aquatic toxicity hazard, wastewater pH depression, and consumption of alkalinity). SulFelox™ is specifically designed to perform in long, slow-moving, sulfide generating sewers such as those experienced at CC1LS/BPLS.

During the prior studies, baseline H_2S levels at BP1LS were recorded at 350 parts per million (ppm) on average, but peaks as high as 747 ppm were observed. It is important to note that in addition to long-term corrosion, concentrations of H2S above 700 ppm are known to cause rapid unconsciousness, and can cause death within a matter of minutes without proper safety precautions.

Pilot testing demonstrated that the addition of SulFelox™ at CCLS1 could reduce the average H_2S concentration at BP1LS to 14 ppm and reduce peaks to between 60-100 ppm, which no longer exceed corrosive and/or hazardous levels. SulFelox™ is a newly developed and trademarked product of USP Technologies. Therefore, District staff is not able to solicit competitive bids for this product and will proceed with this procurement under a sole source contract if approved.

The proposed SulFeloxTM delivery and feed system would be leased from the vendor on an annual basis as an interim solution until flows in the force main approach design conditions through increased growth in the surrounding area. At that time, the leased equipment would no longer be necessary and would be removed from the CC1LS site. Based upon current development patterns staff anticipates the chemical and equipment may be needed for at least three years. Therefore, staff is requesting that the Board authorize the General Manager to extend the contract for up to two additional, single-year periods if in the District's best interests.

FUNDING

The contracts to procure SulFelox™ chemicals and dosing equipment lease would be funded through the Operations Department Wastewater Division annual operations budget.

BOARD OPTIONS

Option 1: Award a one-year contract to USP Technologies in the not-to-exceed amount of $65,097.50 for implementation of Carson Creek #1 Lift Station corrosion treatment program, and authorize the General Manager to extend the contract for up to two additional, single-year periods if in the District's best interests.

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

Option 3: Take no action.

RECOMMENDATION
Option 1

ATTACHMENTS
Attachment A: USP Technologies Quote

Jon Money
Senior Civil Engineer

Tracy Crane
Wastewater/Recycled Water Operations Manager

Dan Corcoran
Operations Director

Mark Price
Finance Director

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

November 11, 2020

Tracy Crane
El Dorado Irrigation District
1000 Blackstone Pkwy
El Dorado Hills, CA 95762

RE: Sulfelox Odor Control Program for the El Dorado Hills WWTP

Dear Tracy,

USP Technologies (USP) appreciates the opportunity to provide a proposal for a full-service Sulfelox treatment program for the Carson Creek PS. The program is designed to control dissolved sulfides in the liquid phase, thus reducing H2S odors at EDHWWTP.

This offering is a full-service treatment program, wherein USP provides the equipment and operation and maintenance thereof, managing chemical supply, as well as program management, and includes sampling and performance validation and optimization throughout the course of the year. Please refer to **Appendix A** for details of USP's full-service program design.

Project Team

In support of the program, USP Technologies is committed to providing a highly qualified and experienced team of local individuals with a proven track record of success in working together on programs of similar size and scope. Our team is also dedicated to safe, reliable and cost effective operation and management of the program to meet the stated specifications and performance objectives. Key members are outlined below:

• Territory Manager	Michael Collins	559-725-5169
• Technical support	Ian Watson	760-685-1618
• Field Service Technician	Robert Gallagher	916-259-6192
• Supply Chain Manager	Michael Engram	404-387-5066

Equipment & Technical Services

Equipment services include new equipment installation, start-up and maintenance of the storage and dosing system:

1 – USP 2500-gallon LVS Sulfelox tank with feed systems and Chemwatch ™ ACS controller

On site applications support will be provided during start-up, and as needed. Safety training will be provided for Sulfelox to all designated personnel during start-up and on an ongoing basis. A basic scope for the furnished system is provided in **Appendix B** of this document. In order to complete this scope, a USP project manager will coordinate installation directly with the designated EDHWWTP point of contact.

Program Pricing

This proposal offer is for 12 month full service program. We are pleased to offer initial full-service, delivered pricing at:

Sulfelox: **$5.05/gallon Sulfelox - $55,297.50/year**

Monthly Facility Fees	**$400/month - $4,800/year**
Total Annual	**$60,097.50/year**
One Time Mobilization Fee	**$5000 one-time**

Above program pricing would be offered and held firm through 12/31/20 and are exclusive of sales tax, fuel and energy surcharges. Surcharge schedules are included in the **Appendix D**.

The application design assumes a chemical requirement of an average of 30 gallons/day of Sulfelox required for approximately 365 days/year.

Again, USP Technologies appreciates the opportunity to present this proposal and is looking forward to working with EDHWWTP. Upon approval via signature below, USP Technologies can quickly mobilize chemical and storage and dosing equipment. If you have any questions or comments concerning this proposal, please contact me at 559-725-5169 or via email at mcollins@usptechnologies.com.

Sincerely,

Michael Collins
Territory Manager
USP Technologies
1375 Peachtree St. NE Ste 300 N
Atlanta, GA 30309 USA
(404) 352-6070 office
(559) 725-5169 mobile
mcollins@usptechnologies.com
www.usptechnologies.com

CC: Ian Watson

Agreed to and Accepted on _____, 2020

by El Dorado Irrigation District

By: _____

Name: _____

Title: _____

Agreed to and Accepted on _____, 2020

by USP Technologies

By: _____

Name: _____

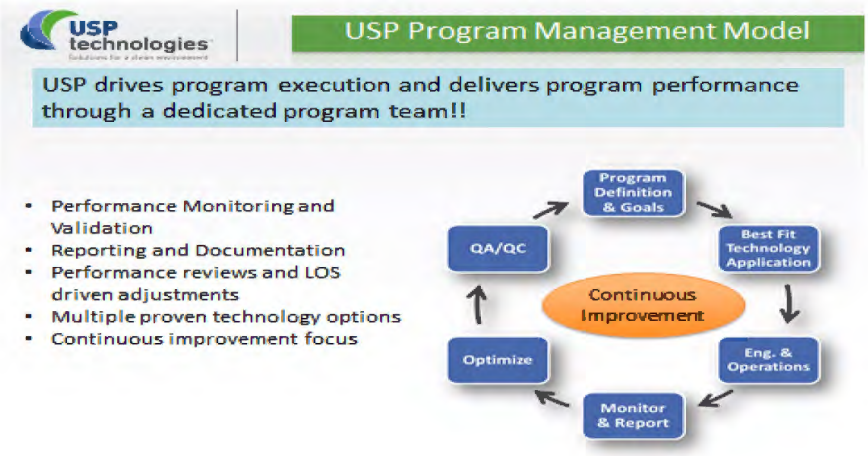
Title: _____

Appendix A: USP Technologies Program Management

USP Program Management

The USP Program will be managed based on performance standards agreed upon with the client ("Level of Service")

- Data Driven Programs
  - Extensive field sampling and data organization
  - Detailed analysis and reporting (**minimum of quarterly LOS meetings suggested**)
  - Rapid and efficient program adjustment per LOS/EID direction
  - Web-Based Program Tool (COMS)



- LOS – "Level of Service" Program Reporting Tool
  - "Exception Management Tool" – measures % performance to target
  - Quickly determines where optimization steps are needed based on performance data
  - Designed to drive program performance via a strategy of continuous optimization
  - Used to monitor treatment performance, dosing performance, and product quality

10/23/2017 - 10/29/2017 Printed: 11/8/17 18:46 **Level of Service Indicators PLWWTP, PS2, PS1, & EMG**

Site	Parameter	Sample Size	Min	Average	Max	Target	LOS %	Notes	Odalog #	
EMG Outfall	H2S (ppm)	0	N/A	N/A	N/A	100	N/A	No run due to Ray being unavailable	01507071	08507795
Newton Ave	H2S (ppm)	5122	0	11.1	37	65	100.0%		01507069	12401174
PS 2 North Interceptor	DS (mg/L)	4	0.5	0.6	0.7	<1.0	100%	Sampled Friday 10/27		
PS 2 South Interceptor	DS (mg/L)	4	0	0.1	0.2	<0.5	100%	Sampled Friday 10/27		
PLWWTP PLR	DS (mg/L)	6	1.2	1.0	2.2	<1.0	95%	Sampled Wednesday 10/25, all dissolved sulfides over target	125080138	
PLWWTP After H2O2	DS (mg/L)	6	0.2	0.3	0.4	<0.3	83%	Sampled Wednesday 10/25, first sample at 11:00 dissolved sulfides over target		
PLWWTP Influent Channel	DS (mg/L)	6	0	0.1	0.1	<0.2	100%	Sampled Wednesday 10/25		
PLWWTP PLE	DS (mg/L)	6	0	0.0	0	0	100%	Sampled Wednesday 10/25		
		Influent	After H2O2	After FeCl3	Effluent	AVG. O-PO4 Site 1	AVG. O-PO4 Site 2			
PLWWTP Iron	Fe (mg/L)	N/A	3.1	5.0	1.4	N/A	N/A	Sampled Wednesday 10/25		
	Sample size	0	1	1	1	0	0			

Dose Site	Product	Sample Size	Variance From Daily Target Min	Average	Max	Average Dose	Average Target	LOS%	Notes	Inspections	Initials
PS 2	H2O2	7	-1	0	0	850	851	100%		10/24/2017	JP
PLWWTP HW	H2O2	7	-2	-1	-1	749	750	100%		10/24/2017	JP
PS 1	FeCl2	7	11	15	17	4816	4801	100%		10/25/2017	JP/KD
EMG	FeCl2	1	-1450	-1450	-1450	0	1450	100%		10/26/2017	JP

Product Quality	Supplier	Sample Size	Specific Gravity Meas. Min	Average	Max	Specific Gravity Variance Min	Average	Max	LOS %	Notes
CWT FeCl2	CWT	3	1.380	1.382	1.385	0.000	0.002	0.005	100%	Del Mar 10/25, PPS 10/26, PS 65 10/26,
Kemira FeCl2	Kemira	7	1.380	1.384	1.390	0.000	0.000	0.001	100%	PS1 Samples
Evonik H2O2	Evonik	1	1.195	1.195	1.195	-0.0002	-0.0002	-0.0002	100%	NCWRP 10/25
Pencco FeCl2	Pencco	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No product supplied to SD
Operations Log	Complete	PL Notes:								

*Example weekly LOS report for a complex treatment program

Appendix B: EDHWWTP H_2O_2 Feed Equipment

Project/Client Name: El Dorado Irrigation District

Site Names: Eldorado Hills WWTP Headworks

USP Technology Manager: Michael Collins

USP Project Manager: Robert Gallagher

Treatment Technology: Sulfelox

Sulfelox; avg. 30 gpd

USP Scope Description:

- Provide and install one Engineered Chemical Storage and Feed System suitable for hydrogen peroxide service
- Provide and install chemical fill, suction, vent, and discharge plumbing (up to 40 feet) to application point
- Terminate customer-provided electrical sources at USP feed system power panels
- Provide and install safety shower and eyewash assemblies (as necessary)
- Connect customer-provided water sources at USP safety shower/eyewash assemblies (as necessary)

EID Scope Description:

- Provide accessible 15' x 15' concrete pad or level, graded site for each engineered chemical storage and feed system. A 4" bed of concrete, or coarse crushed aggregate, is preferred for the tank foundation. However, other surfaces may be acceptable.
- Provide 120VAC 20A single phase electrical service for each feed system power panel
- Provide ANSI-compliant water service for each safety shower/eyewash assembly (as necessary)
- Provide water source for emergency wash down service
- Provide suitable process tie-in for each application for chemical injection
- Offload and positioning of major equipment shipped to site (e.g. tank and feed system)

Description of Major Equipment:

- One Engineered Storage and Feed System for Sulfelox service including…
    - One 2,500 gallon HDPE Double Wall Tank
        - Leak Detect
        - Ultrasonic Level Indicator
    - One 1 Pump, 1 Dose Point Standard USP Feed Module
        - Peristaltic Pump; max. 16 gph
        - Leak Detect

- One ChemWatch™ Control and Power Panel
- Approx. 20 ft. of ½ PVC Tubing and associated fittings for suction and vent plumbing
- Approx. 40 ft. of ½ inch PVC Tubing and associated fittings for discharge plumbing
- Associated Chemical Labels and Markers
- On-site critical spares and PPE

Appendix C: Terms & Conditions

Terms & Conditions:

1. Weights. Seller's weights and volumes shall govern, except that in case of proven error adjustment shall be made.

2. Risk of Loss. Risk of loss and responsibility for all goods sold or provided hereunder shall pass to Buyer upon Seller's delivery to Buyer.

3. Warranty & Liability. Seller warrants that the goods shall conform to Sellers standard specifications in effect at time of shipment. SELLER MAKES NO OTHER WARRANTY, EXPRESS, OR IMPLIED, COVERING THE GOODS AND DISCLAIMS THE IMPLIED WARRANTY OF FITNESS FOR PURPOSE. Upon passage of title to the goods, Buyer assumes all responsibility and liability for and agrees to defend and indemnify Seller against, all claims, loss or damage resulting from Buyers storage, handling, sale or use of the goods or their containers.

4. Indemnification. Buyer shall indemnify, defend and hold Seller harmless from and against that portion of any liability, costs, expense (including without limitation reasonable attorneys' fees and expenses), claim, judgment, settlement or damage (collectively, "Claims") that Seller may incur or be required to pay to any third party (including without limitation any employee

of Buyer regardless of whether such employee is barred under applicable law from claiming against Buyer) which is caused or contributed to by any act or omission of Buyer, including without limitation those arising from the negligence of Seller. If Buyer resells the products sold hereunder, Buyer will use its best commercial efforts to obtain from its purchaser an indemnification similar to the foregoing for the benefit of Buyer and Seller.

5. Damages & Claims. Seller's liability for damages and remedies against the Seller shall be limited to return of the purchase price of the particular delivery with respect to which such damages are claimed. The foregoing constitutes the exclusive remedy against the Seller and entire liability of the Seller in connection with such delivery and Seller shall not be liable for any incidental or consequential damages. Buyer shall inspect each shipment of goods within a reasonable time after arrival at Buyers plant, and in any event before use. Failure to make a claim in writing against the Seller within 30 days after arrival of goods at destination shall constitute an irrevocable acceptance of goods. Any action for breach of this contract must be commenced within one year after the cause of action has accrued.

6. Default or Waiver. If Buyer fails to perform any of the terms of this contract, Seller may defer shipments until such failure is made good or may treat such failure as final refusal to accept further shipments and may cancel this contract. A Seller may terminate this contract if Buyer becomes insolvent, assigns his property for the benefit of creditors or is adjudicated a bankrupt. Either party's waive of such party's rights thereafter to enforce and compel strict compliance with conditions of this contract, at any time, shall not in any way affect, limit, or waive such party's right thereafter to enforce and compel strict compliance with every term and condition of the contract.

7. Excuses for Nonperformance. Seller shall have no liability for any delay or failure in performance hereunder, in whole or in part, if such delay or failure arises from (i) compliance in good faith with any foreign or domestic governmental regulation or order, whether or not later shown invalid or inapplicable; (ii) the occurrence of any contingency the nonoccurrence of which was a basic assumption at the time this contract was made, including without limitation acts of God, fire, flood, accident, riot, war, terrorism, sabotage, strike, lock-out, labor trouble or shortage, breakdown or failure of equipment, or embargo; (iii) Seller's inability to obtain any required product, material, energy source, equipment, labor, or transportation at prices and on terms deemed by Seller to be acceptable; (iv) Seller's incurring increased costs for compliance with environmental protection, health or safety regulations; or (v) any other event or occurrence not within the reasonable control of Seller. If any such circumstances affect only a part of Seller's capacity to perform, Seller may allocate products, services and deliveries among its customers and its own requirements as Seller may determine in its sole discretion. Quantities affected by this paragraph may, at the option of either party, be eliminated from the contract without liability, but the contract shall remain otherwise unaffected.

8. Assignability & Continuity. The Buyer shall not assign this contract or any right or obligation under this contract and any purported assignment shall be void and ineffective, but this contract shall be binding upon and inure to the benefit of the successors of the parties hereto.

9. Surcharges. Notwithstanding anything in this Contract to the contrary, Seller reserves the right to impose a special temporary surcharge in the event of any increase in the price of energy or any other raw material that is reasonably likely to have a material impact on Seller's overall costs of Products and Services, or is imposed on Seller by its material or services providers. The amount of such surcharge will be limited to that required to negate the increase in Seller's costs resulting from such increases. Seller shall give Buyer written notice at least [ten (10) business days] prior to imposing any such surcharge and shall reduce or remove such surcharge at such time as the price of energy or raw materials return to levels which no longer justify such increase.

10. Patents. Seller represents that to the best of its knowledge, the sale and/or use by Buyer of goods in the form sold hereunder will not infringe any composition of matter claims in any adversely held U.S. Patent claiming the goods per se, but in the event that it is alleged that such sale and/or use constitutes infringement of such Patent, then Seller's liability to the Buyer shall (i) be limited to the defense of such infringement actions and the payment of damages awarded therefor by a court of competent jurisdiction from which no appeal is or can be taken, and (ii) arise only if Buyer promptly gives Seller written notice of such claim and full authority, information and assistance for the defense of such claim. Seller's warranty as to use patents only applies to infringement arising solely out of the use of the goods according to their applications as envisioned by Seller's specifications. In no event shall Seller be liable for any infringement or alleged infringement arising from or caused or alleged to be caused by Buyer's combination of the goods supplied hereunder with other goods in any fashion not specifically recommended by Seller or by use of the goods in any process not specifically provided or recommended by Seller and is provided on the condition that the Buyer is likewise responsible for and will defend, indemnify and hold harmless the Seller against all losses, claims, expenses or damages which may result from the misuse or misapplication of any goods or services by the Buyer or any third party affiliated or in privity with Buyer. The foregoing states the entire liability of the Seller with respect to patent infringement by said goods. Seller reserves the right to suspend deliveries hereunder, or to terminate this contract, if the Seller believes that the manufacture and/or sale by the Seller, or the sale and/or use by the Buyer, of any goods sold hereunder infringes on any U.S. PATENT.

11. Applicable Law – Entirety. The construction, performance and completion of this contract shall be governed by the law of the state of Delaware. This contract is intended by the parties as the final expression of their agreement and is the complete and exclusive statement of the terms thereof, notwithstanding any oral representations or statements to the contrary heretofore made. No modification or release shall be effective unless in writing, signed by both parties, and specifically stating it is such modification or release.

12. Termination. If pursuant to any Federal, State or local law, regulation or ordinance Seller is required to install any additional equipment or facilities, in order to comply with governmental standards and if the cost of such installation, in Sellers opinion, makes it uneconomic to Seller to continue production of the goods, Seller may terminate this contract on 30 days prior written notice to buyer.

13. Acceptance. All sales and purchases of products hereunder are limited to and conditional on Buyer's acceptance of these standard terms and conditions. Seller objects to and rejects any terms and conditions that may be proposed by Buyer which are in addition to or different from these standard terms and conditions. No modification of this contract shall be effected by the acknowledgment or acceptance of purchase order forms containing different or additional terms or conditions.

Appendix D: Energy & Fuel Surcharge Details

Natural Gas Surcharge Matrix

Average of NYMEX Henry Hub options prices* ($ per MMBTU)	Quarter Energy Surcharge ($/Lb-100%)	Equivalent ($/gal-50%)	Equivalent ($/gal-35%)	Equivalent ($/gal-27%)
$10.00/MMTBU and above	$0.01/lb for each $1.00/MMBTU	$0.050/gal for each $1.00/MMBTU	$0.033/gal for each $1.00/MMBTU	$0.025/gal for each $1.00/MMBTU
$9.00-$9.99	$0.05	$0.250	$0.165	$0.125
$8.00-$8.99	$0.04	$0.200	$0.132	$0.100
$7.00-$7.99	$0.03	$0.150	$0.099	$0.075
$6.00-$6.99	$0.02	$0.100	$0.066	$0.050
$5.00-$5.99	$0.01	$0.050	$0.033	$0.025
Below $5.00	Removed	Removed	Removed	Removed

- The natural gas surcharge will be calculated each quarter using the average of the NYMEX Henry Hub forward price at the end of each month during the prior quarter.
- Surcharges are charged per customer, per invoice, for H2O2 deliveries.
- The surcharge will be removed when natural gas rates average below $5.00/MMBTU.

Diesel Fuel Surcharge Matrix

Diesel Fuel $/Gallon	Surcharge <200 Miles ($/Shipment)	Surcharge 200-399 miles ($/Shipment)	Surcharge >400 miles ($/Shipment)
1.001-1.100	Removed	Removed	Removed
1.101-1.200	$3	$203	$503
1.201-1.300	$9	$209	$509
1.301-1.400	$18	$218	$518
1.401-1.500	$23	$223	$523
1.501-1.600	$32	$232	$532
1.601-1.700	$38	$238	$538
1.701-1.800	$47	$247	$547
1.801-1.900	$53	$253	$553
1.901-2.000	$62	$262	$562
2.001-2.100	$68	$268	$568
2.101-2.200	$76	$276	$576
2.201-2.300	$82	$282	$582
2.301-2.400	$91	$291	$591
2.401-2.500	$97	$297	$597
2.501-2.600	$106	$306	$606
2.601-2.700	$112	$312	$612
2.701-2.800	$120	$320	$620
2.801-2.900	$126	$326	$626
2.901-3.000	$135	$335	$635
3.001-3.100	$141	$341	$641
3.101-3.200	$150	$350	$650
3.201-3.300	$156	$356	$656
3.301-3.400	$164	$364	$664
3.401-3.500	$170	$370	$670
3.501-3.600	$179	$379	$679
3.601-3.700	$185	$385	$685
3.701-3.800	$194	$394	$694
Every $0.10/gal Inc	Add alternating $6 & $9	Add alternating $6 & $9	Add alternating $6 & $9

The fuel surcharge will be calculated each month using the prior month's average weekly rate as published by the Energy Information Administration, which is a statistical agency of the U.S. Department of Energy. The link to the EIA site is as follows: http://tonto.eia.doe.gov/oog/info/gdu/gasdiesel.asp

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider authorizing additional funding in the amount of $18,200 for material purchase, $4,800 for a welding contract, $7,000 for an excavator rental, $80,000 for capitalized labor, and $11,000 for contingency for a total funding request of $121,000 associated with the El Dorado Main #2 Camino Heights Isolation Valve Project, Project No. 20047.

PREVIOUS BOARD ACTION

October 26, 2020 – Board adopted the 2021-2025 CIP, subject to available funding.

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

Staff advised that each CIP project would be presented to the Board for funding approval.

SUMMARY OF ISSUE

Board approval is required to authorize CIP funding prior to staff proceeding with work on the projects.

BACKGROUND/DISCUSSION

The CIP project identified in Table 1 requires funding. The expenditures to date, amount of new funding requested and the funding source are listed. The project was not included in the 2021 – 2025 CIP as the project was not identified prior to the development of the CIP. In mid-December staff reviewed the Caltrans Camino Safety Project which involves relocation of both the District's EDM#1 and EDM#2 critical transmission mains. Staff identified that the installation of a new valve on EDM#2 downstream of the project site would increase operational flexibility of the system to address any future leaks, maintenance and unplanned outages in this area and would better facilitate the tie-in of the new pipeline associated with the Camino project. Installation of the valve in January, during low demand flow conditions, will decrease the number of customers who would experience a water outage during the project's work. . If approved, the work to be performed by District crews is scheduled to commence on January 20, 2021 during the low demand flow season and prior to the Caltrans pipeline installation and tie-in of EDM2.

Table 1
CIP Funding Request

	Project Name and Number	2021-2025 CIP Plan[1]	Funded to Date	Actual Costs to date[2]	Amount Requested	Funding Source
1.	El Dorado Main #2 Camino Heights Isolation Valve Project 20047	-	$50,000	-	$121,000	100% Water Rates
	TOTAL FUNDING REQUEST				$121,000	

[1] Includes all existing costs plus any expected costs in the 5-year CIP.
[2] Actual costs include encumbrances.

The following section contains a brief breakdown and description of the project in the table.

CIP Funding Request

Project No.	20047	**Board Date**	01/11/2021
Project Name	El Dorado Main #2 Camino Heights Isolation Valve		
Project Manager	Delongchamp		

Budget Status	**$**	**%**
Funded to date	$ 50,000	-
Spent to date	-	-
Current Remaining	$ 50,000	100%

Funding Request Breakdown	**$**
Material – Asphalt Base (Pipe Bedding & Backfill), Concrete, & Associated Parts for 2" Air Release Valve	$ 18,200
Welding Contract	$ 4,800
Equipment Rental - Excavator	$ 7,000
Capitalized Labor – Engineering and Construction	$ 80,000
10% Contingency	$ 11,000
Total	$ 121,000

Funding Source
100% Water Rates

Description
This project will install a new 36" butterfly valve on El Dorado Main #2 in Camino. This valve will provide needed ability to isolate portions of El Dorado Main #2 to provide system reliability for the Camino Safety Project as well as future leaks and outages by allowing for smaller shutdowns that affect fewer customers. The original $50,000 funded to the project is being used to purchase the 36" parts including the 36" butterfly valve, 36" Flanges to be welded to the pipe for connection, and 36" DIP. The purchase orders for this material are currently being processed. This funding request is for the remaining material needed, welding contract, equipment rental, and capitalized labor for this valve installation. The District's Drinking Water Construction group will be installing the valve. The remaining material includes Asphalt Base for pipe bedding and back fill, concrete for the valve thrust block, and associated parts for a 2" Air Release Valve. The equipment rental is for an excavator as the District's mini excavator is not rated for the weight of the valve.

BOARD OPTIONS

Option 1: Authorize additional funding in the amount of $18,200 for material purchase, $4,800 for a welding contract, $7,000 for an excavator rental, $80,000 for capitalized labor, and $11,000 for contingency, for a total funding request of $121,000 associated with the El Dorado Main #2 Camino Heights Isolation Valve Project, Project No. 20047.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

None

Kailee Delongchamp
Associate Engineer

for
Dawn Noceti
Accountant

for
Elizabeth Dawson
Engineering Manager

Brian Mueller
Engineering Director

Mark Price
Finance Director

Jim Abercrombie
General Manager

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding a contract to Kyocera Document Solutions Northern California, Inc. in the not-to-exceed amount of $60,000 for a term of three years to provide managed print services.

PREVIOUS BOARD ACTION

November 9, 2020 – Board adopted the 2021-2022 Operating Budget.

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

BP 3060 Contracts and Procurement
AR 3061.09 Standardization of Goods and Services

SUMMARY OF ISSUE

The District currently utilizes various types of document management equipment to print, copy, and scan materials in support of District operations. Resupply of consumable goods, plus maintenance and support of the equipment is through a managed print services contract with Kyocera Document Solutions Northern California, Inc. (KDS) that automatically renews each year. The purpose of this item is to award a new contract to KDS for managed print services that updates several negotiated provisions of the current contract and sets a three-year term. Without a contract, the District would not be able to obtain proactive resupply of consumable printing goods and timely expert equipment support. Document management equipment and services would be purchased as needed during the term of the new contract.

BACKGROUND/DISCUSSION

Like other modern utilities, the District has adopted the use of digital forms and communications to serve a wide range of business needs. However, for situations where digital formats are not ideal or available, the District's document management equipment enables staff to convert digital information to print and vice versa. The District has currently deployed 11 high-volume network copier units that provide a wide range of features and functionality to staff, including printing, copying, scanning, and document finishing. The District has also deployed 34 additional low-volume desktop-style network print units across District facilities and configured for specific facility or functional needs.

The managed print agreement ensures all covered document management equipment is operating optimally and charges a per-page fee for each image printed on the equipment. Managed print services include proactively providing good quality consumable supplies such as toner, drums, and filters, plus preventative maintenance and repairs done by skilled technicians. Integrated software owned and maintained by the service provider is an essential part of the solution and automates many tasks, including ordering resupplies and alerting technicians of equipment faults or needs for service. In addition, the software collects and provides detailed equipment usage data which staff analyzes and uses regularly in a program to optimize business processes and gain further efficiencies. Since implementing the managed print program in 2014, the District's associated printing costs have fallen from an estimated $60,000 to under $20,000 annually, while printer performance and reliability have significantly increased.

The District contracted with KDS (previously doing business as Discovery Office Systems or DOS) to provide managed print services as the District began to implement the current standard high-volume network copier units in 2014. KDS offers an award-winning range of device technology and integrated business process solutions that work together seamlessly. In addition to being a proven service provider for the District, KDS continues to differentiate itself by being the only firm in the region qualified and willing to service the District's entire fleet of document management equipment under a managed print agreement. Advantages of using a single managed print service provider include simplified administration and streamlined support to drive greater efficiencies.

KDS was selected by District staff through a best value analysis to replace the fleet of aging and non-standardized equipment in 2014. The General Manager has approved standardization number 20016 with KDS for document management solutions and support through July 28, 2023. Staff prepared for negotiations with KDS that lead to the recommended contract by analyzing the existing contract, print volume trends, and service performance data seeking areas for improvement. During the negotiation staff obtained lower per-page rates on low-volume printing equipment while keeping the same per-page rates on high-volume equipment. Staff was also successful in reducing future rate increases to a maximum of 5% from a proposed 15% prompted by increased support concerns due to aging high-volume equipment. Base billing volume changes remain conservative to ensure that the District does not pay for images it does not print. Other key provisions are consistent with District requirements and remain unchanged from the prior contract. Staff recommends contract award to KDS using the negotiated standardization agreement. The recommended KDS managed print services contract would expire on January 31, 2024.

FUNDING

Managed print services would be purchased as needed through the District's annual operating budget, with per-page charges distributed to the respective department funds on a quarterly basis. The requested not-to-exceed contract amount of $60,000 is for a three-year term, based on the District's average annual managed print service costs of $20,000.

BOARD OPTIONS

Option 1: Award a contract to Kyocera Document Solutions Northern California, Inc. in the not-to-exceed amount of $60,000 for a term of three years to provide managed print services.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: MPS Contract
Attachment B: MPS Copiers Quote
Attachment C: MPS Printers Quote

Tim Ranstrom
Information Technology Director

Ryan Deakyne
Senior Buyer

Mark Price
Finance Director

Elizabeth Leeper for
Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

Attachment A

TERMS AND CONDITIONS

1. GENERAL SCOPE OF COVERAGE

This agreement covers both the labor and the material for adjustments, repairs, and replacement of parts as necessitated by normal use of the equipment except as hereinafter provided. ASM agreements include toner, developer, PM kits and drums in the amount consistent with manufactures published yields and servicing intervals. Freight charges may be applied and additional supplies will be billed at the prevailing rate. Basic, Fax/Printer agreements include labor and non-consumable parts only; No toner, developer, IU, Drums or PM kits are included.

1A. HELP DESK / NETWORK SUPPORT (When included)

Help Desk / Network Support is a separate service to provide assistance with key operator features and network issues. Service calls related to network connectivity will initially be supported by Help Desk / Network Support. Customer will allow Remote Assistance for the purpose of firmware upgrades, print driver upgrades, and troubleshooting network connection as it relates to the device on contract, such as updating IP addresses or scanning information. This does not cover troubleshooting or repair of customer's external devices for example; routers, switches, desktop or laptop computers and servers. The Help Desk / Network Support inclusion does not cover any on-site support. On-Site support will be invoiced at the prevailing rate.

2. SERVICE CALLS

Service calls covered under this agreement will be made during normal business hours (8:00a.m. – 5:00p.m.) at the installation address shown on the reverse side of this agreement. Travel and labor time for service calls after normal hours, on weekends and on holidays, if and when available, will be charged at overtime rates in effect at the time the service call is made.

3. LIMITATIONS AND EXCLUSIONS

A. It is understood that the obligation of Discovery Office Systems hereinafter referred to as DOS for service and maintenance under this Agreement shall be limited to only the equipment specified within this contract.

B. Service calls resulting from a malfunction of or damage caused by associated peripheral equipment not listed in the Agreement, or (b) use of paper and toner or other supplies not meeting OEM's specifications, or (c) operator or user error, (d) failure to perform operator maintenance as defined in the operator manuals, extreme environmental conditions, (temperature, dirt, high dust airborne contaminants, humidity) will be invoiced to the Customer at DOS's current published labor rates.

C. Maintenance service does not include performing service connected with the relocation of the equipment. All services rendered in connection with equipment relocations will be invoiced to the Customer at DOS's then current published labor rates. All freight charges incurred in the relocation are the liability of the Customer.

D. Customer agrees to notify DOS of any Customer performed relocations. Failure to do so may cause delays in response time when a service call is received for said equipment.

E. No other agreements, representations or understanding, expressed or implied, not specified herein, apply to the Agreement or services furnished hereunder.

F. When in its sole discretion DOS determines a shop reconditioning is necessary to keep the equipment in working condition, DOS will submit to Customer an estimate of needed repairs and the cost thereof, which will be in addition to the charge payable under the Maintenance Agreement. If the Customer does not authorize such reconditioning, DOS may discontinue the equipment from contractual coverage. Thereafter, service will be available on a "Per Call" basis at the current published labor rates plus any parts or supplies required during the service call.

G. Service required as a result of misuse, neglect, abuse, or operator error e.g. (Toner spill or internal damage caused by foreign objects such as paper clips or staples) is not included as a standard service and will be charged to the Customer at DOS's current published labor rates.

H. Electrical or mechanical work external to the equipment and/or system is not covered under this agreement.

I. Repair and/or maintenance required to fix damages, malfunctions or service failures caused by (a) Customer's repair, modifications or movement of the equipment and (b) abuse, misuse or negligent acts (c) acts of God or natural disasters are not covered under this agreement.

J. In accordance with DOS Performance and Product Guarantee, loaner equipment will be provided until the contracted equipment is repaired and deemed serviceable. Service loaners remain the property of DOS.

K. Equipment deemed by DOS as unserviceable and beyond economical feasible repair, due to excessive age or usage, may be discontinued from contractual coverage.

L. In no event shall either party be liable to the other party for any lost profits or special, incidental or consequential damages (However arising, including negligence) arising out of or in connection with this agreement.

M. Excludes repair and/or replacement of all network printing, scanning, faxing functions effected by updates, changes and/or modifications of the customer network whether by the customer, customers operating system of contractor thereof, or external network accessories, or systems not affiliated with the unit MFP/Printer covered by this contract, unless a Help Desk / Network Support agreement is included.

N. Fiery Color Control Systems are not covered under this contract.

4. TERM

This annual agreement shall become effective upon DOS's receipt of signed agreement and/or payment of the initial annual maintenance charge provided in this Agreement hereof and shall continue for twelve months after effective date. This Agreement is non-refundable, not transferable and subject to an annual increase. DOS will provide customer with a quote reflecting updated contract pricing at least 90 days prior to contract expiration date. This Agreement is non-refundable, non-transferable and subject to an increase not to exceed 5% annually

5. CHARGES

The initial annual charge for maintenance under this agreement shall be the amount set forth on the reverse side hereof. The annual maintenance charge with respect to any renewal term will be the charge in effect at the time of renewal. Customer agrees to pay the total of all charges for maintenance, service, and repair during the initial term and any renewal term within 30 days of the date of DOS invoice for such charges. DOS will identify in advance and in writing any customer specified changes, alterations, or attachments that will require an increase in maintenance charges, and once customer authorizes the increase in writing agrees to pay such charges promptly when due. Repair and/or maintenance of said equipment not covered by this Agreement will be separately charged at DOS's current published labor rates.

6. BREACH OR DEFAULT

If the Customer does not pay all charges for maintenance or parts as provided hereunder, promptly when due: 1) DOS may (a) refuse to service the equipment (b) furnish service on a C.O.D. "Per Call" basis at DOS Current published labor rates and 2) the Customer agrees to pay DOS costs and expense of collection including all attorney's fee incurred in collection. If equipment is moved outside of DOS's servicing area, DOS shall have the option to charge, and the Customer agrees to pay the difference in published maintenance charges between the current service area and the new service area, such charges to be assessed on a pro-rated basis. If equipment is moved beyond DOS published service area, DOS has the right to cancel the maintenance agreement.

7. RENTAL AGREEMENT TERMINATION

a. This Agreement may be terminated, with or without cause, by either party with no less than 30 days prior written notice.

b. Should Customer terminate this Agreement prior to the end of its term, with or without cause, Customer shall:

i. Permit DOS to remove any DOS owned equipment and supplies covered under this Agreement

ii. Pay all charges due and owing to DOS through the date of removal of such equipment and/ or supplies.

8. CUSTOMER METER READING AND REPORTING OBLIGATIONS

Customer agrees to provide DOS with accurate and timely meter readings at the end of each applicable billing period through the use of PageLogic Meter Collection Software during the Initial Term and all subsequent Renewal Terms. The Maintenance Pricing is based on the use of the PageLogic Meter Collection Software. An additional $10.00 monthly service fee will be charged for network connected equipment if the Customer elects not to use the PageLogic Meter Collection Software.

Initial here _____ if you wish to DECLINE the use of PageLogic Meter Collection Software.

9. **CONFIDENTIALITY**

DOS recognizes that it must conduct its activities in a manner designed to protect any information concerning its affiliates or Customers (such information herein referred to collectively as the "Information") from improper use or disclosure. DOS agrees to treat Customer's Information on a confidential basis. DOS further agrees that it will not disclose any Customer Information, without Customer's prior written consent, to any person, firm or corporation except (1) to authorize Customer representatives or (2) to employees of DOS who have to perform the services contemplated hereunder. DOS agrees upon request to have its employees execute written undertakings to comply with the confidentiality requirements set forth under this paragraph.

10. ADDITION OF EQUIPMENT (MPS PageLogic ONLY)

Customer is required to immediately notify DOS upon installation of any additional equipment and/or movement of covered equipment at Customer's site. Upon installation, if DOS deems equipment serviceable, such equipment shall automatically be added to Schedule A, and be covered by this Agreement and shall be considered the Equipment for all purposes under this agreement.

11. MISCELLANEOUS

A. This Agreement and any amendments thereto shall be governed in accordance with the laws of the State of California.

B. DOS will not be liable for any failure to perform which may be attributable to (a) the inability to obtain raw materials, parts or supplies at reasonable prices or through usual and regular sources or on a timely basis, (b) the interruption of transportation, (c) government regulation, labor disputes, strikes, war, fire, flood, accident, or other cause beyond DOS's control making it impractical for DOS to perform, (d) manufacture backorders and/or discontinuation of parts.

INITIAL x _____

Attachment B

MANAGED DOCUMENT SOLUTIONS

SALES REP Justin Dempsey

P.O. NUMBER

Contract 2/1/2021 (BEGIN DATE) 1/29/2024 (RENEWAL DATE)

CUSTOMER INFORMATION

Please check contract type: ☐Silver XGold Platinum

SHIP TO:		BILL TO:	
COMPANY NAME		COMPANY NAME	
El Dorado Irrigation District /Various Locations		El Dorado Irrigation District / HQ	
ADDRESS		ADDRESS	
2890 Mosquito Rd		2890 Mosquito Rd	
CITY, STATE, ZIP		CITY, STATE, ZIP	
Placerville, CA 95667		Placerville, CA 95667	
CONTACT NAME	PHONE	CONTACT NAME	PHONE
Tim Ranstrom	(530)642-4175	EID Accounts Payable	(530)642-4156
EMAIL ADDRESS	FAX	EMAIL ADDRESS	FAX
transtrom@eid.org		invoices@eid.org	

PRODUCT MAINTENANCE & SUPPLIES AGREEMENT (GOLD)	FAX / PRINTER SERVICES AGREEMENT (SILVER)	MANAGED PRINT SERVICES AGREEMENT (PLATINUM)
INCLUDES - TONER, DEVELOPER, DRUMS OR PHOTOCONDUCTORS, FILTERS, PARTS, PREVENTATIVE MAINTENANCE & LABOR	**INCLUDES** -PARTS & LABOR, ONLY	**INCLUDES** - TONER, PARTS, MAINTENANCE KITS, ACCOUNT REVIEW
EXCLUDES - PAPER, STAPLES, LABELS OR TRANSPARENCIES	**EXCLUDES** - SUPPLY UNITS, PAPER, STAPLES, LABELS OR TRANSPARENCIES, FUSER, MAINTENANCE KITS	**EXCLUDES** - PAPER, STAPLES, LABELS, OR TRANSPARENCIES
**NETWORK FEES ARE NOT INCLUDED*	**NETWORK FEES ARE NOT INCLUDED*	**NETWORK FEES ARE NOT INCLUDED*

EQUIPMENT COVERED UNDER AGREEMENT

Model	Serial Number	Equipment ID#	Begin Meter
SEE ATTACHED SCHEDULE A Copier Fleet FOR COMPLETE DEVICE LIST			
This is a gold level copier service agreement			

CONTRACT PRICING

Base Billing Cycle is Quarterly

base of $438.00 for 60,000 black & white images

and $561.60 for 36,000 color images

Other

Overage Billing Cycle is Quarterly

Rate on Kyocera devices

$0.0073 black & white images

$0.0156 Color Level 1 images

$0.04500 Color Level 2 images

$0.07200 Color Level 3 images

Other

Rate on non-Kyocera devices

black & white images

color images

NOTES ON SPECIAL TERMS:

This agreement will not exceed 5% rate escalation per year

CUSTOMER ACCEPTANCE

This agreement consisting of the terms & conditions appearing on the reverse is hereby approved, accepted & executed by the respective parties, hereto on the dates set forth adjacent to their signatures. ***See reverse for additional terms.***

X _____ _____ _____

customer signature **print name and title** **date**

X _____ _____ _____

Kyocera Document Solutions Northern California, Inc. Signature **print name and title** **date**

Attachment C

MANAGED DOCUMENT SOLUTIONS

SALES REP Justin Dempsey

P.O. NUMBER

Contract 2/1/2021 (BEGIN DATE) 1/29/2024 (RENEWAL DATE)

CUSTOMER INFORMATION

Please check contract type: ☐Silver Gold X Platinum

SHIP TO:		BILL TO:	
COMPANY NAME		COMPANY NAME	
El Dorado Irrigation District /Various Locations		El Dorado Irrigation District / HQ	
ADDRESS		ADDRESS	
2890 Mosquito Rd		2890 Mosquito Rd	
CITY, STATE, ZIP		CITY, STATE, ZIP	
Placerville, CA 95667		Placerville, CA 95667	
CONTACT NAME	PHONE	CONTACT NAME	PHONE
Tim Ranstrom	(530)642-4175	EID Accounts Payable	(530)642-4156
EMAIL ADDRESS	FAX	EMAIL ADDRESS	FAX
transtrom@eid.org		invoices@eid.org	

PRODUCT MAINTENANCE & SUPPLIES AGREEMENT (GOLD)	FAX / PRINTER SERVICES AGREEMENT (SILVER)	MANAGED PRINT SERVICES AGREEMENT (PLATINUM)
INCLUDES - TONER, DEVELOPER, DRUMS OR PHOTOCONDUCTORS, FILTERS, PARTS, PREVENTATIVE MAINTENANCE & LABOR	**INCLUDES** -PARTS & LABOR, ONLY	**INCLUDES** - TONER, PARTS, MAINTENANCE KITS, ACCOUNT REVIEW
EXCLUDES - PAPER, STAPLES, LABELS OR TRANSPARENCIES	**EXCLUDES** - SUPPLY UNITS, PAPER, STAPLES, LABELS OR TRANSPARENCIES, FUSER, MAINTENANCE KITS	**EXCLUDES** - PAPER, STAPLES, LABELS, OR TRANSPARENCIES
**NETWORK FEES ARE NOT INCLUDED*	**NETWORK FEES ARE NOT INCLUDED*	**NETWORK FEES ARE NOT INCLUDED*

EQUIPMENT COVERED UNDER AGREEMENT

Model	Serial Number	Equipment ID#	Begin Meter
SEE ATTACHED SCHEDULE FOR COMPLETE DEVICE LIST			
This is a Platinum Printer Service Agreement			

CONTRACT PRICING

Base Billing Cycle is Quarterly — base of $153.00 for 10,200 black & white images; and $738.00 for 9,000 color images

Other

Overage Billing Cycle is Quarterly — Rate on Kyocera devices

$0.015	black & white images
$0.082	Color Level 1 images
	Color Level 2 images
	Color Level 3 images

Other

Rate on non-Kyocera devices

$0.015	black & white images
$0.082	color images

NOTES ON SPECIAL TERMS:

This agreement will not exceed 5% rate escalation per year

CUSTOMER ACCEPTANCE

This agreement consisting of the terms & conditions appearing on the reverse is hereby approved, accepted & executed by the respective parties, hereto on the dates set forth adjacent to their signatures. ***See reverse for additional terms.***

X _____ _____ _____

customer signature | **print name and title** | **date**

X _____ _____ _____

Kyocera Document Solutions Northern California, Inc. Signature | **print name and title** | **date**

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider directing staff to implement the lower of current or last year's winter usage to establish the customer's 2021 residential wastewater rate.

PREVIOUS BOARD ACTION

November 15, 1999 – Board adopted Resolution 99-109, to bill customers bi-monthly for wastewater based on the average water consumption of two bi-monthly cycles during the winter service period effective May 1, 2000.

January 23, 2012 – Board directed the General Manager to continue with the implementation of the 2012 residential wastewater calculations, and have staff determine the lower of the current or last year's winter usage to establish their 2012 wastewater rate.

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

BP 9050 Payment for On-going Service
AR 9051.1 Minimum bills (paragraph 4)
AR 9051.3 Bill adjustments

SUMMARY OF ISSUE

Due to recent COVID-19 stay-at-home orders implemented throughout the state of California, including El Dorado County, customers may see an increase in their winter water usage during the calculation period for their 2021 residential sewer rates.

BACKGROUND/DISCUSSION

The District's Administrative Regulation 9051.1 states in part that residential wastewater rate calculations are performed annually, based on water consumption that occurs during the two-month winter billing cycle. Additionally, there is a notice on our billing statements each fall advising residential sewer customers of the upcoming period where their usage determines their residential wastewater rate for the following year. The notice states, "the sewer commodity charge is based upon your winter water consumption that occurs November through February. Conserving water during these months can result in lower 2021 sewer bills."

However, based on the Governor's stay-at-home order, this year, calculating the sewer commodity charge based on current year's winter usage may be higher than normal to customers who have been impacted by the stay-at-home order during this year's calculation period.

Therefore, one option to account for this situation may be to establish the 2021 residential sewer rate calculations similar to the process approved by the Board during the height of the drought in 2011/2012. In 2011/2012, staff automatically set the sewer rate to the lower usage of the two years for all residential sewer customers. Similarly, this Director item proposes to direct staff to implement the lower of the current or last year's winter water usage to establish the customer's 2021 residential wastewater rate.

BOARD OPTIONS

Option 1: Direct staff to implement the lower of current or last year's winter water usage to establish the customer's 2021 residential wastewater rate.

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

Option 3: Take no action.

RECOMMENDATION

Board Preference.

ATTACHMENTS

None

Jenny Downey
Customer Service Manager

Mark Price
Finance Director

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

2021 Residential Wastewater Rate Calculation

El Dorado Irrigation District

January 11, 2021

Previous Board Action

- January 23, 2012 – Board directed the General Manager to continue with the implementation of the 2012 residential wastewater calculations, and have staff determine the lower of the current or last year's winter usage to establish their 2012 wastewater rate.

Summary of Issue

- Due to recent COVID-19 stay-at-home orders, residential customers may see an increase in their winter water usage during the calculation period for their 2021 residential wastewater rates.

- AR 9051.1 states in part that residential wastewater rate calculations are performed annually, based on water consumption that occurs during the two-month winter billing cycle.

Summary of Issue (Cont'd)

- Calculating the residential wastewater rate based on current year's winter usage may be higher than normal to customers who have been impacted by the stay-at-home order during this year's calculation period.

- One option may be that staff set the 2021 residential wastewater rate to the lower usage of the two years, 2020 or 2021,for all residential sewer customers.

Board Options

- **Option 1:** Direct staff to implement the lower of current or last year's winter water usage to establish the customer's 2021 residential wastewater rate.

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

- **Option 3:** Take no action.

Recommendation

- Board preference

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider adopting a resolution declaring Earth Day as a day-use free access day at Sly Park Recreation Area.

PREVIOUS BOARD ACTIONS

November 9, 2020 – Staff presented an information item to the Board on recreational facilities discounts and fee waiver concepts.

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

AR 3051 Budget Principles
AR 11010 Adoption of Rates, Fees, and Charges

SUMMARY OF ISSUE

The Board has requested the implementation of a fee waiver program for day use access to Sly Park Recreation Area (SPRA). This agenda item responds to that request by presenting a proposed resolution declaring April 22nd, Earth Day, annually as a day-use free access day for all visitors at SPRA.

BACKGROUND/DISCUSSION

During the November 9, 2020 Board meeting, staff presented a number of options to provide discounted or waived access fees to the District's recreational facilities, along with a regional comparison of similar programs. The Board discussed these options and ultimately directed staff to bring back a proposed approach providing one day-use free access day annually at SPRA. The Board has discretion to determine that providing a free day-use access day to all visitors of the SPRA promotes public welfare by increasing accessibility to recreational opportunities for the public and serving to educate the public regarding the District's water supply facilities.

EID Recreation facilities host more than 700,000 guests per year. The vast majority of this visitation takes place during the summer recreation season from Memorial Day weekend to Labor Day weekend and most of that use occurs at SPRA with the balance occurring at Hwy 88 facilities associated with Project 184. The level of visitation currently experienced at SPRA has caused it to reach capacity and necessitated closing the park to additional visitors during the summer recreation season for several hours on Saturdays, Sundays, and holidays to ensure a safe and enjoyable experience for guests. Based on these circumstances, providing a free access day outside of the peak season is the most likely to provide the best experience for visitors and avoid issues with capacity limits.

During the November Board meeting, the Board also discussed potential dates to provide free access to coincide with dates such as free fishing days offered by the state as well as Earth Day. Since the state's free fishing days are now concurrent with holiday periods during peak summer usage at SPRA, staff has included language in the proposed resolution to coincide with Earth Day, which is honored on April 22nd annually. In addition to the symbolic nature of this date, there is projected to be available park capacity for increased visitation while also having an increased likelihood of favorable weather.

If the Board adopts the proposed resolution, then on future Earth Day dates daily SPRA entrance fees for vehicles, boat launch, and pets would all be waived, but any limitations or restrictions on day use, including capacity, will continue to ensure an enjoyable experience for all users of the facility. There would be no adjustments or credits associated with camping fees during this same time period as the free access would be focused on day use consistent with Board direction. Although providing a free access day annually will have some impact on Recreation revenues, typical use during this time of year is fairly low so expected decreased revenues for that day would be expected to be $500-$2,500 annually, depending on the day of the week Earth Day falls on that year and weather conditions. Hopefully this free day use opportunity could lead to increased visitation on other dates when capacity exists.

The gate house would remain staffed during the free access day to ensure orderly access and safe use of SPRA, process any camping reservations that may be commencing on that date, and, although not expected, limit access of vehicles and/or boats if capacity limits appear likely. In contrast to a voucher system, the implementation of a free access day for all visitors on a specific day will allow staff to provide access without the administrative challenge of verifying whether park entrants are EID ratepayers or county residents and/or tracking use, if a voucher system were implemented.

If the proposed resolution is adopted by the Board, staff would send an email regarding the free access day to those customers who have shared their email with the District. In addition, a summary of this opportunity would be placed in the March/April 2021 Waterfront newsletter which is included with customer billing statements. Going forward, staff will include the free access day information annually in the January/February Waterfront newsletter to allow our customers to plan to come and enjoy a free day at SPRA.

BOARD OPTIONS

Option 1: Adopt a resolution declaring Earth Day as a day-use free access day at Sly Park Recreation Area.

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

Option 3: Take no action.

RECOMMENDATION

Board preference

ATTACHMENTS

Attachment A: Proposed resolution

Greg Hawkins
Parks and Recreation Manager

Dan Corcoran
Operations Director

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

**RESOLUTION OF THE BOARD OF DIRECTORS OF
EL DORADO IRRIGATION DISTRICT DECLARING EARTH DAY
AS A DAY USE FREE ACCESS DAY AT SLY PARK RECREATION AREA**

WHEREAS, the Board of Directors desire to provide the community free access to the Sly Park Recreation Area (SPRA) granting one free access day for day-use visitors annually; and

WHEREAS, Earth Day is an annual event created to promote environmental citizenship, awareness and appreciation; and

WHEREAS, recreation opportunities that promote these goals while increasing awareness of our region's valuable water resources benefits the community as a whole; and

WHEREAS, the management of SPRA and the critical drinking water supplies it provides to the citizens of El Dorado County exemplify Earth Day values; and

WHEREAS, Earth Day in celebrated on April 22nd each year.

NOW, THEREFORE, BE IT HEREBY RESOLVED by the Board of Directors of the EL DORADO IRRIGATION DISTRICT (District) that this Board:

1. Declares SPRA to be a resource for all District customers and citizens of the County of El Dorado; and
2. Determines that providing a free day-use access day to all visitors of the SPRA promotes public welfare by increasing accessibility to recreational opportunities for the public and serving to educate the public regarding the District's water supply facilities; and
3. Approves waiving all day use fees to SPRA including vehicles, boats, and pets on one day each year; and
4. Declares that the most fitting day of the year when such day use fees will be waived to be Earth Day; and
5. Acknowledges that the annual free access day use to SPRA will be subject to any limitations or restrictions on day use, including capacity, to ensure an enjoyable experience for all users of the facility; and
6. Declares that the annual free access days for SPRA day use will begin on Earth Day April 22, 2021 and continue on Earth Day annually thereafter until/unless changed by resolution of the Board of Directors.

/ / /

The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 11th day of January 2021, by Director who moved its adoption. The motion was seconded by Director and a poll vote taken which stood as follows:

AYES:

NOES:

ABSENT:

ABSTAIN:

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

_____
Roger "Pat" Dwyer
Board of Directors
EL DORADO IRRIGATION DISTRICT

ATTEST:

_____
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

(SEAL)

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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 11th day of January 2021.

_____

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

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Sly Park Recreation Area Day-use Free Access Day

El Dorado Irrigation District

January 11, 2021

Summary of Issue

- Board requested implementation of a fee waiver program for day use access to Sly Park Recreation Area (SPRA)
- Proposed resolution declaring April 22nd, Earth Day, annually as a day-use free access day

Background / Discussion

- November 9, 2020 Board Meeting
  - Options for discounted or waived access fees
  - Regional comparison of similar programs
- Board discussed options
  - Directed staff to bring back proposed approach for one day-use free access day annually at SPRA

SPRA Usage

- Recreation facilities host more than 700,000 annually
  - Most occurs during the summer recreation season
  - Project 184 Hwy 88 facilities gaining in popularity
- SPRA often reaches capacity on Saturdays, Sundays, and holidays
- Recommend free access day outside of peak season
  - Provide the best experience for visitors
  - Avoid issues with capacity limits

Free Access Day

- Board discussed potential dates to provide free access
  - State free fishing days (concurrent with summer holiday periods)
  - Earth Day
- Earth Day proposed date
  - Honored on April 22nd annually
  - Promote recreation opportunities while increasing awareness of region's valuable water resources benefits
  - Projected park capacity
  - Increased likelihood of favorable weather

Fee Waiver

- Daily entrance fees waived
  - Vehicles, boat launch, and pets
  - No adjustments or credits associated with camping fees
- Maintain limitations or restrictions on day use including capacity
  - Ensure an enjoyable experience for all users
- Some impact on Recreation revenues expected
  - $500-$2,500 annually depending on day of week and weather conditions
  - Could lead to increased visitation on other dates when capacity exists

Park Access

- Gate house remain staffed
  - Orderly access and safe use
  - Process any camping reservations commencing that day
  - Limit access of vehicles and/or boats if capacity limits appear likely (not anticipated)

Customer Outreach

- Primary goal will be to educate District customers
- If resolution adopted:
  - Email regarding free access day to District customers
  - Summary of opportunity in March/April 2021 Waterfront newsletter
  - January/February Waterfront in future years for early notification

Board Options

- **Option 1:** Adopt a resolution declaring Earth Day as a day-use free access day at Sly Park Recreation Area
- **Option 2:** Take other action as directed by the Board
- **Option 3:** Take no action

Recommendation

- Board Preference

"Quality Recreation & Uncompromising Stewardship"

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding a contract to MGE Engineering in the not-to-exceed amount of $299,841 for design of the Flume 45 abutment section, and authorize additional funding of $145,000 for capitalized labor and $60,000 for environmental studies for a total funding request of $504,841 for the Flume 45 Abutment Replacement Project, Project No. 17025.01.

PREVIOUS BOARD ACTION

October 26, 2020 – Board adopted the 2021-2025 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 45 abutment section is an elevated wooden flume that is currently supported by a historic rock wall and is in need of replacement due to its current degraded condition. The rock wall abutments that support the flume are at risk of collapse; therefore, a design to stabilize the rock wall abutments and replace the flume is necessary. Staff is recommending awarding a contract to MGE Engineering to design the replacement of Flume 45 abutment section including both the flume section and rock wall abutments.

BACKGROUND/DISCUSSION

Flume 45 Abutment section is a wooden flume approximately 100 feet in length and was last replaced in 1945. This section of Flume 45 is elevated and spans a landslide area where an 1870's era historic, un-mortared, hand-stacked rock wall previously supported the flume. The elevated section of flume is currently supported at each end by abutments of the historic rock wall. The District implemented abutment stability measures in 2014 as an interim measure to ensure the continued integrity of the flume section until full replacement could be completed. This section of flume is south and directly above Highway 50, and west of Riverton.

The abutments of the historic wall require either replacement or stabilization. Because the rock wall is listed as an eligible resource on the National Register of Historic Properties, work that may adversely affect the wall requires approval from the State Historic Preservation Officer (SHPO). To facilitate SHPO's review, the District must provide a detailed project description, a complete discussion of all potential alternatives for repairing or stabilizing the rock wall, and an analysis of why alternatives that may avoid adverse effects are not feasible.

The District plans to construct the Flume 45 Abutment Replacement Project in one construction season during the 2022 annual outage. The District envisions this project will replace the elevated wood flume with concrete flumes or canal. Access to the abutment section already exists, but was damaged during the 2017 storms. Therefore, as part of the scope the consultant will provide a design to improve the access to facilitate construction activities.

Request for Proposals
A Request for Proposals (RFP) was released on October 20, 2020 and emailed to the District's Engineering Services on-call list and posted on the District's website. Three consultants attended the pre-proposal meeting and the District received the following proposals:

Engineering Firm	Fee Proposal
GHD, Inc.	$368,914
Gannett Fleming	$344,270
MGE Engineering	$299,841

MGE has provided recent design and construction services for the District, and has demonstrated the experience and knowledge to conduct this design. Therefore, staff is recommending award to MGE Engineering, as the lowest responsive and responsible proposer.

Environmental Review
The project will be subject to compliance with the California Environmental Quality Act (CEQA). Staff is evaluating the appropriate level of environmental review and regulatory permitting requirements necessary for the project. Although the design details of the rock wall stabilization are yet to be determined, staff recommends obtaining cultural resources support to update the existing Finding of Effect and conduct cultural resources investigations of the project area to support the CEQA analysis. Staff also recommends initiating seasonally dependent biological resource surveys to support the environmental review. Both cultural and biological surveys would provide analysis for all likely design options. Staff is requesting $60,000 to initiate these technical studies to support the project. Staff will request additional funding to support environmental review and regulatory permitting once the project design is selected and the appropriate level of environmental review and regulatory permitting is determined.

FUNDING
Staff is requesting funding of $504,841 for design and to initiate environmental review for the project as summarized below. The anticipated funding source is 100% water FCCs.

Flume 45 Abutment Funding Requirements

	Amount
MGE Engineering – Design Services	$299,841
Capitalized labor – Engineering, environmental staff support	$145,000
Professional services to support environmental review	$60,000
TOTAL	**$504,841**

The 2021–2025 CIP estimates expenditures of $1.76 million over three years for environmental, geotechnical, design, and construction of the project. The design scope also includes additional geotechnical evaluations for the historic rock wall, additional laboratory testing, and coordination with SHPO. Construction costs will be further refined as the design proceeds and will be reflected in the 2022-2026 CIP.

BOARD OPTIONS

Option 1: Award a contract to MGE Engineering in the not-to-exceed amount of $299,841 for design of the Flume 45 abutment section, and authorize additional funding of $145,000 for capitalized labor and $60,000 for environmental studies for a total funding request of $504,841 for the Flume 45 Abutment Replacement Project, Project No. 17025.01.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: MGE Engineering Proposal
Attachment B: 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

Mark Price
Finance Director

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

Attachment A

December 9, 2020

Design Professional Services Flume 45 Abutment Section Replacement Project

RFP No. 20-09, Project No. 17025.01

Prepared for

El Dorado Irrigation District

Prepared by:

MGE Engineering, Inc.

Denise

In association with:

[Type the company name]

Blackburn Consulting, Inc.

5/27/2011

Psomas

MGE ENGINEERING, INC.

7415 Greenhaven Drive • Suite 100 • Sacramento, CA 95831 *TEL (916) 421-1000 • FAX (916) 421-1002*

December 9, 2020

El Dorado Irrigation District (EID)
2890 Mosquito Rd
Placerville CA 95667
Attn: Project Manager, Cary Mutschler

Re: Proposal for Flume 45 Abutment Section Replacement Project, Design Professional Services, RFP20-09, Project No. 17025.01

Dear Mr. Mutschler:

MGE Engineering, Inc. (MGE) is pleased to submit this proposal to provide design professional services for the Flume 45 Abutment Section Replacement Project in response to the subject RFP. MGE, founded in 1990, provides civil, structural, and geotechnical engineering services as well as construction management for transportation and water resource infrastructure, and other civil works. MGE has successfully provided these services to EID and to federal, state and local agencies throughout California. MGE is certified as a Disadvantaged Business Enterprise (DBE) by the California Unified Certification Program (CUPC). MGE, headquartered in Sacramento with offices in Oakland and Los Angeles, has a staff of 30 professional, technical, and administrative personnel.

Mr. Blake Johnson, as Project Manager, will lead the MGE team. Mr. Johnson is a registered professional civil engineer with 25 years of relevant experience including recent experience working with EID. He will be supported by key staff with professional registrations including: civil engineer, structural engineer, geotechnical engineer, and licensed land surveyor. In addition, we have included Blackburn Consulting to provide expertise in geotechnical tasks and Psomas to provide surveying services; both firms have recent experience providing these services on similar projects for EID and other agencies.

Key personnel from the MGE team attended the pre-proposal meeting and job walk on Wednesday, November 4, 2020. The MGE team understands that the proposed Project is subject to FERC guidelines, and requires unique experience and availability in order to successfully complete the project on time. Within this proposal, projects are listed to demonstrate our experience in the following criteria:

- Recent projects designed and constructed under "Federal Energy Regulation Commission (FERC) Guidelines for Evaluation of Hydropower Projects",
- Implementation of "Quality Control Inspection Programs (QCIP)" during construction in accordance with FERC guidelines,
- Projects of similar scope in remote areas,
- A project design that was constructed by use of helicopter in remote areas.

MGE has the ability to complete all of the project elements by the dates identified in Section 10, Schedule of the RFP, and team members can report to the site by the next calendar day (and usually the same day) of the request to respond to construction issues. In addition, MGE is registered with the State of California Department of Industrial Relations (DIR) and will abide by prevailing rate requirements as needed, and as determined by Director of the DIR.

We believe that the proposal submitted herein will demonstrate that: MGE understands the project, has the staff resources, expertise, relevant experience to perform the scope of work, is committed to cost-control and client service to meet EID's needs, and does not have professional conflicts that would prevent us from providing services.

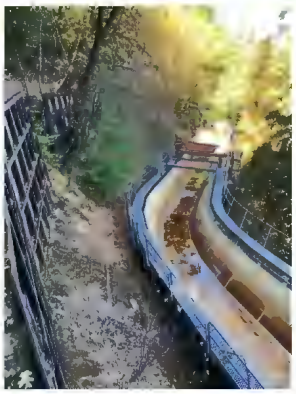
As MGE's Vice President, I will serve as the Principal-in-Charge, representing the team during negotiations. I will administer the professional services contract and be the primary point-of-contact for EID to negotiate the contract and fee. I can be reached via email at rsennett@mgeeng.com or at the telephone number and address listed in the letterhead. Please email or call me should you have any questions about our submittal.

Sincerely,
MGE Engineering, Inc.

Robert E. Sennett, PE, SE – Vice President

SECTION 1 – SCOPE OF WORK

PROJECT UNDERSTANDING



MGE understands that El Dorado Irrigation District (EID) is proposing to replace an approximately 100-foot-long section of the Flume 45. The current 100-foot-long section is supported on a wood truss system and at the ends of the section by historic hand-stacked rock walls. The flume structure and abutment was last replaced in 1945 and temporarily stabilized in 2011, respectively. MGE understands that EID would like to support the 100-foot section on an MSE wall or similar and widen the downhill side to incorporate a patrol/maintenance road next to the canal. Maintenance road widths are typically 12 to 14 feet along straightaways and approximately 16 to 20 feet where the roadway is along curved portions of the canal.

MGE understands that, currently, only one preservation option was presented to the State Historic Preservation Office (SHPO) for this flume replacement project. The presented option included documentation of the wall and shotcrete encapsulation to stabilize the historic rock walls for this section of the flume. SHPO requires at least two to three alternatives for rock wall preservation to evaluate and approve. MGE understands that development of other preservation alternatives is part of the requested design services. Other alternatives that can be investigated and submitted to SHPO include the complete relocation of the canal towards the slope side, leaving the wall intact or documenting and photographing the existing wall with complete removal. MGE will work with EID to meet the needs of EID while satisfying SHPO's requirements.

Another element of this project includes stabilizing a storm damage site on the access road to Flume 45. A small landslide has damaged the outboard portion of the roadway and another hand-stacked historic wall. The length of damage along the road is approximately 20 to 30 feet and extends from the roadway hinge to approximately 8 to 10-feet below the roadway grade. MGE understands that EID requires stabilizing the slope and providing adequate roadway width for District vehicles and construction equipment access. PG&E has used steel column and wood lagged "walls" that buttress the slope in this location. The storm damage occurred between the buttressed portions of the slope.

It is also understood that the flume is located in the area of a landslide, and spans a historic rock wall that is currently experiencing some failure.

For this project, potential conflicts that may hinder the requested services stem from the unknown quantity and quality of the rock stabilization and the unknown potential environmental mitigations required for permitting. In order to manage the rock stabilization analysis and design, MGE has added team members for a collaborative design effort, as well as contract document and constructability reviews by a Certified Engineering Geologist. This will minimize potential unknowns and allow for a knowledge-based design with construction flexibility to minimize risk and conflict. To manage potential unknown environmental mitigations, MGE has in-house resources with qualified experience in environmental permit-required work to minimize impacts to water and air quality and habitat. These resources have recent experience in similar projects for USFS within the El Dorado National Forest and other nearby northern California forests.

MGE proposes the following scope of work to replace the unstable wood abutment section of Flume 45, and replace or preserve the hand-stacked historic rock wall per the State Historic Preservation Offices guidelines (SHPO). MGE expects that the Flume 45 Abutment Section Replacement Project can be constructed in one season during the 2022 outage running from October through December.

SCOPE

The scope listed below has been edited from the version included as *Exhibit A* of the RFP to expand upon tasks and to include additional tasks that the MGE team considers essential or advisable in order to constitute a complete scope of work.

TASK 1. MEETINGS AND SITE VISITS

1.1 Kickoff meeting – MGE will attend a kickoff meeting with representative members of EID and the MGE team in attendance. It is assumed that one 3-hour kickoff meeting will be required.

1.2 Design review meetings – MGE will conduct design review meetings at the 30%, 50%, 75%, and 100% completion level. It is assumed that three meetings at 4 hours each (30%, 50%, and 75% level), and one meeting at 2 hours (100% level) will be required. Design review meetings will be held at EID's office in Placerville.

1.3 Team site visits – MGE will conduct site visits during the design phase as needed. All site visits will be coordinated with EID. It is anticipated that numerous site visits will be required as the design is developed. It is assumed that four site visits at 5 hours each will be required.

TASK 2. PROGRESS REPORTS AND SCHEDULES:

2.1 Monthly progress reports – MGE will prepare and submit monthly progress reports that will accompany an invoice. The reports will include progress-to-date, schedule updates, District action items, team action items, status of deliverables; problems encountered with suggested solutions, budget expenses vs. anticipated and anticipated work for the next month.

2.2 Schedule – MGE will provide and maintain a design schedule and submit schedule updates to EID as changes occur. It is expected that a 100% draft design will be complete by December 2021 for submission to FERC with construction expected to start in October 2022, and project close-out and warranty to continue into 2023. MGE will develop and maintain the schedule in Microsoft Project and include planning, surveying, geotechnical investigation, design, environmental, permitting, FERC review, bidding, and construction.

Deliverables:

- Monthly progress reports and invoices in .pdf format, electronic file of schedule as updated

TASK 3. FIELD TOPOGRAPHIC AND LiDAR SURVEYS

3.1 Topographic Survey of Flume 45

Psomas will produce base mapping for the project, all based mapping will be prepared in AutoCAD 2018 Civil 3D .dwg format. The drawing will include a 3D tin surface. Contours will be generated at an interval of 1-foot with a mapping scale of 1 inch = 30 feet. The mapping information will be on individual layers in accordance with National CAD Standards. Tasks include:

- **Limits:** Flume 45 is located East of Pollock Pines, CA and the Flume Abutment is approximately 100'± in length and mapping limits will extend 150'± up and downstream of site and within the FERC boundaries. These limits are roughly shown in the exhibit (right). Additional surveying will take place at the storm damage site along the access road to Flume 45. A small landslide has damaged the outboard portion of the roadway and another hand-stacked historic wall. The length of damage along the road is approximately 20 to 30 feet and extends from the roadway hinge to approximately 8 to 10-feet below the roadway grade.
- **Datums:** The horizontal datum for this survey shall be the NAD83 California State Plane Zone II and the vertical datum shall be NGVD29.
- **Control Survey:** Psomas shall perform research and field surveys to establish the project control network. Psomas shall also perform necessary calculations and process field data of the site.
- **Topographic Mapping:** Psomas shall produce design level topographic mapping within the project area and extending 150'± beyond the limits and within the FERC boundary. Survey includes cross sections at maximum 25-ft. intervals together with horizontal and vertical grade breaks, edge of canal, grade breaks, toe of slope, top of slope, details of existing flume structure, and trees 6" dbh or larger.

Deliverables:

- Composite archival base map combining all cross sections, topographic/utility information, and right of way/boundary information (including APNs and parcel addresses)

Exclusions:

The following services are excluded from the scope of work for this proposal. If any of the following services are required, Psomas will negotiate the scope and fee for these services.

- Subsurface utility detection. Psomas can provide this additional service if needed.
- Setting of property, right of way, or easement monuments.
- The filing of a Record of Survey

Assumptions:

- Psomas surveyors will not be responsible for public noticing prior to survey activities
- Sites will be accessible during the planned survey activity.

TASK 4. GEOTECHNICAL INVESTIGATIONS

Blackburn will review existing published geologic data, geotechnical data, and historic photos provided by EID (including bare earth LIDAR) and will discuss the proposed flume replacement project with MGE.

4.1 Field Investigations

Blackburn will perform the following to obtain geologic and subsurface data for design:

- Map the geology along the flume alignment on large scale base maps provided by MGE and/or EID. Mapping will include rock outcrops, rock discontinuity measurements, and landslide features.
- Test compressive strength on exposed rock outcrops with a Schmidt Hammer tests to estimate rock unconfined compressive strength.
- Perform up to 9 seismic refraction surveys on both the upslope and downslope side of the flume to evaluate the depth to rock.
- Hand excavated up to three test pits to depths of 3 feet or refusal on un-excavatable rock on the slope below the flume and rock walls to visually evaluate the depth to and condition of bedrock.

A professional geologist or engineer will log the tests pits and obtain bulk and relatively undisturbed samples of representative subsurface soil and rock materials. Where possible, drive samples of soil above the rock will be collected. Test pits will be backfilled with native soils upon completion.

It is assumed that EID will allow access to the flume location. From the access road above the flume Blackburn plans to transport tools and equipment by foot to the downslope side of the flume.

4.2 Field and Laboratory Tests

Blackburn will review the samples obtained from our test pits and then assign laboratory tests. Tests will depend on the soil/rock conditions encountered and will likely include the following:

- Point load testing on rock samples to estimate of rock strength.
- Remolded direct shear tests (on soil) to estimate compacted soil strength.
- Modified proctor to estimate soil compaction characteristics.
- Resistivity, pH, Sulfate, and Chloride Content to estimate soil corrosivity.

4.3 Seismic Refraction Studies

Blackburn will perform up to 9 seismic refraction lines using a seismograph, geophones, and a manually swung sledge-hammer as the source energy. Line lengths will be 55 to 115-feet long. Blackburn will record the seismic data in the field and perform analyses of the data in the office to evaluate depth to rock, rock density, and rippability characteristics. Blackburn will analyze subsurface and laboratory information to evaluate:

- Corrosion potential
- Lateral earth pressures for foundation design
- Bearing capacity and settlement for foundation design
- Seismic design criteria (2019 CBC parameters)
- Depth of excavatable rock
- Backfill requirements and suitability of native materials for MSE walls
- Stability analysis of existing slope and slope with MSE wall.

4.4 Geologic Landslide Mapping

Blackburn will perform geologic reconnaissance near the flume replacement and storm damage sites to visually assess global slope stability and evaluate the potential for landslides and future instability. Blackburn will incorporate this evaluation with the mapping of the rock outcrop and discontinuities.

4.5 CBC Seismic Study

Blackburn will provide seismic design information in accordance with Chapters 16 and 18 of the 2016 CBC (California Building Code) in sufficient detail to support seismic class recommendation for design work. The ground motion shall be based on the geologic, tectonic, seismic recurrence information, and foundation material properties associated with the specific site. The design ground motion shall be 10 percent probability of being exceeded in 50 years.

4.6 Engineering/Geologic Analyses

Blackburn will analyze subsurface and laboratory information to evaluate:

- Corrosion potential
- Lateral earth pressures for foundation design
- Bearing capacity and settlement for foundation design
- Seismic design criteria (2019 CBC parameters)
- Depth of excavatable rock
- Backfill requirements and suitability of native materials for MSE walls
- Stability analysis of existing slope and slope with MSE wall.

4.6 Geotechnical Report

Blackburn will present the fieldwork results in a geotechnical design report, which will include the following:

- Project and site description
- Summary of published geotechnical data
- Vicinity map and site plan
- Site geology
- Summary of soil, rock and groundwater conditions
- Test pit logs
- Seismic refraction survey profiles
- Laboratory test results
- Conclusions and recommendations for:
    - Groundwater presence and control
    - General soil corrosion potential
    - 2019 CBC seismic design parameters
    - Grading recommendations including foundation preparation, cut and fill slopes, and fill properties
    - Rock excavation/rippability characteristics
    - Drainage recommendations
    - Global slope stability and landslide mitigation
    - MSE wall recommendations that include
        - Foundation preparation and embedment
        - Global stability
        - Wall drainage
        - Bearing capacity and passive pressure
        - Minimum reinforcement length
        - Soil backfill properties including classification, unit weight, friction angle, cohesion, and coefficient of friction.
    - Construction considerations that may include:
        - Rock excavation
        - Groundwater control
- Risk management and limitations

Deliverables:

- Draft Geotechnical and Seismic Reports – 2 bound copies and 1 electronic copy on flash drive.
- Final Geotechnical and Seismic Reports – 4 bound copies and one electronic copy on flash drive.

TASK 5. 30% DESIGN MEMORANDUM

MGE will develop a design memorandum (DM) at the 30% design level that will be used as a planning level study to evaluate Flume 45 historic rock wall replacement/preservation options. The DM will provide evaluations on how to stabilize or preserve the existing rock wall, or if needed, to justification for portions of wall the removal. MGE will of the wall, and provide three detailed alternatives to the State Historic Preservation Office (SHPO) for review and approval. At a minimum, three alternatives for the historic rock wall will be detailed and presented. Construction costs for each of the design options alternative will be developed for submittal to SHPO. The DM will be developed after the necessary geotechnical investigations have been completed to support the historic rock wall design alternatives. The 50% design will commence after SHPO has given concurrence on the preferred alternative.

TASK 6. PROJECT DESIGN AND DESIGN DOCUMENTS

The Flume 45 Replacement project design will be based on the outcome of the 30% DM as stated in Task 5 above. MGE's design and bid documents will:

- Meet all applicable and most current codes, laws, regulations, FERC Factors of Safety and Guidelines, and professional standards.
- Clearly identify access routes and schedule constraints.
- Be in conformance with the sixteen-division format of the Construction Specification Institute and EID's design standards.
- MGE will cooperate with EID in coordinating the plans and be in compliance with EID's technical specifications with EID (supplied standard Division 0 and Division 1 specifications). MGE will provide work descriptions and final opinion of probable cost for inclusion into District's standard specifications and complete sections 00400, 00520, 01100, and 01200 in addition to providing additional Division 1 construction contract specifications as necessary for the Project and not supplied in District's standard specifications. MGE will also provide a list of anticipated submittals per section 01330.
- Clearly identify and describe all necessary quality assurance and quality control procedures such as inspections, tests, submittals or other measures that the Contractor must satisfy, meet or perform. MGE will prepare the Quality Control Inspection Program (QCIP) per FERC guidelines and for submission to FERC.
- Include the requirements for tests, controls, performances and certifications needed to verify the specified quality level of Work for that specification section and QCIP.
- Include a dedicated subsection within each work-related specification section to identify and list required Contractor submittals along with testing and inspection requirements.
- MGE will provide EID with a separate listing of tests, inspections and reports required under the construction plans and specifications and responsibility therefore, to occur in connection with the Project and QCIP.
- MGE will meet with EID to incorporate comments at each design review phase.
- MGE will take into consideration the current bidding environment for the construction cost estimates.

6.1 30% Design Memorandum Submittal (Preliminary Design)

MGE will prepare and finalize a 30% Design Memorandum to assist EID in obtaining SHPO concurrence prior to starting on the 50% design phase. Three alternatives will be developed for this task. Layouts and details will be provided for each alternative. Design will identify impacted wetlands or waters of the U.S., borrow and fill sites, trees to be removed, and project improvements.

Deliverables:

- 30% design memorandum detailing, at a minimum, the three alternatives for handling the historic rock wall. Details will be provided for each of the alternatives.
- Geotechnical investigations to support the historic rock wall alternatives

6.2 50% Design Submittal

Once the 30% Design Memorandum has been approved by SHPO, MGE will begin the 50% design on the selected alternative.

Deliverables:

- 50% level design drawings.
- Technical Specifications with accompanying table of contents.
- Geotechnical Report.
- Written response to any comments on 30% design that was not incorporated into the drawings.
- A detailed project description that will be used to obtain permits, agency approvals, and associated environmental documents.
- Revised Opinion of Probable Cost.
- Updated Microsoft Project schedule.

6.3 75% Design Submittal

MGE will continue with design activities from the 50% design submittal and meet with EID to discuss and incorporate comments.

Deliverables:

- 75% level design drawings.
- Written response to comments on 50% design that were not incorporated in the design drawings.
- Revised Opinion of Probable Cost.
- Updated Microsoft Project schedule.
- Technical specifications in Microsoft Word format.

6.4 100% Draft Design Submittal

Technical Specifications MGE will prepare the final draft front-end documents and technical specifications for the project. EID will provide comments on the documents prior to the Final 100% submittal. MGE will incorporate EID comments prior to the Final 100% submittal.

Quality Control and Constructability Review: A supervisory level engineer will review the entire draft PS&E (75% PS&E) package for uniformity, compatibility and constructability. The review will include evaluating plans for conflicts or inconsistencies, and to ensure that the final design is in accordance with all environmental documents, permit requirements, and foundation recommendations. The specifications and estimate will be reviewed for consistency with the plans to ensure construction pay items are addressed per the results of all reviews.

100% Draft PS&E Submittal: MGE will prepare the 100% draft PS&E submittal which will include any revisions/modifications to the project plans, special provisions, and an updated Engineers Estimate of Probable Construction Cost for the project. The plans, special provisions, and estimates will incorporate the requested design changes and comments provided by EID's review of the 75% PS&E submittal.

EID will provide MGE with their standard "boiler plate bid document" (Notice to Contractor, Proposal, and Construction Contract) in Microsoft Word format. MGE will add the bid item list, standard special provisions, environmental requirements and other project information needed to produce the draft Bid Documents for the project.

Deliverables:

- Written response to any comments on the 75% design that were not incorporated.
- 100% draft, essentially biddable documents for submission to FERC.
- Flash drive with front-end documents and technical specifications in Microsoft Word format, and drawings in AutoCAD and high resolution PDF in 11x17 and 24x36 format.
- Four 24x36 plan sets.
- Design calculations for submission to FERC.
- Electronic copy of the FERC Quality Control Inspection Program
- Revised Opinion of Probable Cost.
- Front-end specification as outlined in section 6d.
- Revised technical specifications in Microsoft Word format
- Constructability review documentation.
- Updated Microsoft Project schedule

6.5 Final (100%) Design Submittal

MGE will prepare the Final (100% PS&E) submittal and present it to EID for bidding purposes. This submittal will include any mutually agreed upon revisions/modifications to the project plans, special provisions, and an Engineer's Estimate of Probable Construction Cost for the project as a result of EID's review of the previous submittal. Appropriate modifications will be made to the PS&E by MGE to allow EID to proceed with advertisement of bids, award, and construction the project.

Deliverables:

- Flash drive with Microsoft Word copy of "Final" front end documents of sections 00400, 00520, 01100, 01200, 01330, technical specifications, complete plan set in AutoCAD and high resolution PDF in 11x17 and 24x36 format.
- Eight (8) - 24x36 plan sets.
- Final updated Opinion of Probable Cost.
- Final Microsoft Project schedules.
- QA/QC review documentation.
- Resident Engineer Pending File
- District signature on coversheet & stamped plan set by Engineer of Record.

TASK 7. REGULATORY AND FERC / LEGAL DESCRIPTIONS

EID will obtain the regulatory and environmental permits required for the work, along with FERC notification of the design. It is anticipated that the 50% design drawings will be used to obtain the regulatory permits, and that the 100% draft design drawings will be submitted to FERC. MGE will prepare supporting documents, including drawings and details, as needed for the approvals and respond to comments received.

SECTION 2 – RELEVANT EXPERIENCE AND EXPERTISE

MGE, founded in 1990, provides civil/structural engineering services for the planning, design, construction, maintenance, and repair of transportation infrastructure, water resource structures, and other heavy civil public works. MGE's civil and structural departments have delivered hundreds of projects to Local, State and Federal Agencies. Project types include new roadway and bridge design and construction, bridge retrofit, bridge independent design check, roadway rehabilitation and widening, drainage design and drainage structures, flood damage repair, emergency repair and slope stabilization, retaining walls, right-of-way identification and exhibit preparation, utilities design and relocation and specialized design and construction to meet difficult and constrained projects.

The MGE team includes professionals with 10 years of experience in the required disciplines listed below, qualifications of each of these key staff members is included in the following *Section 3 - Project Team*.

- California registered geotechnical engineer - Thomas W. Blackburn, PE, GE
- California registered civil engineer – Blake Johnson, PE, QSD
- California registered structural engineer – Robert Sennett, PE, SE
- California licensed land surveyor – Dana Remington, PLS

The success of MGE's corporate philosophy and commitment to project delivery is demonstrated by our long-term and repeat clients.

The MGE team understands that the proposed project is subject to Federal Energy Regulation Commission (FERC) guidelines, and requires unique experience and availability in order to successfully complete the project on time. Within this section, projects are listed to demonstrate our experience in meeting the EID's criteria as outlined in the RFP.

CAMP 2 BRIDGE REPLACEMENT, EL DORADO HYDROELECTRIC PROJECT, FERC PROJECT NO. 184-CA, EL DORADO COUNTY, CA

Project Dates: 2011-2015

The Project is located in El Dorado County, California on the south side of U.S. Highway 50 near the town of Riverton. The Project is located on Bureau of Land Management Lands managed by the United States Forest Service (USFS) outside of the FERC License boundary. The Bridge is not visible from any public roads.

The Camp 2 Bridge provides the sole vehicular access to the Plum Creek Siphon, Camp 2 House, and other critical portions of EID's El Dorado Federal Energy Regulatory Commission (FERC) Project No. 184-CA. The bridge is timber constructed and is located atop a steeply inclined exposed granite outcrop. The bridge load rating has recently been de-reduced from vehicular down to pedestrian and small all-terrain vehicles due to age related degradation. The bridge is located immediately below and adjacent to large unstable granite boulders which both endanger the safe continued passage on the bridge, the bridge itself, any replacement structure, and the safety of the maintenance/construction workers who will be working below these boulders.

The project's essential elements were to: remove the existing bridge, stabilize the slope and abutment foundation, scale boulders and the rocks mass that cannot be stabilized, construct a concrete buttressed retaining wall structure to replace the bridge, and allow the historic rock wall to remain intact.

MGE was responsible for design and PS&E preparation, and construction support. The work involved included construction of a reinforced concrete buttress wall structure, rock scaling to remove blocks of rock, rock pinning of the perched blocks above the wall, and installation of wire mesh rock net drapery. MGE's services during construction included: review of submittals, responding to RFI's, re-design of the north abutment (due to contractor caused damage), support to EID Staff in monitoring critical construction methods and verification testing. MGE also provided a punch list and final walk- through, and prepared Record Drawings (As-Built Plans).

The biggest challenge during construction involved contractor negligence. Unfortunately, the original contractor severely damaged the north abutment which consisted of a historic stacked rock wall system slated to remain in place. Additional issues with the contractor resulted in construction delays and eventually forced EID to recommend "Termination for Cause". MGE's project manager aided EID in recovery, deficiency determination, and support for potential legal matters. In the end, EID was successful in terminating the Contractor for cause. This termination served to protect the remaining improvements, remove threats to environmental compliance and allowed EID to seek the services of a qualified Contractor to complete this project and keep it on schedule.

INDIAN VALLEY DAM AND HYDROELECTRIC FACILITY, FERC PROJECT NO. 4066-CA, DESIGN OF DAM SEEPAGE MEASUREMENT VAULT, LAKE COUNTY, CA

Dates: 2020 – ongoing

Indian Valley Dam is owned and operated by the Yolo County Flood Control & Water Conservation District (District). The District is an independent Special District that manages a small hydroelectric plant, two reservoirs, more than 150 miles of canals and laterals, and three dams including the world's longest single bladder inflatable rubber dam.

The Indian Valley Dam is located on the North Fork of Cache Creek and was designed and constructed in the early 70's. It has a disposal system that collects seepage from below the dam's core and transmits it to the stilling basin adjacent to the main spillway. The seepage collection system, which consists of 6" perforated asbestos concrete pipe (ACP), is separated into four zones, which discharge to weir boxes. The collection system for the Main Dam, maximum height section, currently ties into the seepage system that surrounds the Hydroelectric Power Plant. The drainage from the power plant seepage system discharges directly into the stilling basin.

In 2019, FERC prepared a safety inspection report that recommended that the District, *"...implement a plan to directly observe and measure seepage collected from the maximum section of the Main Dam"*. In July 2020, a Seepage Collection Alternatives Study was prepared to evaluate three potential methods of measuring seepage from the Dam. The selected Alternative involves the installation of a weir box and access vault adjacent to the toe of the Dam. This will allow direct observation of the flows and measurement to be provided by an analog instrument using a flow to measure the depth of flow, which can be converted to a flow rate.

MGE's scope of work for this project includes performing the civil and structural engineering necessary to prepare Plans Specifications and Estimates for the installation of the access vault and weir box. The access vault and weir box are approximately 20 to 30 feet deep and will be used to measure seepage from the maximum section of the Main Dam. MGE anticipates, due to the depth of the structure needed and the amount of weight to be supported, the access vault will consist of precast, reinforced concrete box sections installed on a cast-in-place reinforced concrete base slab.

2017 STORM DAMAGE REPAIR, FEMA DISASTERS 4301 AND 4308, SIERRA COUNTY, CA

Dates: 11-2018 – 11-2020

In 2017, severe winter storms, heavy rains, high winds, flooding, mudslides, and storm surge caused widespread damage throughout the State of California, impacting many counties. Sierra is one of the counties impacted with heavy rains and flooding causing damage at several locations at county-maintained facilities. Sierra County Department of Public Works and Transportation contracted with MGE to provide geotechnical, structural, environmental, and surveying engineering services for repairs to roadway slip-outs, one culvert, and a dam (see table following). The Department of Transportation and Public Works administers the County's Engineering & Surveying, Parks & Recreation, Road Maintenance, Sierra Brooks Water System, Solid Waste Operations, and Flood Control and Water Conservation District.

Location	Repair Strategy
Group 1 Sites:	
Long Valley Road	Allow overtopping/pave road/RSP on four corners
Group 2 Sites:	
Oxford Mine	Conventional soldier pile wall with timber lagging, reconstruct roadway, 24" CMP, drop basin
Sailor Ravine	Rebuild approach with RSP and import/agg base, redirect drainage to original channel, remove debris, minor grading, restore low water crossing
Gold Bluff	Replace damaged culvert, construct headwall, conventional soldier pile wall with timber lagging
Group 3 Sites:	
Old Toll Bridge Road	Realign road 8-10 feet east (into cut slope), approx. 200 LF, MGS at slope failure to restrict vehicles
Foote Road (2 Sites)	Cut back into hillside, remove temp roadway, 6" slotted pipe underdrains 50 on-center, daylight downslope
Belle Street	Gabion toe wall, restore embankment slope and shoulder, 1.5:1 slope
Goodyears Creek	Approx. 130 LF of embankment reconstruction
Group 4 Sites:	
Brandy City (2 Sites)	Site 1) Saw-cut AC remove 5' AC 2' shoulder 3 feet deep 140 LF, restore base and structural section. Site 2) Remove and reconstruct existing embankment 5 feet deep, 24 feet wide 150 LF.
Jim Crow Road	Large RSP/sacked concrete, reconstruct upper portion of embankment and shoulder
Group 5 Site:	
Division Dam	New posts and timber lagging, temporary dam/culverts to dewater

MGE completed the work for this Contract in two phases. During the first phase, the project team performed a field review at each site to develop an understanding of storm damage repair requirements to develop an engineering approach, and to identify any additional required services. Following the field review MGE prepared a report for each site identifying and detailing the appropriate permanent repair, preliminary construction costs, any easement and right-of-way needs, and CEQA/NEPA environmental requirements, including regulatory permits. MGE identified mitigation improvements to reduce the potential for future similar storm damage. The County used the completed Phase 1 reports to obtain additional FEMA funding to complete professional design services (second phase). The second phase involves completing environmental and engineering services needed for permanent repair plans, specifications and estimate development.

Phase 2 - MGE prepared final design and PS&E, environmental clearance and regulatory permits for all 12 sites.

Construction Management - MGE provided constructability reviews, and construction management services for the projects at Foote Road (2 Locations), Belle Street and Goodyears Creek Road slip outs.

- RD-191 Foote Roadway slip out (2 sites) – Repair included: cutting back into the hillside to widen the roadways, removing temporary roadway materials, reconstructing the roadway embankments, and rebuilding with subsurface cross drains.
- RD-508 Belle Street Roadway slip out - Repair included: construction of a gabion toe wall and embankment slope and shoulder restoration.
- RD-400 Goodyears Creek Roadway slip out - Repair included: construction of a 130-foot-long, soldier pile wall with treated timber lagging.

Responsibilities during construction included attending and running client and contractor meetings, providing project documentation, RFI/Submittal response, change orders, supervising project inspection teams, witnessing soil testing in the field, and providing technical guidance and quality assurance, and project closeout.

FLORIN CREEK CHANNEL IMPROVEMENTS, SACRAMENTO COUNTY, CA

Dates: Construction completed in 2016

As managing Joint Venture Partner of Pacific Civil and Structural Consultants (PCSC), MGE completed the task order for improvements to the Florin Creek Channel. The project involved widening Florin Creek along a mile-long section, and included modifications to increase channel capacity and provide 100-year flood protection. Improvements include bridge modifications, concrete drop structure modifications, vehicle access ramps, storm drain outlet structures, pump station outlet structures, a paved bike & pedestrian trail, and overhead & underground utilities.

2017 APWA Award Winning Project for Environmental Flood Control

Services included the design of flood control improvements, preparation of PS&E and supporting reports (DDR, ECIFP), coordination of surveying and field data collection, identification of utility relocations, right-of-way and temporary construction easements, construction staging areas, haul routes, disposal sites, and other miscellaneous relocations and improvements. In addition to the channel improvment design, MGE's Joint Venture Partner prepared a HEC-RAS model for the project and prepared flood plain mapping and a report, which served as the basis for revising the flood maps to remove nearly 1,800 from the Flood Insurance program. MGE also provided engineering support during construction which was completed in October 2016. Construction activities included channel widening and concrete lining, installation of reinforced concrete and sheet pile retaining walls, and constructing new maintenance access roads/ramps.

CARIBOU TRAIL BRIDGE, PLUMAS NATIONAL FOREST, CA

Dates: 2005 (construction complete)

For this USDA Forest Service Region 5 project, MGE completed Type Selection Reports, design, construction documents (PS&E) and provided construction support for replacement of two pedestrian bridges crossing the North Fork of the Feather River on the Caribou Trail near the PG&E Caribou Power House within the Plumas National Forest. Both trail bridges provide access over the North Fork of the Feather River. The bridges were 84 and 99 feet in length and have been replaced with slightly longer structures. The existing bridges, which consisted of single-span, timber deck cable structures, were replaced with single-span steel truss bridges with timber decking. The bridges were prefabricated in two sections to facilitate transportation to the site. Due to the accessibility of the site and weight of the structures each section was air craned to the site via Sikorsky Skycrane helicopter and placed on the temporary support built in the river at the splice location.

EXPERTISE OF SUBCONSULTANTS

Blackburn Consulting formed in 1998 with a commitment to excellence. Blackburn provides geotechnical/geo-environmental consulting, materials testing, and construction inspection services. We are a certified small business with offices in West Sacramento, Fresno, and Auburn, California. Blackburn is committed to public sector projects and stays current with state and local agency requirements. This translates into efficient analysis, less review time, and practical solutions. Blackburn specializes in pipelines, water/wastewater treatment plants, tanks, roadways, bridges, landslide mitigation, levees, and dams.

EID PROJECTS

Folsom Lake Intake Improvements - Blackburn provided a data report for the design of the Folsom Lake intake improvements. Due to the complexity and size of the project, and the potential for geologic conditions at the site to affect construction (variably weathered hard rock) there is a heightened risk for construction claims and difficulty achieving the design intent. Blackburn will assist mitigation of this risk by providing a degreed engineer and/or geologist to observe and document subsurface conditions and construction of the foundations.

El Dorado Forebay Dam Upgrades - The project consisted of construction of a downstream stability berm for the El Dorado Irrigation District's Forebay Dam in Pollock Pines, California. Rob performed geotechnical review of foundation conditions on

behalf of the contractor to confirm that the excavation met cleanliness standards required by the project specifications prior to Division of Safety of Dams (DSOD) and FERC inspection. A landslide was identified on the right side of the excavation. Rob worked with the contractor, designer, DSOD and FERC to identify and remove the slide debris and prepare the foundation for the placement of new buttress fill.

FERC PROJECTS

Scotts Flat Spillway - The Scotts Flat Dam was constructed in two phases starting in 1940 and completed in 1960. Blackburn provided a spillway assessment, a preliminary exploration program and prepared a geotechnical data report for spillway subsurface conditions. As part of the alternative's analysis Blackburn prepared a Preliminary Basis of Design Report. Blackburn's geotechnical exploration, analysis and recommendations will assist Nevada Irrigation District (NID) with the upgrade to the spillway to satisfy DSOD and FERC requirements.

PG&E Canyon Dam - Canyon Dam is a Pacific Gas & Electric facility situated on the North Fork of the Feather River and forms Lake Almanor. The right bank, at and immediately downstream of the outlet, has eroded back and caused localized rock fall failures. The toe of the outlet structure has also been undermined. Blackburn performed a Geotechnical Review and a Preliminary Basis of Design Report for remediation of the outlet and slope protection. Blackburn is currently working to complete a geotechnical investigation to provide final geotechnical analysis and design parameters for the Canyon Dam Outlet.

OTHER RELEVANT PROJECT EXPERIENCE

Bear River Siphon - Blackburn Consulting provided design and construction support for approximately 850 ft. of siphon with 45 ft. of elevation difference between the inlet and outlet. The main section of the existing siphon is steel pipe supported on a cable suspension bridge structure with two towers that span approximately 250 feet across the Bear River. The replacement included connections to existing (canal) facilities. The siphon is located on the Bear River approximately 1.5 miles downstream of Combie Dam (within both Nevada and Placer Counties). Geologic/geotechnical challenges to design and construction of the siphon included: determination of suitable foundation, access onto steep slopes, stability of slopes in areas with significant soil cover, rock slope stability, hard rock excavation, generation of large boulders during excavation, foundation and trench excavations into hard rock, drainage and erosion control, naturally occurring asbestos (NOA) minerals.

Combie South Canal - Nevada Irrigation District (NID) is replacing the Combie Flume below Combie Dam with approximately 9,300 feet of 96-inch diameter above-ground precast concrete pipeline. The pipeline will connect the Combie Dam and the Bear River siphon inlet. Blackburn mapped the geology of the alignment, managed the subsurface exploration and laboratory testing program, and prepared a geotechnical design report to present geologic conditions, pipe support recommendations, mitigation of undocumented fill zones, and rockfall hazard mitigation recommendations.

PSOMAS

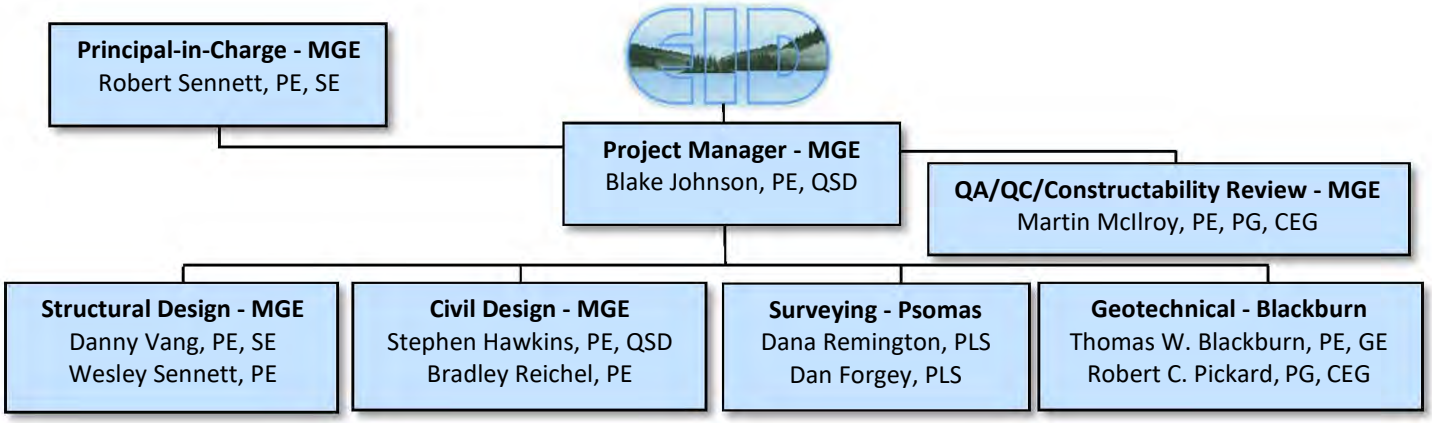
Psomas began as a survey company in 1946, and they continue to be a leading provider of surveying, mapping, photogrammetry, scanning, and GIS services. With a company-wide surveying staff of 170 people, including 41 California licensed land surveyors, they have the ability to provide design support mapping and right of way surveying on large scale projects for public and private sector clients. Psomas currently employs over 604 professionals in 15 offices throughout California, Arizona, and Utah. Psomas has been providing surveying services in Northern California on similar projects as those requested by EID on the Flume 45 project for more than 25 years. An example of recent experience on similar projects includes:

Placer County Water Agency (PCWA) Hayford Flume Replacement, Colfax, CA - Psomas provided surveying and mapping services in support of Placer County Water Agency upgrade of existing 165-feet± Hayford Flume, on Boardman Canal, with wooden trestle. Psomas' aerial mapping and design level supplemental topographic surveys, including existing location of wooden trestle structure, existing canal entering and exiting flume and surround terrain to assist in determining best location for proposed replacement pipeline. Sufficient property corners were located and surveyed to build a LandNet for future acquisition and easements. Preparation of legal description document packages and construction staking services for the proposed pipeline alignment were included in project tasks. Dates: 2016

Placer County Water Agency (PCWA) Penryn Flume Replacement, Penryn, CA - Psomas provided surveying and mapping services in support of Placer County Water Agency upgrade of existing 630'± Penryn Canal Flume, off Sisley Road, with wooden trestle. Psomas' design level topographic surveys, including existing location of wooden trestle structure, existing canal entering and exiting flume, driveways, nearby structures, overflow drainage and surrounding terrain to assist in determining best location for proposed replacement pipeline. Sufficient property corners were located and surveyed to build a LandNet for future acquisition and easements. Preparation of legal description document packages. Dates: 2018

SECTION 3 – PROJECT TEAM

MGE takes a unique and proactive approach to ensure successful completion of our projects. At the core of our success are the technical managers, employees and specialists that comprise the assembled staff and team. When assembling the Team, our first concern is identifying persons with appropriate expertise and previous similar project experience who demonstrate commitment to client, project completion, schedule and budget. The size and resources of MGE together with the experience of our Key Staff allow us to respond to the needs of our clients immediately and without sacrificing to quality. Below is an organization chart that identifies each individual (including subconsultants) who are anticipated to be an integral part of MGE's team. MGE is committed to having the personnel listed in the organization chart below available for the duration of the project. Should additional or substitute staff be necessary, MGE will obtain prior approval from EID. Full resumes that demonstrate each key team member's expertise, past similar project experience, education background, and professional registration(s)/certification are appended to this proposal.



KEY PERSONNEL

Blake Johnson, PE, QSD ***Area of expertise: Project Management/Civil Engineering***

Mr. Johnson has extensive experience in design, construction management and engineering support during construction, evaluation and quality assurance/quality control for a variety of civil projects. Projects have involved: : Civil Design Manager for the replacement of EID's water supply canals/flumes at Flumes 38-40, 44, and for Flumes 5 and 10 where he worked directly with EID and its contractor to design access roads, slope stability, raised flume, 500 feet of box culvert and many other features throughout the winter of 2017 so that water could flow through the canal and to EID's constituents. Flood control has been a big part of Blake's career including: levee evaluation and repair design (relocated levees, raised levees, seepage berms, cutoff walls), levee periodic inspection. Other projects include: planning and implementation of sewer collection systems, pumping stations, canal design, hydraulic and geotechnical document review, utility relocations, permitting assistance, real estate assistance, erosion control plans, and surveying. He currently is serving as the District Engineer for Bradford Island Reclamation District 2059 in Contra Costa County, providing engineering support, operations and maintenance guidelines, budgeting, and management of the subventions program through the State of California Department of Water Resources.

Robert Sennett, PE, SE ***Area of expertise: Structural Engineering***

Mr Sennett is MGE's vice president and supervising structural engineer, responsible for management of complex projects, assigning technical staff, providing technical guidance, monitoring progress, client interface, and coordination of subcontractors. His 30+ years of experience at MGE includes serving in similar role for the design efforts for selected modifications at Folsom Dam, Success Dam seismic remediation, floodwalls along the Napa River, (a $20+ million project), and Florin Creek channel modifications as part of the South Sacramento County Streams Flood Damage Reduction Project. Mr. Sennett served as project manager for the Camp 2 Bridge Replacement, El Dorado Hydroelectric FERC Project No. 184-CA for EID, as well as the Caribou Trail Bridge Replacement Project for the US Forest Service.

Stephen Hawkins, PE, QSD ***Area of expertise: Civil Engineering***

Mr. Hawkins has 40 years' experience in the management and design of civil engineering projects. This experience includes planning and administration of projects involving design of levee improvements, water resources, storm drainage, sanitary sewer design and construction, and the full range of municipal engineering projects. Mr. Hawkins served as project manager for: design for the installation of a jet grout cut off wall along

the levee of the American River; design of slurry cutoff walls to mitigate under- and through-seepage of the levees involved in the Mid Valley Levee Rehabilitation III Area 3 project; as well as the completion of design of flood control features for the Florin Creek Channel Restoration and Flood Damage Reduction Project, among others. Mr. Hawkins is currently serving as MGE's project manager for the Indian Valley Dam and Hydroelectric Facility, FERC Project No. 4066-CA in Lake County.

Martin McIlroy, PE, PG, CEG ***Area of expertise: Geotechnical Engineering/Geology***

Mr. McIlroy has performed and managed geologic, engineering geology and foundation engineering studies for a wide variety of water resource projects. He has performed geotechnical services for the US Army Corps of Engineers (USACE) on levee design and rehabilitation, cutoff wall design, seepage and stability analysis, channel improvements, floodwall design and construction, flood control works inspections and dam Independent Technical Review (ITR) projects. He has managed contracts with multi-million-dollar construction budgets.

Thomas W. Blackburn, PE, GE ***Area of expertise: Geotechnical Engineering/Geology***

Mr. Blackburn has served as a consultant and expert on hundreds of public works, residential, and commercial projects. His technical expertise includes: Deep foundations, landslides, expansive clay, earth pressures, settling soils, surface and subsurface drainage, ground vibrations, seismicity, liquefaction, codes, and construction practices. He has worked on: Dams, canals, penstocks, levees, bridges, pavements, concrete slabs, deep and shallow foundations, ground improvement, retaining walls, anchors, and structures.

Robert C. Pickard, PG, CEG ***Area of expertise: Geotechnical Engineering/Geology***

Mr. Pickard is an Engineering Geologist with Blackburn Consulting. He has a graduate degree from the University of Nevada, Reno in Geological Engineering, and more than 17 years of experience in geotechnical/geologic engineering. He has worked on a wide variety of projects including pipelines, dams, tanks, highways, and bridges throughout California and particularly in the Sierra Nevada Foothills. His experience includes subsurface investigation, soil, rock, and groundwater analysis, excavatability, and slope stability studies.

Dana Remington, PLS ***Area of expertise: Topographic Surveying***

Mr. Remington has more than 30 years of surveying and mapping experience. His experience focuses mainly on public works, geodetic and GPS projects. Dana has worked on numerous GPS projects and is responsible for processing and adjusting data from GPS, digital level and conventional surveys. His proficiency with software from AutoCAD, Trimble and StarNet is used in preparing final maps and reports. He also leads projects using resource grade GPS (Trimble Pro XRS) and hydrographic surveys with GPS and the Knudsen Echo Sounder.

SECTION 4 – QUALITY ASSURANCE AND CONTROL; CONFLICTS

For each project or contract, MGE prepares a Quality Assurance/Quality Control (QA/QC) Plan so that the deliverables will meet or exceed the client's expectations. Having a QA/QC Manager, Project Manager, experienced project engineers, and qualified subconsultants with a performance history, allows for well-coordinated execution and quality completion of a project. The Contract and Project managers are able to tap the resources of the collective team consisting of qualified, experienced personnel from all required disciplines to accomplish work in a timely and cost-efficient manner. For example:

Dissemination of Scope of Work to Project Team - The scope of work will be distributed to all key personnel to allow them to become familiar with the project as it relates to their portion of the work.

CPM Schedule - A CPM schedule will be developed to predict the project duration, identifying the critical path, by analyzing which work assignments have the least amount of scheduling flexibility (the least amount of float).

Resource Planning- The resources needed for the execution of the project will be determined. This is based on the developed work breakdown structure and the necessary effort. Resource needs are discussed and allocated at progress meetings and adjusted as needed.

Surveying – Psomas maintains a set of manuals and checklists for each step of surveying, mapping legal descriptions, exhibits, construction staking, and aerial mapping processes to ensure quality deliverables. MGE then reviews surveys to verify adequacy before design begins.

Geotechnical - Blackburn employs quality control procedures on geotechnical projects by assigning experienced licensed staff, reviewing soil samples and boring logs and assigning appropriate tests, ensuring realistic project schedules, completing internal review processes, and continually coordinating with project managers.

Budget/Cost Control - Estimated costs based on the work breakdown structure and the resources needed, will be prepared. Earned value will be tracked by the QA/QC manager.

Performance Guarantees – MGE's history and corporate philosophy is to over-perform on our projects for the agreed fees, forming a "Client-Consultant" relationship that delivers the project on-time, within budget, and with minimal construction modifications.

CONFLICTS

MGE is not aware of any conflict associated with this contract.

"Blackburn is not aware of any conflict of interest associated with this contract. If Blackburn becomes aware of a conflict, EID will be notified immediately."

"Psomas has no known or potential conflicts for the services requested on this project."

SECTION 5 – CLIENT REFERENCES

The table below contains contact information for representatives of former or current clients for whom MGE team members have performed similar services.

Reference Name/Agency	Contact Information	Project
MGE		
Jake Eymann, (formerly with El Dorado Irrigation District)	209-569-2696, Jake.eymann@ncpa.com	Camp 2 Bridge Replacement, El Dorado Hydroelectric Project
Joaquin Quenga, Technical Lead US Army Corps of Engineers	916-557-6623, Joaquin.s.quenga@usace.army.mil	Florin Creek Channel Improvements
Bryan Davey, Deputy Director, Sierra County Dept. of Public Works & Trans.	530-289-3201 bdavey@sierracounty.ws	2017 Storm Damage Repair, FEMA Disasters 4301 and 4308
Justin Phalen, Slate Geotechnical Consultants, Inc.	510-277-3325, ext. 704, jphalen@slategeotechnical.com	Indian Valley Dam and Hydroelectric Facility, FERC Project No. 4066-CA
Blackburn		
Doug Roderick, Nevada Irrigation District	(530) 271-6866, roderick@nidwater.com	Bear River Siphon Combie South Canal – Combie Flume
Aaron Sullivan, Placer Co. Water Agency	(530) 823-4884, asullivan@pcwa.net	Bear River Siphon
Robert Cannon Schnabel Engineering	(336) 274-9456, rcannon@schnabel-eng.com	Scotts Flat Spillway, Nevada County
Psomas		
Mike Boak, PE Placer County Water Agency	(530) 823-4950, mboak@pcwa.net	PCWA Penryn Flume Replacement
Lloyd Wagstaff (Retired) Sandie Hewston, Placer County Water Agency	(530) 823-4414, shewston@pcwa.net	PCWA Hayford Flume Replacement
Michaele (Mike) Monaghan, PE GEI Consultants	(510) 350-2923, mmonaghan@geiconsultants.com	EID Pacific Tunnel Rehab

SECTION 6 – CONTRACT AND INSURANCE REQUIREMENTS

MGE's proposed project manager has reviewed the *Sample Professional Services Agreement* included as *Exhibit C* to the RFP. By signature of this proposal, MGE states that the firm and can meet the insurance requirements of EID. MGE does not have any exceptions to the *Sample Professional Services Agreement*. MGE understands that alterations or changes to the agreement which were not indicated with this proposal may not be made after consultant selection. This includes alterations, exceptions, or changes to the insurance and indemnity provisions.

SECTION 7 – ADDENDA

MGE confirms receipt of Addendum #1 issued by EID on November 24, 2020; and Addendum #2 issued by EID on November 30, 2020 and again on 12/01/2020 (for document link correction).

B. COST OF SERVICES

Included following this page is a complete and current table of all rates and charges to perform the proposed services with detailed itemization of each task to be performed.

MGE Engineering
COST PROPOSAL
Flume 45 Abutment Section Replacement Design, RFP20-09, Project No. 17025.01

		Principal-in-Charge	Project Manager	Senior Civil Engineer	Civil Engineer	Geologist / Geotechnical Engineer	Senior Structural Engineer	Structural Engineer	CAD Designer	Administrative Assistant	MGE Total Hours	MGE Cost Per Task	Blackburn Consulting (includes 5% markup)	Psomas (includes 5% markup)	Total Project Costs Per Task
	Billing Rate ($/hour)	$280.84	$234.04	$234.04	$190.15	$219.41	$231.11	$193.08	$140.42	$105.32					
Task 0	**Project Management**														
0.1	Comunications and Coordination	16	24							8	48				
	Task 0 Total Hours	**16**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**48**	**$10,952.88**			**$10,952.88**
Task 1	**Meetings and Site Visists**														
1.1	Kickoff meeting		4		4	4		4			16				
1.2	Design review meetings		16		16	12		16			60				
1.3	Team site visits		20		20	8		16			64				
	Task 1 Total Hours	**0**	**40**	**0**	**40**	**24**	**0**	**36**	**0**	**0**	140	**$29,184.29**			**$29,184.29**
Task 2	**Progress Reports and Schedules**														
2.1	Monthly progress reports		8								8				
2.2	Schedule		**8**								8				
	Task 2 Total Hours	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	16	**$3,744.58**			**$3,744.58**
Task 3	**Field Topographic and LiDAR Surveys**														
3.1	Topographic Surveys				6				8		14				
	Task 3 Total Hours	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**8**	**0**	14	**$2,264.30**		**$24,158.30**	**$26,422.60**
Task 4	**Geotechnical Investigations**														
4.1	Field Investigations					2					2				
4.2	Field and Laboratory Tests					2					2				
4.3	Seismic Refraction Studies					2					2				
4.4	Geologic Landslide Mapping					2					2				
4.5	CBC Seismic Study					2					2				
4.6	Geotechnical Report		2		4	6					12				
	Task 4 Total Hours	**0**	**2**	**0**	**4**	**16**	**0**	**0**	**0**	**0**	22	**$4,739.23**	**$44,050.94**		**$48,790.17**
Task 5	**30% Design Memorandum**														
5.1	Design Memorandum Development	2	40	8	64	4	8	56	80	8	270				
	Task 5 Total Hours	**2**	**40**	**8**	**64**	**4**	**8**	**56**	**80**	**8**	270	**$49,580.53**			**$49,580.53**
Task 6	**Project Design and Design Documents**														
6.1	30% Design Memorandum Submittal (Preliminary Design)		12	4	64	4	8	40	32	4	168				
6.2	50% Design Submittal		12	4	64	4	4	40	32	4	164				
6.3	75% Design Submittal		12	4	40	4	4	40	32	4	140				
6.4	100% draft Design Submittal		12	4	40	4	4	40	32	4	140				
6.5	100% Final Design Submittal	4	8	4	24	4	4	20	24	4	96				
	Task 6 Total Hours	**4**	**56**	**20**	**232**	**20**	**24**	**180**	**152**	**20**	708	**$131,165.48**			**$131,165.48**
	Total Hours/Costs	**22**	**178**	**28**	**346**	**64**	**32**	**272**	**240**	**36**	**1,218**	**$231,631.28**	**$ 44,050.94**	**$ 24,158.30**	**$ 299,840.52**

MGE Engineering
COST PROPOSAL
Flume 45 Section Replacement Design

		Sr. Principal	Project Manager	Project Manager	Project Engineer	Project Engineer	Drafter	Lab Manager	Project Assistant	Other Direct Costs	BLACKBURN Cost Per Task	Total Project Costs Per Task
	Billing Rate ($/hour)	$338.88	$214.03	$160.52	$160.52	$124.85	$135.55	$105.23	$65.46			
Task 0	**Project Management**											
0.1	Comunications and Coordination											
	Task 0 Total Hours											
Task 1	**Meetings and Site Visists**											
1.1	Kickoff meeting											
1.2	Design review meetings											
1.3	Team site visits											
	Task 1 Total Hours											
Task 2	**Progress Reports and Schedules**											
2.1	Monthly progress reports											
2.2	Schedule											
	Task 2 Total Hours											
Task 3	**Field Topographic and LiDAR Surveys**											
3.1	Topographic Surveys											
	Task 3 Total Hours											
Task 4	**Geotechnical Investigations**											
4.1	Field Investigations	1	15	15	44	30			2	$1,807.50	$18,704.21	
4.2	Field and Laboratory Tests		1	1				1		$1,819.00	$2,298.79	
4.3	Seismic Refraction Studies									$0.00	$0.00	
4.4	Geologic Landslide Mapping									$0.00	$0.00	
4.5	CBC Seismic Study									$0.00	$0.00	
4.6	Geotechnical Report	**8**	**46**	**46**			**6**		**3**	**$0.00**	$20,950.29	
	Task 4 Total Hours	**9**	**62**	**62**	**44**	**30**	**6**	**1**	**5**	**$3,626.50**	$41,953.28	
Task 5	**30% Design Memorandum**											
5.1	Design Memorandum Development											
	Task 5 Total Hours											
Task 6	**Project Design and Design Documents**											
6.1	30% Design Memorandum Submittal (Preliminary Design)											
6.2	50% Design Submittal											
6.3	75% Design Submittal											
6.4	100% draft Design Submittal											
	Task 6 Total Hours											
Task 7	**Regulatory and FERC / Legal Descriptions**											
7.1	Regulatory and FERC / Legal Descriptions Assistance (NOT SURE IF WE NEED HOURS HERE)											
	Task 7 Total Hours											

Psomas
COST PROPOSAL
Flume 45 Section Replacement Design

		Principal in Charge	Project Manager	Project Surveyor	Project Surveyor	Survey Tech	Project Administrator	2-person crew	Total Hours	Psomas Total Cost
	Billing Rate ($/hour)	$221.51	$153.38	$130.81	$114.74	$85.18	$82.14	$259.94		
Task 0	**Project Management**									
0.1	Comunications and Coordination									
	Task 0 Total Hours									
Task 1	**Meetings and Site Visists**									
1.1	Kickoff meeting									
1.2	Design review meetings									
1.3	Team site visits									
	Task 1 Total Hours									
Task 2	**Progress Reports and Schedules**									
2.1	Monthly progress reports									
2.2	Schedule									
	Task 2 Total Hours									
Task 3	**Field Topographic and LiDAR Surveys**									
3.1	Topographic Surveys	2	8	4	16	24	2	50	106	
	Task 3 Total Hours	2	8	4	16	24	2	50	106	
Task 4	**Geotechnical Investigations**									
4.1	Field Investigations									
4.2	Field and Laboratory Tests									
4.3	Seismic Refraction Studies									
4.4	Geologic Landslide Mapping									
4.5	CBC Seismic Study									
4.6	Geotechnical Report									
	Task 4 Total Hours									
Task 5	**30% Design Memorandum**									
5.1	Design Memorandum Development									
	Task 5 Total Hours									
Task 6	**Project Design and Design Documents**									
6.1	30% Design Memorandum Submittal (Preliminary Design)									
6.2	50% Design Submittal									
6.3	75% Design Submittal									
6.4	100% draft Design Submittal									
	Task 6 Total Hours									
Task 7	**Regulatory and FERC / Legal Descriptions**									
7.1	Regulatory and FERC / Legal Descriptions Assistance (NOT SURE IF WE NEED HOURS HERE)									
	Task 7 Total Hours									
	Total Hours/Costs	**443.03**	**1,227.00**	**523.24**	**1,835.87**	**2,044.30**	**164.27**	**12,996.75**	**106**	**$19,234.46**

Resumes

ROBERT SENNETT, PE, SE

Principal/Structural Engineering

Years Experience: 31

Education (Degree and Specialization)

M.Eng/Structural Engineering/1987
BS/Civil Engineering/1986

Professional Registration

Civil Engineering/CA #46195 - Structural Engineering/CA #3976
Civil & Structural Engineering/OR #16881PE
Professional Engineer/LA #35368 - Civil Engineering/WA #56815

Key Qualifications

Mr. Sennett has extensive experience managing multi-discipline teams responsible for development of complex civil works and transportation projects for federal, state and local agencies. In addition, he has extensive experience in the preparation of Design Documentation Reports (DDRs), and has repeatedly used both the DrChecks and SpecsIntact programs over the past 10 years. He has an excellent record as a project manager for completion of Task Orders under multiple IDIQ contracts for federal agencies including the US Army Corps of Engineers.

Relevant Projects

Camp 2 Bridge Replacement, El Dorado County Irrigation District - Project manager for design and PS&E for the project involves replacing the existing timber bridge that crosses a steep exposed granite outcropping, with a buttressed retaining wall structure.

Forebay Road Penstock Bridge Evaluation, Forebay Dam Modification Project, El Dorado County Irrigation District, El Dorado County, CA - Project manager for the condition inspection and bridge inspection report, load rating analysis and report, oversized load capacity analysis and report, preconstruction survey, and engineering support during construction for the structure spanning an EID penstock. Temporary shoring was designed and constructed to provide continuous superstructure support so large off-highway trucks or scrapers could safely use the bridge without causing potential damage to the structure.

Caribou Trail Bridges, USDA Forest Service, Plumas National Forest, CA - Task manager and lead structural engineer responsible for completion of Design and PS&E for two pedestrian trail bridges. Both bridges were single-span prefabricated steel truss structures with timber decking, and were placed by helicopter.

Stewart's Point Skaggs Springs Road Slide Repair Project, Sonoma County Public Works, CA. Project Manager. Project involves design for repair of Four landslides that occurred in February 2019. These landslide repairs are being designed and constructed using FHWA ER funding and Caltrans will be the delegated NEPA lead agency and the County the CEQA lead agency. MGE is under contract to provide civil, structural and geotechnical engineering services, environmental consultation, utility coordination, surveying and right-of-way (ROW) mapping, and post-construction engineering services to support the bidding and award phase. Responsible for management of the project including: communication with the County and other stakeholders, management of staff and subconsultants, and QA/QC oversight of design and deliverables.

Winter Storm Damage Repair Projects, FEMA Disasters 4301 and 4308, Sierra County DOT, CA – Project Manager. The project involves the permanent repair of 9 sites damaged by 2017 winter storms. Sites include roadway slipouts, a culvert repair and the Sierraville Division Dam Repair. Responsible for management of the project including: communication with the County and stakeholders, management of staff and subconsultants, and QA/QC oversight of design and deliverables.

2017 Storm Damaged FHWA ER Projects, Sierra County DOT, CA - Project Manager. The project involved the permanent repair of storm damaged roadways at 6 sites. The sites were grouped into two categories. The first group contains sites where storm flow and debris overwhelmed exiting culverts and caused overtopping and erosion of the roadway and culvert support material. The second group contains sites that have outboard roadway slope failures or have debris accumulated on the road from failure of the inboard cut slope. Responsible for management of the project including: communication with the County and stakeholders, management of staff and subconsultants, and QA/QC oversight of design and deliverables.

Panther Creek Road Storm Damage Remediation Project, USDA Forest Service, El Dorado National Forest, CA – *Project Manager.* The project involved 7 sites along Panther Creek Road damaged by heavy rains in early 2017. Three of the sites consist of rotational landslides with multiple scarps below and above the roadways, with roadways dropping from 6- to 12-feet below original grades. The remaining four sites lost from 3 to 8 feet of roadway/shoulder as a result of oversaturated fill. Responsible for: Project management, preliminary engineering and preparation of FHA, Federal Lands Highway Damage Survey Forms (DSRs).

BLAKE JOHNSON, PE

Project Manager/Civil Engineering

Years Experience: 23

Education (Degree and Specialization)

BS/Civil Engineering/California State University Sacramento/1997

Professional Registration

2002/Civil Engineering/CA #63158

Awards

ASCE: Outstanding Civil Engineer in the Private Sector, Region 9, 2012

ASCE: Flood Control Project of the Year, Sacramento River East Levee, Natomas Basin, Sacramento Area Flood Control Agency.

ASCE: Flood Control Project of the Year, Upper Yuba River Levee Improvement Project, Yuba County, Three Rivers Levee Improvement Authority.

ASCE: Flood Control Project of the Year, West Sacramento CHP, I Street and The Rivers Project, West Sacramento, West Sacramento Area Flood Control Agency.

Key Qualifications

Mr. Johnson has extensive experience in design, construction management and engineering support during construction, evaluation and quality assurance/quality control for flood control projects. Projects have involved: levee evaluation and repair design (relocated levees, raised levees, seepage berms, cutoff walls), levee periodic inspection, planning and implementation of sewer collection systems, pumping stations, canal design, hydraulic and geotechnical document review, quantity take offs and cost estimating, utility relocations, permitting assistance, real estate assistance, erosion control plans, and surveying.

Relevant Projects

Flume 38-40, 44, Pollock Pines, CA - Civil Design Manager. Provided design for the replacement of EID's water supply canals/flumes. Work consisted of stabilized embankment, converting raised flumes to in-ground canals, verifying flow characteristics, widening maintenance access roads, and placing mechanically stabilized earthen walls.

Flume 5 and 10, Pollock Pines, CA - Civil Design Manager. During the winter of 2017, heavy rains saturated the slopes that supported Flume 10. A mud slide destroyed approximately 700 feet of canal. Worked directly with EID and its contractor to design access roads, slope stability, raised flume, 500 feet of box culvert and many other features throughout the winter so that water could flow through the canal and to EID's constituents. Through rain and snow, the design and construction team was able to achieve the goals set by EID.

2017 Storm Damaged FHWA ER Projects, Sierra County, CA – QA/QC Reviewer. The project involves the permanent repair of storm damaged roadways at 6 sites. The sites were grouped into two categories. The first group contains sites where storm flow and debris overwhelmed exiting culverts and caused overtopping and erosion of the roadway and culvert support material. The second group contains sites that have outboard roadway slope failures or have debris accumulated on the road from failure of the inboard cut slope. At the slope failure sites, Mountain House Road and Ridge Road were typically constructed using a combination of cut and side-cast fill.

On Call Water Resources and Levee Engineering Services, Reclamation District 799, CA - Project Manager/District Engineer. Provided water resources, flood management, and levee engineering services on an as-needed basis, which included plan review of pending developments, review of encroachment permits, grant fund applications and maintenance recommendations.

Bear River, Yuba River and Western Pacific Interceptor Canal Levee Repair Projects, Phases 1, 2, and 4, Three Rivers Levee Improvement Authority, Yuba County, CA - Technical Lead and Construction Manager. Assisted with the design and construction engineering services for of approximately 6 miles of levee rehabilitation and two pump stations for Yuba County and Reclamation District 784, which included the Western Pacific Interceptor Canal (WPIC), Yuba River, and Bear River levees, to retain FEMA certification for 100-year flood protection. The project consisted of raising levees for flood protection, construction of a sand seepage berm for underseepage control and pump stations for internal drainage needs. Worked directly with USACE, Central Valley Flood Protection Board, Department of Fish and Game (DFG) for necessary permits and construction requirements. Worked with all necessary utility agencies for the relocation of utilities where necessary. Also developed plans and specifications for the project.

Butcher Reservoir Improvements, Vacaville, CA - Quality Control Reviewer. Provided preliminary design and design of improvements to the Butcher Reservoirs, which included: constructing of a partially-buried reinforced concrete valve vault. Work also included all site preparation; environmental and erosion control measures; excavation; sub-grade preparation; concrete work; process piping; drainage piping; electrical power and instrumentation; leak testing; disinfection; backfilling; landscape restoration; irrigation system; fencing; storm drainage systems and paving.

C-44 Reservoir and Appurtenant Features, USACE Jacksonville District. Florida. Quality Control Reviewer. Designed an 1100 cubic feet per second (cfs) stormwater reservoir pumping station, stormwater reservoir with 36,500 acre-feet of storage and an associated stormwater treatment area of approximately 4,000 acres. The project goal was to capture stormwater runoff from the C-44 canal to better control damaging freshwater discharges and improve water quality for the St Lucie Estuary.

Coal Canyon Culvert Replacement, Paradise, CA - Project Manager. Provided design and construction recommendations for an 84 inch corrugated metal pipe replacement for PG&E. This culvert was heavily damaged during the winter of 2016. Realigned the creek, added slope protection and upsized the culvert to allow for more debris flow. Worked closely with PG&E's environmental staff to achieve a constructible project within 4 months.

Truckee River Flood Management Authority Planning and Design Services, Reno, NV - Technical Advisor and Quality Control Reviewer Provided preliminary engineering planning and design services for the development of a 100-year flood protection plan along the Truckee River.

Utility Survey for the San Francisco to Stockton Channel, CA - Researched utility records and determined what utilities can be found crossing the project channel footprint; extracted pertinent identifying information and provided a report with drawings showing their geographical locations. The investigation included all utilities that cross the San Francisco to Stockton shipping channel and that are within the project limits from the West Richmond Channel to the furthermost marine terminals at the Port of Stockton. Role: Technical Advisor

Public Law (PL) 84-99 Emergency Levee Repair Program, Central Valley, CA - Provided technical assistance, including a combination of planning, surveying, design, preparation of Plans and Specifications, cost estimating, preparation of environmental documents, independent technical review, and engineering during construction services for flood damaged projects throughout the Central Valley. Over 100 sites were repaired as part of this task. Role: Project Manager

Upper Guadalupe River Flood Risk Management Project, Reach 7 and 8 Bypass Design and Construction Documents, USACE San Francisco District, CA - The purpose of this task order was to develop the Bypass Design for reaches 7 and 8 of the Limited Reevaluation Report (LRR): Proposed Project Modifications Upper Guadalupe River San Jose, California into construction documents consisting of plans, specifications, and estimate (PS&E). The modifications include: bridge replacement, rail bridge replacement, river realignment and utility relocations. Role: Technical Advisor.

Yuba River Basin General Re-evaluation Report, USACE Sacramento District, CA - Prepared a General Reevaluation Report (GRR) for the project area as a result of higher implementation costs due to increased underseepage problems within the Yuba Basin. The project included levee modifications on 6.1 miles of the left bank of the Yuba River upstream of the confluence with the Feather River, and 10 miles of levee on the left bank of the Feather River downstream of the confluence of the Yuba River. As a result of the report, the scope of the project may be expanded to include flood risk reduction, ecosystem restoration, and increase flood protection against the 0.5 percent Annual Exceedance Probability (200-year) flood event to the communities of Linda, Olivehurst, Arboga, and RD 784. Role: Technical Advisor and Quality Control Reviewer. Task Order Fees: $375,800.

San Francisquito Flood Improvement, Palo Alto, San Francisquito Creek Joint Powers Authority (SFCJPA) CA - Provided the flood protection elements needed to protect homes, businesses, and other facilities in the cities Palo Alto and East Palo Alto downstream of Highway 101. The intent of the project is to provide conveyance of the one-percent (1%) design flood flow through the area of consideration from the downstream face of East Bayshore Road (east frontage road to Highway 101) to San Francisco Bay. Role: Technical Advisor

Engineering Design Services, Sutter Butte Flood Control Agency (SBFCA), CA - Provided complete the designs for levee repairs for both the 2013, 2014 and 2015 construction seasons. Prepare final designs that are bid ready and remaining cutoff wall windows in 2014. Several project areas will be advanced Project from 65% design to final design, as well as supporting design activities, SBFCA team support and coordination with the Independent Panel of Experts (IPE) and regulatory agencies. Role: Technical Advisor

DANNY VANG, PE, SE

Senior Engineer/Structures Design/Independent Check

Years Experience: 26

Education (Degree and Specialization)

BS/Civil Engineering/ 1994

Professional Registration

2001/Civil Engineering/CA # 60613
2014/Structural Engineering/CA #6143

Key Qualifications

Mr. Vang recently rejoined MGE Engineering, Inc. He has experience in structural design and inspection of bridges and buildings including steel, concrete, and prestressed concrete structures. Mr. Vang's experience also includes design, analysis, condition inspection and technical reports, shop drawings of structural steel and reinforced concrete buildings, bridges, roadways, foundations, retaining walls, sound barriers, and sign structures. Mr. Vang is experienced in MicroStation and AutoCAD applications.

Relevant Projects

2017 Winter Storm Damage Repair Projects, FEMA Disasters 4301 and 4308, Sierra County, CA - Independent Design Check for Retaining Walls associated with slides along Ridge Road. The project involved engineering design services for the permanent repair of storm damaged roadways at 12 sites. MGE's scope includes field reviews to identify the cause of failure and an appropriate permanent repair, design, and plans, specifications & estimates (PS&E), obtaining environmental clearance and regulatory permits, and provide engineering support during construction.

South Sacramento Streams Morrison Creek UPRR Floodwall and Levee, USACE, Sacramento, CA - Design Engineer responsible for design of over 2800 feet of flood walls. Project involves flood protection improvements along the Union Pacific Railroad (UPRR) from the confluence of Morrison Creek and Unionhouse Creek upstream approximately 3,300-feet to the existing UPRR trestle over Morrison Creek. In addition to the walls, improvements also included new levee embankment sections, levee patrol road, drainage facilities, and utility relocations. Also provided construction support reviewing shop drawings, concrete mix design, revised designs due to change orders and responded to RFIs.

Napa Creek Box Culverts and Flood Terrace Project, USACE, Napa, CA - Structural design for over 600 feet of flood protection retaining walls along Napa Creek as part of the project to increase hydraulic capacity and reduce flood potential. The channel improvements will include re-grading approximately 2400 feet of the existing Napa Creek channel and the construction of flood walls at selected locations. Bypass box culverts will be constructed at two locations.

South Sacramento County Streams Flood Damage Reduction Project – Unionhouse Creek, USACE, Sacramento, CA - Designed structural components associated with the Unionhouse Creek task order. This segment included both banks of Unionhouse Creek from Franklin Boulevard upstream to Center Parkway. Design was based on the recommended alternative developed to the 30% design stage by another firm. The design was a rectangular shaped reinforced concrete lined channel. After delivery of 90% PS&E, DDR and ECIFP (Engineering Considerations and Information for Field Personnel), the USACE, SAFCA and DWR postponed completion of this project due to budgetary constraints and it was not constructed.

Success Dam and Reservoir Seismic Remediation Project, USACE, Tulare County, CA - Structural design of a new chute, wingwalls and stilling basin. The 174-foot-long structure and its components are comprised of cast-in-placed reinforced concrete. The seismic remediation also includes a replacement or retrofit design of an existing reinforced concrete conduit, 12 foot inside diameter by 155 foot long section, which is a part of the outlet works under the existing dam embankment. It also includes structural design of a new 370 feet reinforced conduit extending from the end of the existing (retrofitted or replaced) conduit to the new stilling basin, as well as an extension of an existing 42-inch steel pipe.

Holly Street Retaining Walls, City of Redwood City, CA – Structural Engineer for the project includes design of retaining walls. The retaining walls consisted of 3 retaining walls: Retaining Wall No. 4 - A 44-foot long wall with an overhang to eliminate the need for a temporary construction easement due to wall proximity to right of way, Retaining Wall No. 5 –A 151-foot-long cantilevered retaining wall supported on a pile foundation system due to shifting the wall alignment, and Retaining Wall 2A – Design consisted of a 24-foot-long Type 1 retaining wall.

Yerba Buena Island (YBI) Westside Bridges Retrofit Project, San Francisco, CA - Structural Project Engineer. Responsible for design of Retaining Wall No. 1, a soldier pile tieback wall approximately 768 feet in length with wall heights up to about 45 feet; and the Treasure Island Road Undercrossing, a 252-foot-long "cut-and-cover" reinforced concrete tunnel structure with a vertical clearance of approximately 17 feet. This project includes the construction of six retaining walls and an undercrossing structure over approximately 1,400-feet along Treasure Island Road as part of the overall project that will retrofit structures to meet current seismic safety standards.

WESLEY SENNETT, PE

Senior Engineer/Structures Design

Years Experience: 10

Education (Degree and Specialization)

BS/Civil Engineering/ 2010

Professional Registration

Civil Engineering/CA # 82031
Civil Engineering/WA #53617

Key Qualifications

Mr. Sennett has recent project experience in the design of flood control and drainage stabilization structures, including outlet structures, culverts, hydraulic structures, and anchorage design for bio-engineered log structures; as well as pedestrian, vehicular, and light rail bridges, retaining walls, and reinforced concrete cut and cover tunnels. He is proficient in the use of current software used for structural analysis and design.

Relevant Projects

Camp 2 Bridge Replacement, El Dorado Irrigation District – Senior Engineer. The project involved construction of a reinforced concrete buttress wall structure, rock scaling to remove blocks of rock, rock pinning of the perched blocks above the wall, and installation of wire mesh rock net drapery. Also responsible for providing engineering support to the District during construction. Responsible for the design of a rock anchored, reinforced concrete, buttressed and backfilled retaining wall structure with a cantilevered roadway section to replace a structurally deficient timber bridge that crossed a steep exposed granite outcropping.

Forebay Road Penstock Bridge, Forebay Dam Modification Project, El Dorado County Irrigation District - Associate Engineer. The Forebay Road Penstock Bridge, built in 1969, consists of a single-span, reinforced concrete slab superstructure supported on diaphragm type abutments and spread footings. The structure spans 15'-11" along the centerline of the roadway and is skewed at approximately 19 degrees. The bridge spans the 5-foot diameter EID penstock, which conveys water from the Forebay to the El Dorado Powerhouse, which then discharges into the South Fork of the American River. Construction of the Forebay Dam Modification Project is anticipated to include the use of heavy equipment and oversized loads which will need to cross the structure. Responsible for condition inspection and bridge inspection report, load rating analysis and report, oversized load capacity analysis and report, and engineering support during construction.

Mission Creek (Zone 6, L Line) Flood Protection & Restoration Project, Alameda County Flood Control and Water Conservation District, CA – Project engineer for the structural design of retaining walls, a pedestrian bridge, and a golf course bridge associated with the widening of Mission Creek in Gomes Park and Central Fremont Park as part of a flood protection project. As a result of the creek widening, the existing Gomes Park Pedestrian Bridge and Fremont Park Golf Club Bridge was replaced, and retaining walls were constructed to increase the creek channel capacity. Both bridges consisted of prefabricated steel truss structures with lightweight concrete deck slabs.

South Sacramento County Streams, Flood Damage Reduction Project, Florin Creek, USACE, Sacramento, CA - Structural design associated with flood control features along a segment of Florin Creek from 150 feet downstream of Franklin Boulevard to Highway 99. Responsible for design of structural components including storm drain inlet structures, sheet pile wall, reinforcing concrete retaining walls, and reinforced concrete low-flow channel liner. Used DrChecks to respond to review comments.

Site 18A Culvert Replacement Project, Sacramento Area Flood Control Agency, CA - Structures Design of the culvert and wingwalls. The project that involved removal of a 30-inch RCP culvert at Basin 18A and replacement with an approximately 120-foot-wide by 7-foot-high steel plate arch culvert. The new larger culvert will facilitate drainage from the Natomas East Main Drainage Canal, and reduce ponding issues and improve fish passage through the new culvert.

Panther Creek Road Storm Damage Remediation Project, USDA Forest Service, El Dorado National Forest, CA - Responsible for preparation of quantities for structures associated with the project that involves the preliminary engineering and preparation of FHA, Federal Lands Highway Damage Survey Forms (DSR's) for 7 storm damage sites caused by heavy rains in early 2017 along Panther Creek Road.

Jalama Road Slide Repair, Santa Barbara County, CA – Responsible for the structural design of the hydraulic inlet and outlet structures and associated retaining walls. Also responsible for preparation of structural quantity calculations in support of cost estimates.

STEPHEN HAWKINS, PE, QSD

Supervising Engineer/Civil Engineering

Years Experience: 39

Education (Degree and Specialization)

BS/Civil Engineering/1980
MBA/Business Administration/1991

Professional Registration

1983/Civil Engineering/CA #36556
2014/Qualified Stormwater Developer/Practitioner

Key Qualifications

Mr. Hawkins has broad and extensive experience in all facets of civil engineering. This experience includes planning and administration of projects involving civil design associated with flood protection, levee improvements, water resources, storm drainage, sanitary sewer design and construction, bridges, site development, and the full range of municipal engineering projects. Experienced in the use of the DrChecks system for review and SpecsIntact for preparation of specifications.

Relevant Projects

American River Common Features 2016 Project, Type II IEPR Safety Assurance Review (SAR), Sacramento River Contract 1 (Sac 55.2L) and Lower American River, Contract 1 (LAR Subreach 2), USACE Contract No. W91238-19-D-0004, Sacramento, CA – Project/Task Order Manager. The American River Common Features Project is designed to strengthen the River levees so they can safely pass a flow of 160,000 cubic feet per second (cfs). The Project has installed roughly 24 miles of slurry wall up to depths of 80-feet, raised levees to provide adequate freeboard, addressed slope stability issues and corrected bank and channel erosion problems. MGE selected a panel of experts to consider: redundancy, resiliency, robustness and acceptability of the design and construction activities for the purpose of assuring public health, safety, and welfare.The scope of work for this task order includes: review of and comment on the DDR, the O&M Manual, the plans and specifications 65% and 90% design levels, and a construction review at the midpoint of construction. The review panel will prepare a final report that includes the reviews of the plans and specifications, construction activities, and operations and maintenance manual.

Yolo Bypass East Levee, WSAFCA, Yolo County, CA – Project manager for the project to develop 65% plans, specifications, Design Documentation Report (DDR), Engineering Documentation Report (EDR), and Engineering Considerations and Instructions for Field Personnel (ECIFP) for the Yolo Bypass Levee as part of the West Sacramento Project. The Yolo Bypass Levee extends along the Yolo Bypass Levee left bank from the confluence of the Sacramento Bypass and the Yolo Bypass south to the Navigation Levee (DWSC West Levee). The Project will meet the USACE's and State's current levee design criteria and provide at least a 200-year level of protection. Project design includes: seepage, stability and geometry remediation, rock revetment and erosion prevention, site tie-in details upstream and downstream, identification of facility relocations, identification of property lines and access points, identification of material staging locations and haul routes. Interaction of the proposed project with existing infrastructure, including rail lines, may also include identification of required relocations to existing roads, utilities, public and private facilities, and drainage features.

Marysville Ring Levee Rehabilitation, Yuba River Basin Flood Protection Project, Phase 2b and 3, USACE, Sacramento, CA - Project (Task Order) Manager for design under (Contract W91238-10-D-0016 Task Order 12), completion of Plans & Specifications, Design Documentation Report (DDR), Engineering Considerations, and Instructions for Field Personnel (ECIFP), and identification of needed utility relocations and utilities to be protected in place for Phase 2B of the Marysville Ring Levee (MRL). Phase 2B is the segment the right bank of the Yuba River (near the confluence of the Feather River and Yuba River), between State Route 70 and Simpson Lane. Phase 2B, which is 5,150 linear feet in length, includes strengthening a portion of the existing levee and the construction of two set-forward levees. Levee improvements for Phase 2B include construction of a soil-bentonite cutoff wall along the existing and realigned levees, location and closure of abandoned historic sewer tunnels, relocation of utilities, improvement of landside and waterside patrol roads, and improvements to levee embankments including correction of bank slopes. Design challenges included the development of vibration monitoring measures to avoid damage to the historic Bok Kai temple during construction, the relocation of overhead utilities crossing the levee, determining the location of existing sheet pile walls, bridge abutments and other features that may interfere with the installation of the cutoff wall, excavation and location of the historic sewer tunnels that may cross the levee, and other cultural and environmental constraints. Upon completion of Phase 2B, MGE was issued a Task Order to complete the final design for Phase 3 which had been completed prepared by the USACE San Francisco District to the 90% design level, and combine the final design packages for Phase 2B and 3 into a single package for advertising and award for construction. This required modification of the documentation prepared by MGE for Phase 2B to incorporate Phase 3. Phase 3 extended northeasterly begins at from the terminus of the Phase 2B cutoff wall and extends northeast approximately 9,700 linear feet. Reach 3 is proposed to be a deep mix method, soil cement bentonite wall.

South Sacramento Streams Flood Damage Reduction Project - Florin Creek Channel Improvements, USACE, Sacramento, CA - Project (Task Order) Manager for the design of flood control features along a 1.1 mile long segment of Florin Creek, preparation of a Design Document Report (DDR), identification of needed utility relocations, and determination of needed rights-of-way and temporary construction easement limits. Depending upon the location, the project included channel widening and deeping, construction of a concrete lining, installation of floodwalls and sheet piles (upstream of Persimmon Ave.), modification of the bridge at and construction of new maintenance access roads/ramps. Also managed design support during construction. The completed project together a detention basin adjacent constructed at the same time as the same time provided 100-year flood project to nearby residential properties.

Site 18A Culvert Replacement Project, Sacramento Area Flood Control Agency, CA - Project (Task Order) Manager for the design and preparation of PS&E to improve the outflow from a 17-acre detention basin. Following periods of high flow in the creek migrating fish became trapped as water drained from the basin. The project involved replacement a 30-inch RCP culvert with an approximately 120-foot-wide by 7-foot-high steel plate arch culvert at the basin inlet/outlet and some regrading of the basin to facilitate drainage, reduce ponding issues, and improve fish passage from Basin 18A.

American River Common Features, Levee Improvements, Site L9, USACE Sacramento District, Sacramento, CA - Project Manager for the design associated with closing a 148-foot "window" in a previously constructed slurry cutoff wall, using the jet grout method, along the centerline of the levee crest. Responsibilities included preparation of plans, specifications & estimates for the jet grout cutoff wall, utility coordination, and coordination of the joint submission between MGE and another firm that designed an adjacent jet grout wall.

American River Common Features (ARCF) Natomas Basin Reach H & D Levees, USACE, Sacramento, CA - Task Order Manager for the project that involves improvements to the windows left in the Natomas Basin Reach D levees and removal of two pumping stations, relocation of the outfall pipes for Pumping Plant 4, and installing a cutoff wall to close the gaps at each of these sites. The levee will also be enlarged to match the existing levee on each side of these gaps, and the Vestal Drain will be relocated. Also tasked with Independent Technical Review of levee improvements along the Natomas Basin Reach H portion of the project. Scope includes completion Plans & Specifications, DDR, Cost Estimate, Engineering Considerations, Instructions for Field Personnel (ECIFP).

Mid Valley Levee Rehabilitation Project, Phase III Area 3, Sites 9, 10, 11, USACE Sacramento District, Yolo County, CA - Task Order Manager. This project involved design of slurry cutoff walls that will mitigate under and through seepage of the levee. The construction methods used were soil bentonite slurry and soil cement bentonite deep cutoff walls. Responsible for project management, design and preparation of the plans & specifications.

St. Jude to Venice Levee System, USACE New Orleans District, New Orleans, LA - Task Manager. This project involved Periodic Inspection of the 70-mile St. Jude to Venice ring levee system, which included a major floodgate structure. The work included preparation of the Periodic Inspection Report, coordinating the input from two inspection teams (one for the Mississippi River Levee and one for the Gulf Levee) and a structures inspection team to develop the final inspection recommendation to USACE and deliver the Official Outbrief to the New Orleans District USACE staff.

Pajaro River Sheet Pile Floodwall Evaluation Study, Santa Cruz, CA. MGE Project Manager. The purpose of the Pajaro River Sheet Pile Evaluation Project is to develop an order of magnitude cost to install sheet pile along both banks of the Pajaro River and Salsipuedes Creek to contain up to 100-year flood flows. Responsible for overseeing the hydraulic analysis of the River/Creek system to determine water surface elevations for 25, 50 and 100-year recurrence events, preparation of plans and details related to the alignment of the sheet pile wall, determination of lateral sheet pile loads and coordinating with the County's geotechnical engineer to determine sheet pile tip elevations, and preparation of the cost estimate.

Eden Landing Pump Station, Alameda County Flood Control and Water Conservation District, CA - Project Civil Engineer and Construction Support team leader. Project involved design of improvements to rehabilitate the 35-year old pump station including replacement of natural gas pump engines with variable frequency electric controls. Responsibilities included: field investigation and measurements, review of existing As-Built and repair drawings, evaluation of operational conditions; underground discharge line inspection; and preparation of PS&E for the civil engineering portion of the project.

Harney Lane across North Paddy Creek Bridge Scour Countermeasures, San Joaquin County - Supervising engineer. The 84-foot-long, 3-span, cast-in-place, concrete slab bridge is listed as scour critical by Caltrans and the foundations are determined to be unstable for calculated scour conditions. Piers are supported by standard cast-in-place, 16-inch pile extensions, founded on spread footings. The streambed has been classified as having highly erodible material and the potential calculated scour elevation is lower than the allowable limits for the existing foundation.

BRADLEY REICHEL, PE, QSD

Senior Engineer/Civil Design *Years Experience: 10*

Education (Degree and Specialization)

MS/Civil Engineering - Water Resources Planning & Mgt/2011
BS/Civil Engineering/2009

Professional Registration

2012/Civil Engineering/CA #80306
2014/Civil Engineering/CO #0048480
2018/Civil Engineering/TX #130217
2018/Civil Engineering/WA #56747

Key Qualifications

Mr. Reichel has experience in civil engineering, applied hydraulic system design; engineering applications of GIS and GPS; environmental river mechanics; pipe system engineering and hydraulics; stream rehabilitation design; and urban stormwater management. In addition, Mr. Reichel is highly proficient with ArcGIS, AutoCAD Civil 3D, EPA-NET, EPA-SWMM, HEC-RAS, HEC-6, HEC-HMS, HY-8, MATLAB, .NET Framework, and SpecsIntact. Mr. Reichel was a Graduate Research Assistant and Teaching Assistant responsible for preparation of reports for the EPA detailing water conservation and graywater reuse principles and scenarios; developing standalone application in VB.NET for simulation of sustainable urban water management practices. Also instructed undergraduate students in principles of computational model design and engineering statistical analysis and developed lessons and materials for GIS course and conducted lectures and labs for undergraduate class.

Relevant Projects

Panther Creek Road Storm Damage Remediation Project, USDA Forest Service, El Dorado National Forest – Civil design and hydrology/hydraulics support for the project that involves the preliminary engineering and preparation of FHA, Federal Lands Highway Damage Survey Forms (DSR's) for 7 storm damage sites caused by heavy rains in early 2017 along Panther Creek Road.

Jalama Road Storm Damage Repair, Santa Barbara County – Civil engineer responsible for hydrology/hydraulics and drainage system design for the repair of Jalama Road, as part of the effort to restore flood-damaged facilities. Design included repair of pavement displacements on the southbound (uphill) lane and replacement of the 30-inch CMP culvert that was displaced during the slide.

Harney Lane across North Paddy Creek Bridge Scour Countermeasures, San Joaquin County – Lead Civil Engineer. The 84-foot-long, 3-span, cast-in-place, concrete slab bridge is scour critical and the foundations are unstable. The streambed has highly erodible material and the potential calculated scour elevation is lower than the allowable limits for the existing foundation. Piers are supported by standard cast-in-place, 16-inch pile extensions, founded on spread footings.

Yolo Bypass East Levee, WSAFCA, Yolo County – Lead Civil Engineer to develop design, plans, specifications, and associated design reports for the levee rehabilitation project to provide at least a 200-year level of protection. Project design includes: seepage, stability and geometry remediation, rock revetment and erosion prevention, site tie-in details upstream and downstream, identification of facility relocations, identification of property lines and access points, identification of material staging locations and haul routes. Interaction of the proposed project with existing infrastructure, including rail lines, may also include identification of required relocations to existing roads, utilities, public and private facilities, and drainage features.

American River Common Features 2016 Project, Type II IEPR Safety Assurance Review (SAR), Sacramento River Contract 1 (Sac 55.2L) and Lower American River, Contract 1 (LAR Subreach 2), USACE Contract No. W91238-19-D-0004, Sacramento, CA – Lead Civil Engineer. The American River Common Features Project is designed to strengthen the River levees so they can safely pass a flow of 160,000 cubic feet per second (cfs). The Project has installed roughly 24 miles of slurry wall up to depths of 80-feet, raised levees to provide adequate freeboard, addressed slope stability issues and corrected bank and channel erosion problems. MGE selected a panel of experts to consider: redundancy, resiliency, robustness and acceptability of the design and construction activities for the purpose of assuring public health, safety, and welfare. The scope of work for this task order includes: review of and comment on the DDR, the O&M Manual, the plans and specifications 65% and 90% design levels, and a construction review at the midpoint of construction.

Marysville Ring Levee Rehabilitation, Yuba River Basin Flood Protection Project, Phase 2B and 3, USACE, Sacramento, CA - Lead Civil Engineer for design, completion of Plans & Specifications, Design Documentation Report (DDR), Engineering Considerations, and Instructions for Field Personnel (ECIFP), and identification of needed utility relocations and utilities to be protected in place for Phase 2B of the Marysville Ring Levee (MRL). Phase 2B is the segment the right bank of the Yuba River (near the confluence of the Feather River and Yuba River), between State Route 70 and Simpson Lane. Phase 2B,

which is 5,150 linear feet in length, includes strengthening a portion of the existing levee and the construction of two set-forward levees. The section of levee designed for strengthening is adjacent to the historic downtown Marysville and the culturally significant Bok Kai Temple. Levee improvements for Phase 2B include construction of a soil-bentonite cutoff wall along the existing and realigned levees, location and closure of abandoned historic sewer tunnels, relocation of utilities, improvement of landside and waterside patrol roads, and improvements to levee embankments including correction of bank slopes. Design challenges included the development of vibration monitoring measures to avoid damage to the historic Bok Kai temple during construction, the relocation of overhead utilities crossing the levee, determining the location of existing sheet pile walls, bridge abutments and other features that may interfere with the installation of the cutoff wall, excavation and location of the historic sewer tunnels that may cross the levee, and other cultural and environmental constraints. Upon completion of Phase 2B, MGE was issued a Task Order under Contract W912P7-16-D-0006 to complete the final design for Phase 3 which had been completed prepared by the USACE San Francisco District (SPN) to the 90% design level, and combine the final design packages for Phase 2B and 3 into a single package for advertising and award for construction. This required modification of the documentation prepared by MGE for Phase 2B to incorporate Phase 3. Phase 3 extended northeasterly begins at from the terminus of the Phase 2B cutoff wall and extends northeast approximately 9,700 linear feet. Reach 3 is proposed to be a deep mix method, soil cement bentonite wall.

South Sacramento Streams Flood Damage Reduction Project - Florin Creek Channel Improvements, USACE, Sacramento, CA - Lead Civil Engineer for the design of flood control features along a 1.1 mile segment of Florin Creek from Franklin Boulevard to Highway 99, preparation of a Design Document Report (DDR), identification of needed utility relocations, and determination of needed rights-of-way and temporary construction easement limits. Depending upon the location, the project included channel widening and deepening, construction of a concrete lining, installation of floodwalls and sheet piles (upstream of Persimmon Ave.), modification of the bridge at and construction of new maintenance access roads/ramps. The completed project together a detention basin adjacent constructed at the same time as the same time provided 100-year flood project to nearby residential properties.

American River Common Features (ARCF) Natomas Basin Reach H & D Levees, USACE, Sacramento, CA - Civil Engineer performing design for a project that involves improvements to the windows left in the Natomas Basin Reach D levees and removal of two pumping stations, relocation of the outfall pipes for Pumping Plant 4, and installing a cutoff wall to close the gaps at each of these sites. The levee will also be enlarged to match the existing levee on each side of these gaps, and the Vestal Drain will be relocated. Also tasked with Independent Technical Review of levee improvements along the Natomas Basin Reach H portion of the project. Scope includes completion Plans & Specifications, DDR, Cost Estimate, Engineering Considerations, Instructions for Field Personnel (ECIFP).

Napa Creek Flood Control Project, Water Resources & Environmental Restoration, USACE, Napa, CA - Prepared the construction and environmental protection specifications for the project through multiple milestone stages using SpecsIntact. The project included adding two concrete box culverts totaling 990 feet in length to function as bypasses during periods of high flow in Napa Creek. Each of the culverts have two 12 feet high by 11 feet wide cells. The project also included approximately 4,000 feet of creek channel improvements. The improvements included widening the channel where possible, removal of obstructions to flow, and the construction of overbank flood plain terraces, flood walls, berms, and hydraulic grade control structures to create riffles and pools. The creek channel modifications incorporated bio-engineered channel and bank treatments, in-water wood structures, 5 grade control structures, and habitat restoration. The DrChecks system was used for reviews and addressing comments received. Also assisted with providing design support during Construction Phase. Tasks included site visits, review of construction submittals, responding to requests for information (RFI's) submitted by the construction contractor, modeling for storm events during construction, and preparation of design revisions in support of contract modifications for work not associated with any errors and omissions.

St. Jude to Venice Levee System, USACE New Orleans District, New Orleans, LA. Civil Project Engineer. Performed analysis of GIS data during project close-out phase. GIS data was integrated into final reports and presentation for de-brief meeting with the USACE and Levee Safety Officer(s). Project involved levee safety Periodic Inspection (PI) on 70 miles of levees and floodwalls located along the Mississippi River in the Buras Levee District and along the Gulf Coast of Louisiana.

Pajaro River Sheet Pile Floodwall Evaluation Study, Santa Cruz, CA - Civil Project Engineer. Responsible for providing hydraulic analysis of the Pajaro river system to determine water surface elevations for 25, 50 and 100-year recurrence events. Work included evaluation of past hydrologic and hydraulic modeling followed by preparation of revised HEC-RAS models to determine necessary improvements to prevent flooding. The project is located in the Pájaro River watershed on the Central Coast of California. The watershed is approximately 1,300 square miles and includes portions of Santa Clara, San Benito, Santa Cruz, and Monterey counties. The focus of the sheetpile evaluation is to determine the cost to protect the lower Pájaro River and its tributaries, Salsipuedes and Corralitos creeks.

MARTIN MCILROY, PE, PG, CEG

Senior Project Manager/Geology and Geotechnical Services

Years Experience: 26

Education (Degree and Specialization)

BS/Geology/1994

Professional Registration

California - Civil Engineering #78846
California - Registered Geologist, #7435
California - Certified Engineering Geologist, #2322
Louisiana - Professional Geologist, #716

Publications/Committees

ICSE-6-2014, Paris, France, Scour at Unknown Foundations or What I did on my Summer Vacation;
ICSE-7-2016, Perth, Australia Put on your hip boots a practical application of partially grouted rip rap.
ASCE-GI Geotechnics of Soil and Erosion; NCHRP-24-43 Panel Member; Relationship between Erodibility and Fundamental Geotechnical Properties of Geomaterials.

Key Qualifications

Mr. McIlroy has performed and managed geologic, engineering geology and foundation engineering studies for a wide variety of water resource projects. He has performed geotechnical services for the USACE on levee design and rehabilitation, cutoff wall design, seepage and stability analysis, channel improvements, floodwall design and construction, flood control works inspections and dam Independent Technical Review (ITR) projects. He has managed contracts with multi-million-dollar construction budgets and routinely develops Geotechnical Appendices to Design Documentation Reports (DDRs), input for Engineering Considerations and Instructions for Field Personnel (ECIFPs), performed ITR and worked within the Dr. Checks system to manage and resolve document comments from the USACE.

Relevant Projects

Harbor / Industrial Boulevard Water Transmission Line, West Sacramento, CA – Geotechnical study to develop subsurface data for contractor's reference and soils criteria for use in design. Project consisted of 11,700±l.f. of new 36-inch diameter pipeline for water transmission along Harbor Boulevard from West Capitol to Industrial Boulevard in West Sacramento. The pipeline construction methods were by typical "cut and cover" and also included trenchless (bore and jack) installations below US Highway 50 right-of-way and under the Union Pacific Railroad where it crosses Industrial Boulevard.

Fishway Pipeline Project–Woodbridge, CA – Geotechnical investigation to develop preliminary subsurface data and soils criteria for use in project design and construction of an 1,800 ft long, 10 ft diameter fishway pipeline located along/near the Mokelumne River in the town of Woodbridge, California.

U & S Street Inline Storage Project, Sacramento, CA – Subsurface investigation to provide data on earth materials and conditions for reference during design and construction of 1,350±l.f. of new 72-84 inch diameter concrete pipe and 810±l.f. of new 54-inch diameter concrete pipe associated with Sump 1A improvements. Construction methods for the pipeline will be by means of "cut and cover" methods and microtunneling beneath I-5.

Kelseyville – Finley Water Supply Projects, Kelseyville, California – The project included a new 1-million gallon, 85-foot diameter steel tank with 15-foot wide perimeter road as well as 21,500±feet of pipeline.

Mid-Valley Phase III Area 3, Levee Improvements, Right Bank Sacramento River, Sites 9,10,11 and EDR, USACE, Yolo County, CA - Geotechnical Project Manager – This USACE Sacramento District project consisted of developing designs for levee improvements along two 700-foot right bank segments of the Sacramento River (site 9 & 10) and a 5,650-foot right bank segment of the Sacramento River (site 11). Work consisted of surveying, geotechnical studies, evaluating through seepage and slope stability using SEEP/W and SLOPE/W, preparing final EDR for phase 3, preparing EDR level construction plans, Preparation of construction plans and specifications; Design Documentation Report (DDR); Geotechnical Appendix to DDR, utility relocations; right-of-way and temporary construction easement requirements; developed CEQA/NEPA documentation and acquired permits during the design process; Engineering Consideration Instructions for Field Personnel (ECIFP) report, 60%, 90%, and 100% Design submittals, MCASES MII cost estimate; and Dr. Checks review of submittals.

Mid-Valley Area Phase III Area 3, Levee Improvements, Knights Landing Ridge Cut, Sites 12, 12A and 13, USACE, Yolo County, CA – Geotechnical Project Manager. An IDIQ Task Order for design of levee improvements along an 18,000 foot-long segment of the left bank of the Knights Landing Ridge Cut from approximately levee mile (LM) 2.8 to 5.0 (Site 12), LM 2.0 to 2.8 (Site 12A), LM 1.6 to 2.0 (Site 13), Near Knights Landing, California . As part of the Sacramento River Flood Control Project, the project design included levee seepage berms to control through seepage. The work included surveying, geotechnical review of existing data and tests; evaluation of seepage and slope stability using SEEP/W and SLOPE/W;

preparation of construction plans and specifications; Design Documentation Report (DDR); utility relocations; right-of-way and temporary construction easement requirements; 11,600 l.f. of levee rehabilitation from embankment creep due to expansive soils; regraded/removed expansive soils and added non-expansive soil cap; performed seepage & stability analysis and developed plans & specs for levee improvements; levee toe irrigation canals and through levee utilities were removed/relocated/ replaced; developed CEQA/NEPA documentation and acquired permits during the design process; Engineering Consideration Instructions for Field Personnel (ECIFP) report, and a MCASES MII cost estimate; Dr. Checks review of submittals.

Florin Creek from Franklin Boulevard to Highway 99 (Section 2D1), USACE, Sacramento, CA – Geotechnical Project Manager. This project consisted of a geotechnical investigation and design services for over a mile of channel and floodwall improvements along Florin Creek in south Sacramento. Geotechnical services included exploration along the banks and in surrounding neighborhoods to gather subsurface information for stability and seepage analyses. Project also involved coordination of laboratory testing and geotechnical engineering analyses for a Geotechnical Appendix to the Design Documentation Report (DDR). Improvements included channel re-shaping and floodwall along parts of the eastern channel sections. Performed review services for plans and specifications for floodwall improvements.

Stewart's Point Slide Repair, Sonoma County – Project Manager. Stewart's Point Skaggs Springs Road suffered significant slides at four locations during the 2019 February Flood Disaster. These landslide repairs will be designed and constructed using FHWA ER funding and Caltrans will be the delegated NEPA lead agency and the County the CEQA lead agency. This road is a critical inland evacuation route from Stewarts Point that also serves other nearby coastal towns in case of emergencies. MGE is providing civil, structural and geotechnical engineering services, environmental consultation, utility coordination, surveying and right-of-way (ROW) mapping, and post-construction engineering services to support the bidding and award phase.

Winter Storm Damage Repair Projects, FEMA Disasters 4301 and 4308, Sierra County – Provided QA/QC and geotechnical services for the permanent repair of 9 sites damaged by 2017 winter storms. Sites included roadway slipouts, a culvert repair and the Sierraville Division Dam Repair.

Fifteen 2017 Storm Damage Sites, Yuba County – Geotechnical Lead. Prepared geotechnical reports and designed repair alternatives for FEMA funded storm damage sites. Sites included landslides and culvert washouts. Martin proposed applying for a CalRecycle tire-derived aggregate light-weight fill grant, and the County received a $439,636 grant in addition to disaster recovery funding. Landslide repair designs included: soldier pile walls, geosynthetically-reinforced soil slopes, reconstructed embankments with lightweight tire-derived aggregate, and gabion walls.

Trout Gulch Road PM 1.41, Santa Cruz County – Project Manager. Managed the geotechnical and engineering geologic services for this project that included: field exploration and geologic mapping, slope stability analyses, bearing capacity analyses, and construction observation during foundation excavation and crib wall installation. The FEMA-funded project involved emergency storm-damaged road repair. A 132' long by 18' high crib wall retaining structure was constructed to provide roadway stability. Seepage from the hillside above the roadway necessitated the construction of a drainage system to be constructed on the inboard side of the roadway to limit the saturated soil pressure against the wall.

Bear Creek Road PM 5.05, Santa Cruz County – Geotechnical Lead. Performed geotechnical investigation for the repair of an approximately 50-foot-long section of roadway resulting from storm damage events. Services included field exploration and testing program, review of aerial photos and geologic mapping, developing cross-sections and providing recommendations for a 75-foot long tie-back soldier pile wall, improved drainage and new pavement sections.

Hunter Creek Bridge on Requa Road, Del Norte County – Geotechnical Lead. Performed a bridge foundation investigation for a new concrete box girder bridge. Preliminary investigations revealed liquefaction potential to 70-ft depth with limited to no bearing materials to 120-ft depth.

Martins Ferry Bridge Seismic Retrofit and Emergency Landslide Stabilization, Humboldt County - Geotechnical Lead. Martins Ferry Bridge is a critical transportation route, providing the only all-weather access to a large area of Humboldt County. The bridge was being compressed and distorted by landslide movement along the northern bank. The geotechnical investigation included the landslide and existing bridge supports as part of a seismic retrofit of the bridge structure. Recommendations were provided for stabilization of the large landslide, new bridge supports, and provided input for retrofit of the remaining supports. Landslide stabilization included installation of a drainage gallery, horizontal drains, offset 8-ft diameter CIDH shear piles for bridge support and landslide stabilization, and 3-ft diameter CIDH piles for bridge piers and temporary bridge supports. Multiple inclinometers and other instruments monitored slope movement and groundwater.

Education

- University of Missouri at Rolla, M.S. Civil Engineering 1984 Concentration Geotechnical/ Materials Engineering
- University of Missouri at Rolla, B.S. CE, 1982

Registrations

- Registered Geotechnical Engineer, CA #2311
- Registered Civil Engineer, CA #48147, Nevada # 011564

Affiliations

- ACEC-CA –Fellow, State President 2009-10, officer and chairman for various other committees
- BORPELS – Technical Expert for Enforcement Unit from 1999 to present, Geotechnical Exam Judge 2003
- ASTM – Technical Reviewer - Soil and Rock Committee since 1996
- ASCE – Guest Lecturer 1996
- ASFE/GBA – President elect 2020, Peer Review Committee Chair 2014-15, Multiple presentations

Publications/Awards

- ASCE Fellow and 2009 "Francis N. Hveem Geotechnical Engineer"

Geotechnical

Geo-Environmental

Forensics

Construction Services

Thomas W. Blackburn, PE, GE, F. ASCE, F. ACEC

Principal-in-Charge

BLACKBURN CONSULTING

Mr. Blackburn's attributes:

- Proactive
- Persistent
- Problem solver
- Excellent business writer
- Simplifies complex issues
- Diplomatic
- Heavily experienced with construction, geotechnical and materials engineering

Representative Experience

Tom has served as a consultant and expert on hundreds of public works, residential, and commercial projects.

His technical expertise includes: Deep foundations, landslides, expansive clay, earth pressures, settling soils, surface and subsurface drainage, ground vibrations, seismicity, liquefaction, codes, and construction practices.

He has worked on: Dams, canals, penstocks, levees, bridges, pavements, concrete slabs, deep and shallow foundations, ground improvement, retaining walls, anchors, and structures.

Geotechnical Expert for Large Retaining Wall and Roadway Claim

Roadway improvement project on US Hwy 395 near Topaz Lake. Improvements included significant retaining walls and fill placement for road widening.

- Challenge: Caltrans faced a ~$12M differing site conditions claim this complex project. The contractor encountered difficult (but predictable) underground installation in large rubble fill. This included tiebacks, temporary soil nail walls and CIDH piles for large retaining walls. Ultimately, the contractor delivered the project over 1 year late with several outstanding change orders.
- Solutions: Mr. Blackburn interviewed key Caltrans employees. Then, he reviewed borings/site geology and thousands of pages of documents from Caltrans and the contractors. Mr. Blackburn helped simplify issues and summarize the case so the client and other parties could understand it. He also assisted the cost estimator.
- Benefits: Mr. Blackburn's work helped Caltrans achieve a reasonable settlement during mediation.

Bear River Siphon, Placer and Nevada Counties, CA,

Nevada Irrigation District's replaced an 850-foot long, 54-inch diameter siphon across the Bear River. Included a 200-foot long suspension bridge approximately 70 to 90 ft above the Bear River. Blackburn provided Subsurface investigation, detailed geologic mapping, slope stability analyses and active rock anchor design, bridge foundation design recommendations, and design services during construction.

- Challenges: Steep slopes caused challenging working conditions for labor and foundation construction. Poor construction practices during rock anchor installation caused emergency field evaluations.
- Solutions: Blackburn modified rock anchor locations in the field to respond to difficult terrain. Blackburn helped develop a new design for pipe one pipe support to mitigate a significant change order but still meet design intent. Blackburn helped the contractor and owner understand the heavier than expected seepage and how far to over-excavate saturated soils.

With Blackburn Since 2005

Education

- University of Nevada, Reno M.S. Geological Engineering, 2002

Registrations

- Professional Geologist, California #7997
- Certified Engineering Geologist, California, #2508

Affiliations

- AEG - Association of Engineering Geologists

Office Location

11521 Blocker Drive
Suite 110
Auburn, CA 95603
(530) 887-1494

Geotechnical
Geo-Environmental
Forensics
Construction Services

Robert C. Pickard, PG, CEG

Project Manager

BLACKBURN CONSULTING

Mr. Pickard is an Engineering Geologist with Blackburn Consulting. He has more than 17 years of experience in geotechnical/geologic engineering. He has worked on a wide variety of projects including pipelines, dams, tanks, highways, and bridges throughout California and particularly in the Sierra Nevada Foothills. His experience includes subsurface investigation, soil, rock and groundwater analysis, excavatability, and slope stability studies.

Representative Experience

EID Folsom Lake Pump Station, Folsom, CA

Project Engineering Geologist for the proposed raw water pump station improvements located on the south-eastern edge of Folsom Lake. Managed drilling and laboratory testing. Logged and analyzed borings and provided a geotechnical data report.

EL Dorado Forebay Dam Upgrades, El Dorado County, CA

The project consisted of construction of a downstream stability berm. Rob performed geotechnical review of foundation conditions on behalf of the contractor to confirm that the excavation met cleanliness standards required by the project specifications prior to DSOD and FERC inspection. A landslide was identified on the right side of the excavation. Rob worked with the contractor, designer, DSOD and FERC to identify and remove the slide debris and prepare the foundation for the placement of new buttress fill.

Bear River Siphon, Placer and Nevada Counties, CA

Rob served as Senior Engineering Geologist for replacement of a suspension bridge approximately 70 to 90 ft above the Bear River. The new suspension bridge will be approximately 200 ft long and support a new 54–inch diameter siphon. Rob provided geologic mapping, managed subsurface exploration and laboratory testing program, performed rock slope stability analysis, and provided foundation recommendations. Rob provided geotechnical support during construction for foundation redesigns, unstable slopes, seepage, and soil nails and rock anchors.

NID Scotts Flat Spillway Evaluation, Nevada County, CA

Senior Engineering Geologist for the evaluation of a dam spillway constructed in the 1960's. Rob mapped the area surrounding the spillway, managed subsurface explorations, reviewed existing geologic mapping and documentation, and completed a Geotechnical Data Report.

Lost Creek Dam Modifications, Butte County, CA

Rob served as Senior Engineering Geologist for design modifications of a concrete arch dam on a tributary to the South Fork of the Feather River in Butte County. The dam required spill and bridge deck modifications. Rob completed a field investigation which included exploratory drilling, seismic refraction, and geologic mapping. He also assisted in providing a geotechnical design report for the improvements. During construction of the facing, Rob provided inspection and approval of the foundation preparation prior to DSOD and FERC final inspection. This project required coordination with the DSOD, FERC, and State Fish and Game.

Combie Flume Replacement Pipeline, Nevada County, CA

Project includes replacement of a 9,300 ft open flume with a 96-inch diameter above-ground precast concrete pipeline. The pipeline will connect the Combie Dam and the Bear River siphon inlet. Rob mapped the geology of the alignment, managed the subsurface exploration and laboratory testing program, and assisted with geotechnical design memorandums to present geologic conditions, pipe support recommendations, undocumented fill zones, and rockfall hazards and mitigation recommendations.

REGISTRATION

2008/CA/Professional Land Surveyor/8448

EDUCATION

1993/Coursework/Surveying and Photogrammetry Courses/California State University, Fresno (4 years)

EXPERIENCE

With Psomas for 27 years; with other firms for 3 years

Dana Remington, PLS

Lead Surveyor

Dana Remington has more than 30 years of surveying and mapping experience. His experience focuses mainly on public works, geodetic and GPS projects. Dana has worked on numerous GPS projects and is responsible for processing and adjusting data from GPS, digital level and conventional surveys. His proficiency with software from AutoCAD, Trimble and StarNet is used in preparing final maps and reports. He also leads projects using resource grade GPS (Trimble Pro XRS) and hydrographic surveys with GPS and the Knudsen Echo Sounder.

Experience

Placer County Water Agency (PCWA) Penryn Flume Replacement – Penryn, CA: Project Manager responsible for surveying and mapping services in support of PCWA upgrade of approximately 630 feet of Penryn Canal Flume. Psomas' services include design-level topographic surveys. Property corners were located and surveyed to build a LandNet for future acquisition and easements.

Placer County Water Agency (PCWA) Hayford Flume Replacement – Penryn, CA: Project Manager responsible for surveying and mapping services in support of PCWA upgrade of approximately 630 feet of Hayford Flume. Psomas services include aerial mapping and design-level topographic surveys, preparation of legal description document packages, and construction staking services. Property corners were located and surveyed to build a LandNet for future acquisition and easements.

WSAFCA Yolo Bypass Levee Project – West Sacramento, CA: Project Manager responsible for geodetic control network, topographic base mapping, and boundary survey/land net preparation for the WSAFCA team of consultants selected for this project.

USACE Folsom Joint Federal Project Auxiliary Spillway Control Structure Surveying Phase Construction Support - U.S. Bureau of Reclamation & U.S. Army Corps of Engineers - W91238-10-D-0003 – Folsom, CA: Project Manager for on-call construction support and responsible for short notice deployment of field crews and equipment to the control structure construction site to check, monitor and evaluate construction forms, concrete pours, volumes and as-built locations with plan design, establishing and checking horizontal and vertical control, terrestrial LiDAR and providing survey control for terrestrial photogrammetry.

Placer County Water Agency, American River - Auburn Dam Site Channel Restoration – Placer County, CA: Project Manager on this restoration project that included control, photogrammetric, bathymetric, topographic hydrographic, volumetric and construction surveys for the design of a pumping station and restoration of the American River channel at the Auburn Dam site. Mapping of the submerged river channel was performed upstream and downstream of the Coffer Dam. Digital terrain models were included in the mapping to facilitate surface visualization and volume computations.

Dana Remington, PLS (Continued)

Department of Water Resources, Task Order 7 - Emergency Levee Repair 39 Sites – Statewide, CA: Project Manager on this on-call contract to perform emergency surveys at 39+ levee repair sites that were damaged by the severe flooding during the 2016/2017 winter storms. Services included GPS control, as-built topographic surveys, boundary determination, preparation of land-net, appraisal maps and legal descriptions for new acquisitions, monumenting new acquisitions with survey monuments together with preparation of record of survey maps. Boundary surveys were performed to determine if new levee easements were needed to accommodate the new levee footprint, as-built surveys, appraisal maps, legal descriptions, exhibit plats for acquisition, and record of survey were filed.

Brunswick Road Pipeline Project, Nevada Irrigation District – CA: Project Manager responsible for providing surveying and mapping services for this project of approximately 8,000 feet of pipeline. Services include topographic mapping, photogrammetry, locating boundary and easement lines, legal descriptions and exhibit plats. Topographic mapping included field and office work to set and survey permanent control points suitable for future boundary, design and construction surveys. Field surveys were performed to augment the photogrammetric mapping and identify existing edge of pavement and driveway cuts, surface evidence of utilities and other visible features impacting the route.

PG&E R-1018 Pipeline Replacement Project – Helena, CA: Project Manager for the required surveying and mapping for the design of 4 miles of gas pipeline replacement. The pipeline in need of replacement lies within State Highway 29 north of St. Helena CA and because of the traffic and safety concerns required alternate methods for data collection. Psomas deployed the LYNX Mobile Mapping unit to collect the topographic data along the route which ensured a safe and expedient field survey. The schedule for delivering the mapping was very aggressive and Psomas was able to meet the needs of the client. Deliverables on the project included topographic base mapping in MicroStation format, 3D utility mapping that includes modeling of the underground utility lines, right of way mapping delineating the Caltrans right of way, and monument preservation mapping.

REGISTRATION

2007/CA/Professional Land Surveyor/8303

EDUCATION

1997/BA/Geography/ California State University, Chico

PROFESSIONAL AFFILIATIONS

California Land Surveyors Association

Society of American Military Engineers

International Right of Way Association

American Public Works Association

EXPERIENCE

With Psomas for 15 years; with other firms for 9 years

Daniel Forgey, PLS

Principal-In-Charge

Dan Forgey is a professional land surveyor with 22 years of surveying and mapping experience. Dan is a Project Manager responsible for coordination and execution of tasks that utilize his expertise in the following areas: boundary and right-of-way resolutions including complex land net preparation for large scale public works projects; topographic design mapping; preparation of legal descriptions and plats; eminent domain exhibits/support; monitoring surveys; construction staking; and verification surveys. He is experienced in geodetic control surveys, utilities surveys, ALTA/ACSM Land Title Surveys, and preparation and processing of records of survey and final maps.

Experience

Natomas Central Mutual Water Company (NCMWC) Facility Program – Sutter and Sacramento Counties, CA: Survey Manager for this 2.5-mile earthen irrigation canal built to convey diverted water from the Sacramento River to support agriculture, development and habitat in the Natomas Basin. Services provided include; horizontal and vertical control network, utility relocation surveys, construction staking, settlement monitoring, verification and as-built surveys as well as legal descriptions and plats for easement acquisition and Lot Line Adjustment processing.

Tisdale Weir Rehabilitation and Fish Passage Project – Sutter County, CA: Project Manager responsible for structural surveys on bridges, weirs and pump stations within the Sutter Bypass for the evaluation of the hydraulics associated with the Tisdale Weir. Provided structural and topographic mapping to for this California Department of Water Resources (DWR) project.

Regional San (SRCSD/SASD) On-Call Surveying Services – Sacramento County, CA: Project Manager for this current on-call contract. Services include legal descriptions and plats, site surveys to facilitate property transfers between agencies, surveys to establish/delineate easement limits, property boundary surveys, sewer manhole surveys, surveys for lot merger, topographic and underground utility surveys.

Sacramento Area Flood Control Agency (SAFCA) Levee Accreditation Program – Sacramento, CA: Lead Project Surveyor on 50+ miles of urban levees. Provided design support services that included: establishing permanent survey control; design topographic base mapping; detail structure surveys; coordination with DWR on right-of-way surveys performed in MA-9 portion of the project; right-of-way strip mapping to provide details of ownership and rights; and easement evaluation services as requested by the design team and SAFCA.

Sacramento Area Flood Control Agency (SAFCA) Natomas Levee Improvement Program – Sacramento and Sutter Counties, CA: Lead Project Surveyor for this levee project involving 42+ miles of State and Federal levees and County roads of the Natomas Basin. Services included establishing survey control to Second Order, Class II specifications; providing orthophotography; performing topographic surveys; 1"= 40' base mapping with 1-foot contours, utility surveys; performing boundary surveys, analysis,

and land net maps preparation; preparation of right-of-way strip maps, descriptions and exhibits for 200+ acquisitions and land transfers; construction survey support; monitoring; GIS database development, and eminent domain proceedings support.

South River Pump Station Flood Protection – West Sacramento, CA: Project Surveyor for this project to provide 100-year-flood protection for the South River Pump Station. Services include control surveys, base mapping, boundary and right-of-way surveys, preparation of legal descriptions for the levee, access easements, temporary construction easements, and borrow sites. Prepared a record of survey to document the boundary resolutions performed, monumentation set, and the property acquired for the project. Surveys were based on NAD83, Zone 2 horizontal datum and NAVD88 vertical datum.

U.S. Army Corps of Engineers, American River Common Features Project – Sacramento District, CA: Project Surveyor supporting the establishment of primary control to Second Order, Class II specifications for 50+ miles of levee corridors in Sacramento. Services involved static GPS surveys, conventional surveys; precision digital leveling; CEPD compliance; and inclusion in USACE USMART control database. In addition, the project included QA/QC oversight for USACE on two consultants performing right-of-way inventory services for the levees and provided GIS consulting services in developing a GIS geodatabase for use by the right-of-way inventory consultants.

Sacramento Area Flood Control (SAFCA) On-Call Task Order #1-American River Common Feature, Lower American River Erosion Repair – Sacramento, CA: Team Leader providing boundary surveys and land net mapping, existing easement delineation, new easement delineation, mapping and legal descriptions, support for land appraisals and real estate acquisitions, coordination between project stakeholders including California Department of Water Resources, California State Lands Commission, Sacramento County Parks, and USACE. This project involved extensive water boundary surveys along the American river to establish the jurisdictional boundary of the sovereign lands of the State of California.

West Sacramento Area Flood Control Agency (WSAFCA) Southport Early Implementation Program – West Sacramento, CA: Project Surveyor providing independent review of the work provided by two land surveying consultants on this project. Performed verification surveys on portions of the project to evaluate accuracy of the data. Prepared a detailed report and met with the consultants and WSAFCA to recommend ways to bring the control, topographic mapping and right-of-way surveys into compliance with the state and federal requirements and to get both surveys on the same horizontal and vertical datums.

WSAFCA Yolo Bypass Levee Project – West Sacramento, CA: Team Leader responsible for geodetic control network, topographic base mapping, and boundary survey/land net preparation for the WSAFCA team of consultants selected for this project.

MGE ENGINEERING, INC.

7415 Greenhaven Drive, Suite 100
Sacramento, CA 95831
(916) 421-1000
www.mgeeng.com

Denise
[Type the company name]
5/27/2011

2021 CAPITAL IMPROVEMENT PLAN Program: Hydroelectric

Project Number: 17025

Project Name: Flume 45 Abutment Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 10/26/20

Project Description:

This section of Flume 45 is an elevated wood flume approximately 100 feet in length and last replaced in 1945. This portion of the flume was constructed to span a section of the historic rock bench that had previously failed and the design will need to be approved by the State Historic Preservation Office. In 2014 the District crews made interim repairs to ensure the continued safe operation. The replacement of this entire flume is scheduled to occur during the scheduled canal outage in the future. This project will only address the abutment section. Construction cost estimates will be revised upon completion of the geotechnical assessment and design.

Basis for Priority:

The flume will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 22,122
Spent to Date:	$ 12,122	2021 - 2025 Planned Expenditures:	$ 1,760,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 1,782,122
Project Balance	$ 27,878	Additional Funding Required	$ 1,732,122

Description of Work	Estimated Annual Expenditures					
	2021	2022	2023	2024	2025	Total
Study/Planning/Env	$ 50,000					$ 50,000
Geo/Design	$ 150,000					$ 150,000
Construction		$ 1,500,000				$ 1,500,000
QCIP/Warranty			$ 60,000			$ 60,000
TOTAL	$ 200,000	$ 1,500,000	$ 60,000	$ -	$ -	$ 1,760,000

Estimated Funding Sources	Percentage	2021	Amount
Water FCCs	100%		$172,122
			$0
			$0
Total	100%		$172,122

Funding Comments:

Consideration to Award a Contract to MGE Engineering for the Flume 45 Abutment Section Replacement Design

January 11, 2021

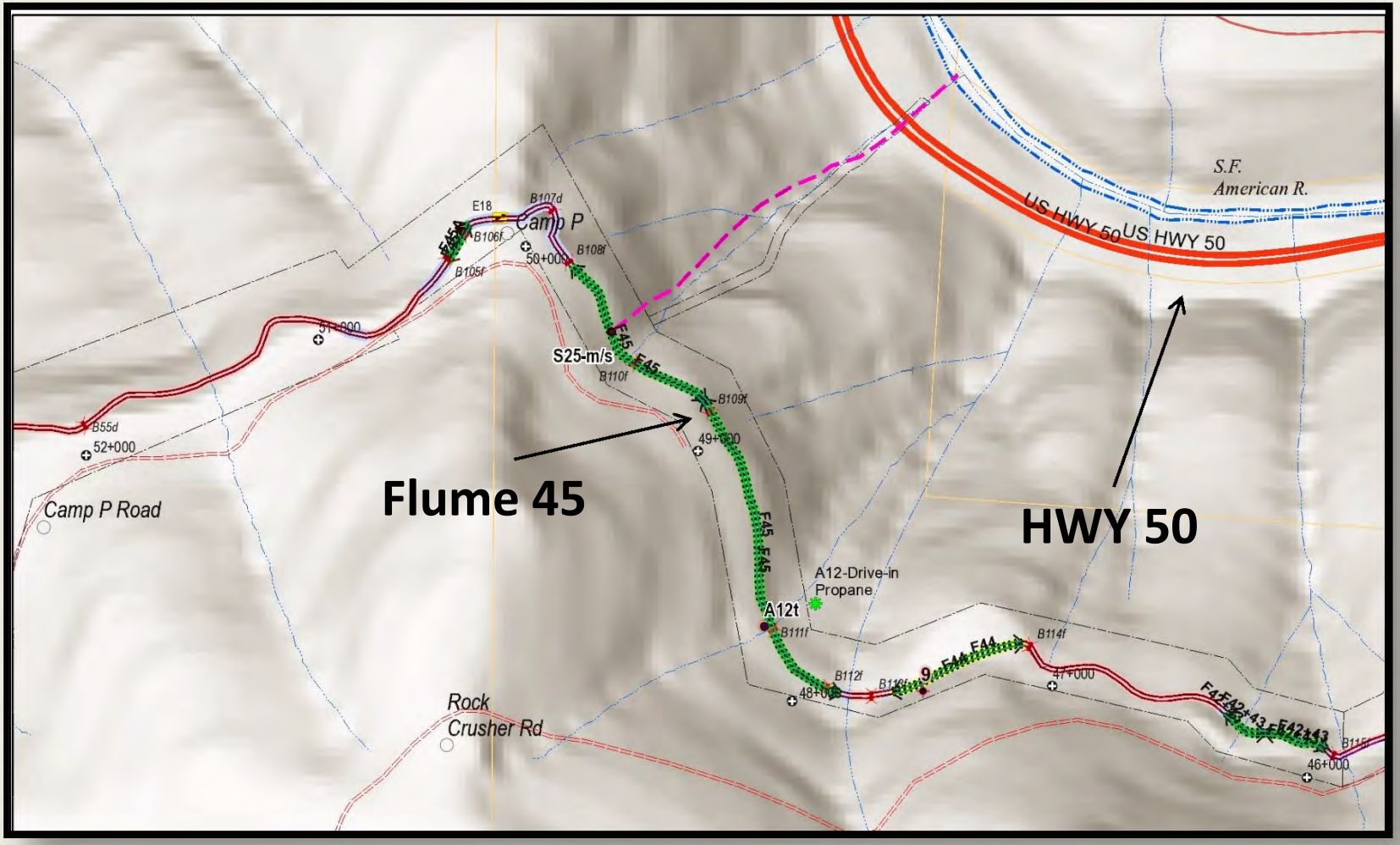
By: Cary Mutschler
Senior Civil Engineer

El Dorado Irrigation District

Previous Board Actions

- October 26, 2020 – Board adopted the 2021-2025 CIP, which included this project, subject to funding availability.

Project Site



Summary of Issues

- Flume 45 is a 1,900 foot long flume that was last replaced in 1945
- Most of the flume rests on a historic rock wall constructed in the 1870's
- The abutment section is 100 feet long in the middle of the flume in an area that has experienced a slide
- Stability measures implemented in 2014 on the abutment section
- Project requires approval from State Historic Preservation Office for historic wall

Flume 45 Abutment Issues

Flume 45 Abutment Issues

Flume 45 Abutment Issues

Flume 45 Abutment Issues

Flume 45 Abutment Issues

Scope of Work

- Develop replacement and stabilization alternatives for the historic rock wall
- Consult with SHPO
- Perform geotechnical analysis of site
- Finalize design for replacement and stabilization of Flume 45 abutment section
- Design access road repair from 2017 storm

Proposals

Engineering Firm	Fee Proposal
GHD, Inc.	$368,914
Gannett Fleming	$344,270
MGE Engineering	$299,841

Environmental Review

- The appropriate level of environmental review and regulatory permitting will depend on the design alternative selected.

- Funding needed at this time for:
  - Cultural resources support evaluate potential impacts to the historic rock wall
  - Seasonally-dependent biological resource surveys

- Staff will request additional funding to support environmental review and regulatory permitting once project is more defined.

Cost Breakdown

Flume 45 Abutment Funding Requirements

	Amount
MGE Engineering – Design Services	$299,841
Capitalized labor – Engineering, environmental staff support	$145,000
Professional services to support environmental review	$60,000
TOTAL	**$504,841**

Board Options

- **Option 1**: Award a contract to MGE Engineering in the not-to-exceed amount of $299,841 for design of the Flume 45 abutment section, and authorize total funding of $504,841 for the Flume 45 Abutment Replacement Project, Project No. 17025.01.
- **Option 2**: Take other action as directed by the Board.
- **Option 3**: Take no action.

Recommendation

- **Option 1**

Questions?

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding a contract to Aqua Metric in the not-to-exceed amount of $800,000 for the purchase of meters, parts and related meter reading equipment.

PREVIOUS BOARD ACTION

August 24, 2020 – Board awarded a contract to Golden State Flow Measurement, Inc. in the not-to-exceed amount of $234,054 for the purchase of meters, parts and related meter reading equipment.

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

BP 3060 Contracts and Procurement
AR 3061.04 Procurement and Contract Authority
AR 3061.09 Standardization of Goods and Services

SUMMARY OF ISSUE

Due to the ongoing COVID-19 pandemic-related delays in supply order fulfillments, staff has identified a need to purchase additional meters, meter parts and related meter reading equipment to ensure sufficient supplies for the District's inventory. Therefore, staff is requesting funding in the amount of $800,000 for 2021 supplies. These supplies are necessary for District crews to install and replace new and existing meters, and complete meter repairs. District staff estimates 850 connections will be purchased by developers in 2021 and approximately 800 meters will be repaired or replaced.

BACKGROUND/DISCUSSION

In order to ensure that District staff have a sufficient inventory of flow meters and meter parts for use in supplying new development with water and for replacing stuck meters throughout the District's service area, staff periodically makes bulk purchase of flow meters and meter parts in order to maintain its inventory. On August 24, 2020, the Board authorized the purchase of a large amount of meters, parts and related meter reading equipment. Since that time, District staff have utilized the materials to conduct necessary repairs and replacements. Consequently, staff must restock inventory in order to continue the ongoing repairs and replacements.

Pursuant to AR 3061.09, the District uses only one brand of meter, which is manufactured by the company Sensus and in previous years the meters were purchased through the company Golden State Flow Measurement (GSFM). In October of 2020 GSFM was acquired by Aqua Metric which subsequently replaced GSFM as the only company authorized to sell Sensus products. Keeping all meters with the manufacturing company Sensus, will ensure ease of meter and meter part purchases and will keep consistency of the District's meter products. Purchasing staff routinely surveys the market to see if any other vendor can meet our needs.

FUNDING

This request is to authorize the purchase of the items needed to complete the estimated 850 meter sets with Development Services which will be paid by Developer reimbursement and the remaining meters will be paid out of the annual Automated Meter Replacement CIP.

Product	Price
Sensus meters, parts and related meter reading equipment	$739,000
Tax	$61,000
Total	**$800,000**

BOARD OPTIONS

Option 1: Award a contract to Aqua Metric in the not-to-exceed amount of $800,000 for the purchase of meters, parts and related meter reading equipment.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

None

Jason Warden
Fleet Maintenance Supervisor

Christine St. Lawrence
Buyer II

Mark Price
Finance Director

Elizabeth Leeper
Senior Deputy General Counsel

Jim Abercrombie
General Manager

Meters, Parts and Related Meter Reading Equipment Purchase

El Dorado Irrigation District

January 11, 2021

Previous Board Action

- August 24, 2020 - Board awarded a contract to Golden State Flow Measurement, Inc. in the not-to-exceed amount of $234,054 for the purchase of meters, parts and related meter reading equipment

Summary of Issue

- Ongoing COVID-19 pandemic-related delays in supply order fulfillments
- Need for purchase of additional meters and associated equipment to avoid potential delays in meter installations and repairs

Background / Discussion

- District has standardized metering equipment on Sensus
- Meters and supplies last purchased August 2020
- Sole authorized provider Golden State Flow Measurement acquired by Aqua Metric after last purchase
- Future purchases will occur through Aqua Metric
- Continued growth projections and ongoing repairs warrant next purchase at this time

Background / Discussion

Product	Price
Sensus meters, parts and related meter reading equipment	$739,000
Tax	$ 61,000
Total	**$800,000**

Board Options

- **Option 1:** Award a contract to Aqua Metric in the not-to-exceed amount of $800,000 for the purchase of meters, parts and related meter reading equipment

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

- **Option 3:** Take no action

Recommendation

- Option 1

Questions?

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider authorizing the General Manager to execute agreements with the Regional Water Authority (RWA) and other participating RWA members for two programs: Major Projects Management Services Program in an amount not to exceed $24,000 per year and Water Resilience Program in an amount not to exceed $28,000 per year.

PREVIOUS BOARD ACTION

August 10, 2020 – Board approved payment of the annual membership dues for the Regional Water Authority General and Water Efficiency Category 1 Programs in the amount of $117,121 for fiscal year 2020-2021.

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

BP 0010 District Mission Statement
BP 5010 Water Supply Management
BP 5050 Watershed Management

SUMMARY OF ISSUE

RWA is creating two new subscription programs that will benefit the District in its efforts to engage on regional and state-wide water supply resiliency issues. The General Manager seeks Board authorization to execute agreements that will allow the District to take advantage of these efforts.

BACKGROUND/DISCUSSION

RWA, which was formed in 2001, is a joint powers authority representing two dozen water providers and affiliates in the greater Sacramento region. Its mission is to serve, represent and align the interests of regional water providers and stakeholders for the purpose of improving water supply reliability, availability, quality and affordability.

The District joined RWA in 2003 and its membership has provided many benefits, including integrated regional planning, grant funding, and consistent messaging with other water agencies in the region. For example, RWA obtained $28.0 million dollars in Proposition 84 grant funding from the State of California for 15 priority projects within the region, including $1.0 million for the District's Upper Main Ditch Piping project and $1.2 million for improvements to the Outingdale raw water intake. The District also partnered with RWA to purchase high resolution aerial imagery of the service area for a variety of planning and operational purposes at a low cost. Annual RWA membership costs are currently $117,121. Of that amount, $77,751 is for general membership, and $39,370 is for the RWA water efficiency program

In recent years, RWA has played a key role in representing the interests of American River water purveyors in statewide regulatory proceedings, including the State Water Resources Control Board's update to its Bay Delta Water Quality Control Plan (BDWQCP).

In order to better align regional coordination and participation in the BDWCP and similar efforts in the future, multiple RWA member agencies have requested that RWA provide support for important regional initiatives by creating a new staff position. The new position, Water Resilience Manager, will coordinate the region's response to the BDWQCP update and other regulatory

matters affecting the region's water supplies. The Water Resilience Manager will also coordinate the region's engagement on regulatory matters that affect water management, increasing the opportunities for RWA's member agencies in obtaining funding for their programs and projects, and other related additional responsibilities discussed below.

Two new subscription programs will fund the proposed RWA staff position. Half of the employee's time would be spent coordinating and managing major projects, with the current project being technical, political, and legal response to the BDWQCP. This major project is anticipated to take at least two years, but likely more. If a voluntary agreement (VA) path prevails, the next major project would be management of the VA for the American River watershed. The other half of this employee's time would be spent on water resilience activities, largely driven by regulations, that have been emerging and have been incorporated into updates to the RWA Strategic Plan (e.g, climate change, expanding Integrated Regional Water Management planning, Federal affairs support, etc.). Each of these subscription programs is described below and draft program agreements are attached:

Major Projects Management Services Program

The State Water Resources Control Board (SWRCB) is engaged in a protracted process to update the BDWQCP. The outcome of this process will likely include water quality control measures and flow requirements for protection of habitat and endangered species in the Delta waterways. These requirements could dramatically alter beneficial uses of existing water rights on the American River and in Folsom Reservoir by increasing "unimpaired" flow from Folsom Reservoir to between 45% and 65% of total run-off in order to meet needs of the Delta. Advocating for American River interests has the potential to require considerable technical resources in the coming years. The BDWQCP will also likely require implementation once adopted, possibly in the form of VAs. In order to prepare for the BDWQCP update, some RWA members have for several years now worked together to coordinate their technical, political, and legal activities. Leadership over these activities have been staffed by representatives from participating agencies, with more significant involvement from a few agencies. Centralizing this work through the RWA will provide better organization and more consistent representation. This work includes engagement with federal and state agencies, local and statewide environmental non-government organizations, among others. In order to successfully protect the region's water supplies, the Water Resilience Manager would work closely with the Water Forum and its stakeholders to provide coordination of technical studies and modeling. Coordinating advocacy and communication would also be part of the Water Resilience Manager's role with the participating agencies. This person would be subject to the direction of the RWA Executive Director and the water agencies that participate in the program.

Water Resilience Program

The RWA participates in numerous efforts that help plan for sustainable water resources for the American River watershed. These efforts include, but are not limited to:

- Working with the Bureau of Reclamation (Reclamation) to promote mitigation measures needed to adapt to the projected impacts of climate change in the American River basin and to ensure the region's interests are being taken into account by Reclamation.
- Providing support for grant applications and other funding requests that provide for reliability and resilient water supplies.
- Providing support to the Federal Affairs Standing Committee, such as local implementation of project appropriations and grant processes, coordination with Reclamation's Great Basin Office, Army Corp of Engineers locally and in Washington, DC.

- Leading an evaluation and making recommendations for better integration of lower and upper watershed planning.
- Providing support in the completion of Federal recognition and implementation of the Sacramento Regional Water Bank.

The RWA is currently at capacity in staffing these kind of matters, however, the demand for this work is increasing with new regulatory proposals. This subscription program will give participating members access to support and regional representation by the Water Resilience Manager on these matters. The Water Resilience Manager would work closely with participating members in identifying common issues that can be represented as a whole.

The currently anticipated participants in each of these two programs are listed in the exhibits of the attached draft agreements. The actual cost to participants will ultimately depend on the final outcome of participation. The range of anticipated costs to EID are discussed below.

The RWA Executive Committee was presented this item at its August 26, 2020, meeting and recommended advancing these programs to the RWA Board for consideration. These programs were presented and approved, by a unanimous vote, at the September 10, 2020, RWA Board meeting.

FUNDING

The fully burdened cost of the proposed RWA staff plus direct costs is estimated to be $336,000 per year, which would be $168,000 for each of these subscription programs. Based upon the anticipated participants, the resulting cost to EID would be $18,813 per year for the Major Projects Management Services Program and $21,000 per year for the Water Resilience Program. However, participation is not finalized and committed to by each agency, so increased not-to-exceed limits are proposed in the amounts of $24,000 and $28,000 for these programs, respectively. This cost has been contemplated and is included in the adopted 2021 Operating budget.

BOARD OPTIONS

Option 1: Authorize the General Manager to execute agreements with the Regional Water Authority (RWA) and other participating RWA members for two programs: Major Projects Management Services Program in an amount not to exceed $24,000 per year and Water Resilience Program in an amount not to exceed $28,000 per year.

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

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: RWA Program Agreement – Water Resilience Program
Attachment B: RWA Program Agreement – Major Projects Management Services Program

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

REGIONAL WATER AUTHORITY
PROGRAM AGREEMENT

WATER RESILIENCE PROGRAM

This Agreement is made and entered into as of the ____ day of _____, 2020, by and between the Regional Water Authority ("RWA"), a joint exercise of powers authority formed under California Government Code section 6500, and following, and the Members and Contracting Entities of RWA listed in Exhibit 1 to this Agreement, upon their execution of this Agreement (who are collectively referred to in this Agreement as "Participants"), to provide for carrying out a project or program that is within the authorized purposes of RWA, and sharing in the cost and benefits by the Participants.

RECITALS

A. RWA is a joint powers authority, formed to serve and represent regional water supply interests and to assist its members in protecting and enhancing the reliability, availability, affordability and quality of water resources.

B. The joint powers agreement ("RWA JPA") pursuant to which RWA was formed and operates, and as was amended on October 8, 2013, authorizes RWA to enter into a "Project or Program Agreement," which is defined in the RWA JPA as an agreement between RWA and two or more of its Members or Contracting Entities to provide for carrying out a project or program that is within the authorized purposes of RWA, and sharing in the cost and benefits by the parties to the Project or Program Agreement.

C. Article 21 of the RWA JPA states: "The Regional Authority's projects are intended to facilitate and coordinate the development, design, construction, rehabilitation, acquisition or financing of water-related facilities (including sharing in the cost of federal, State or local projects) on behalf of Members and/or Contracting Entities. The Regional Authority may undertake the development, design, construction, rehabilitation, acquisition or funding of all or any portion of such projects on behalf of Members and/or Contracting Entities in the manner and to the extent authorized by such Members and/or Contracting Entities as provided in this Agreement, but shall not accomplish these functions, nor acquire or own water-related facilities in its own name."

D. Article 22 of the RWA JPA states: "Prior to undertaking a project or program, the Members and/or Contracting Entities who elect to participate in a project or program shall enter into a Project or Program Agreement. Thereafter, all assets, benefits and obligations attributable to the project shall be assets, benefits and obligations of those Members and/or Contracting Entities that have entered into the Project or Program Agreement. Any debts, liabilities, obligations or indebtedness incurred by the Regional Authority in regard to a particular project or program, including startup costs advanced by the Regional Authority, shall be obligations of the

participating Members and/or Contracting Entities, and shall not be the debts, liabilities, obligations and indebtedness of those Members and/or Contracting Entities who have not executed the Project or Program Agreement."

E. RWA and the Participants desire to carry out a program as more fully described below and share in the costs and benefits of the program, as a Project or Program Agreement as provided for in Articles 21 and 22 of the RWA JPA.

In consideration of the promises, terms, conditions and covenants contained herein, the parties to this Agreement hereby agree as follows:

1. Recitals Incorporated. The foregoing recitals are hereby incorporated by reference.

2. Defined Terms. Terms defined in the RWA JPA will have the same meaning in this Agreement.

3. Description of the Program. The RWA and the Participants desire to create and carry out a Water Resilience Program ("Program"). The RWA Water Resilience Program will help support member agency efforts to improve water resilience in the greater Sacramento region and will include, but are not limited to, the tasks listed below:

- To work with the Bureau of Reclamation to promote mitigation measures need to adapt to the projected impacts of climate change to the American River basin and to ensure the Region's interests are being taken into account by Reclamation.
- To provide support for grant applications and other funding requests that provide for reliability and resilient water supplies.
- To provide support to the Federal Affairs Standing Committee such as local implementation of project appropriations and grant processes, coordination with the Bureau of Reclamation Great Basin Office, Army Corp of Engineers locally and in Washington, DC (in a support role).
- To lead an evaluation and make recommendations for better integration of lower and upper watershed planning.
- To provide support in the completion of Federal recognition and implementation of the Sacramento Regional Water Bank.

Specific work activities will be identified in an annual Work Plan to be approved by the Program Committee as described in Article 5 below.

4. Program Committee. The Participants hereby form a Program Committee consisting of one representative (and alternates) designated by each Participant. The Program Committee will meet as necessary from time to time to administer and implement this Agreement on behalf of the Participants. The Program Committee will appoint a Chair and Vice-Chair from among its members. A majority of the total members of the Program Committee will constitute a quorum. Each member of the Program Committee will have one vote, either by its representative or an

alternate. To proceed with a vote to take action, a quorum must be present at a meeting, with a majority of the number present required for an affirmative vote.

5. Program Staffing and Resources. RWA will hire an employee to staff the Program.

6. **Work Products**. Participants shall have full access to the work products of the Program.

7. Sharing in Program Costs and Benefits. The assessments for each Participant are further described and attached hereto as Exhibit 2 ("Financing Plan"). Each of the Participants will make one or more payments to RWA for completion of the Program. In accordance with the provisions of Articles 21 and 22 of the RWA JPA, any debts, liabilities, obligations or indebtedness incurred by RWA in regard to the Program will be the obligations of the Participants, and will not be the debts, liabilities, obligations and indebtedness of those Members and/or Contracting Entities who have not executed this Agreement. The initial total annual cost for the Program is estimated to be $168,000. Future annual costs and allocations will be determined through an annual Work Plan approved by the Program Committee.

This Program will pay for one half of a full-time equivalent RWA employee and expenses. The other half of the costs for the employee and expenses will be paid for through the Major Projects Management Services Program subscription program.

8. Role of RWA. The RWA will (a) ensure that the interests of Members and Contracting Entities of RWA who do not participate in this Program are not adversely affected in performing this Agreement, (b) provide information to the Participants on the status of implementation of the Program, (c) assist the Program Committee in carrying out its activities under this Agreement, d) secure consultant support services through a competitive selection process as identified in RWA Policy 300.2, where applicable; and e) manage consultant support services in completion of the Program.

9. Authorization to Proceed with the Program. The Water Resilience Program is authorized to proceed upon the commitment of $200,000 collectively through the Water Resilience Program and Major Projects Management Services Program from Participants to fund initial costs. Upon execution of this Agreement, the Participants agree to fund their portion of the Water Resilience Program costs in an amount and manner as described in Exhibit 3 ("Financing Plan") to this Agreement.

10. Term. This Agreement will remain in effect for so long as any obligations under this Agreement and/or obligations from other sources of funding secured remain outstanding.

11. Withdrawal. A Participant may withdraw from this Agreement without requiring termination of this Agreement, effective upon ninety days' notice to RWA and the other Participants, provided that, the withdrawing Participant will remain responsible for any indebtedness incurred by the Participant under this Agreement prior to the effective date of

withdrawal. If any surplus funds remain after the withdrawing Participant has met all of its financial obligations under this Agreement, then such funds will be returned to the withdrawing Participant in proportion to the total contribution made by each Participant.

12. Amendments. This Agreement may be amended from time to time with the approval of a simple majority vote of the Participants and RWA.

13. Privileges and Immunities. All of the privileges and immunities from liability; exemptions from laws, ordinances and rules; and all pension, relief, disability, worker's compensation and other benefits that apply to the activity of officers, agents or employees of RWA or the Participants when performing their respective functions for those agencies will, to the extent permitted by law, apply to them to the same degree and extent while engaged in the performance of any of the functions and other duties under this Agreement. It is further understood and agreed by RWA and the Participants that, notwithstanding anything contained herein, the employees of RWA and of each Participant shall continue to be entirely and exclusively under the direction, supervision and control of the employing party.

14. No Third Party Beneficiary. RWA and the Participants understand and agree that this Agreement creates rights and obligations solely between RWA and the Participants and is not intended to benefit any other party. No provision of this Agreement shall in any way inure to the benefit of any third person so as to constitute any such third person as a third-party beneficiary of this Agreement or any of its items of conditions, or otherwise give rise to any cause of action in any person not a party hereto.

15. Liabilities. With respect to this Agreement, RWA and the Participants expressly agree that the debts, liabilities and obligations of RWA and of each Participant shall remain the debts, liabilities and obligations of that party alone and shall not be the debts, liabilities and obligations of any other party to this Agreement, except as may be otherwise set forth herein or in an amendment to this Agreement.

16. Audits and Accounting. All funds provided under this Agreement shall be separately accounted for and maintained, with books and records of such funding open to inspection by the Participants. Funding under this Agreement shall be subject to and consistent with the audit and accounting procedures set forth in Articles 27 and 28 of the RWA JPA.

17. General Provisions. Any notice to be given under this Agreement shall be made by: (a) depositing in any United States Post Office, postage prepaid, and shall be deemed received at the expiration of 72 hours after its deposit; (b) transmission by facsimile copy; (c) transmission by electronic mail; or (d) personal delivery. This Agreement shall be governed by the laws of the State of California. The contact information for each Participant with respect to this section of the Agreement is set forth in Exhibit 3 ("Notice Information"). This Agreement may be executed by the parties in counterpart and by facsimile or PDF signatures, each of which when executed and delivered shall be an original and all of which together will constitute one and the same document.

18. Signatories' Authority. The signatories to this Agreement represent that they have authority to execute this Agreement and to bind the Participant on whose behalf they execute it.

The foregoing Water Resilience Program Agreement is hereby agreed to by RWA and the Participants.

Dated: _____, 2020

_____
James Peifer
Executive Director
Regional Water Authority

_____, 2020

_____
Signature

_____
Name

_____
Agency

List of Agreement Exhibits

Exhibit 1 – Program Participants
Exhibit 2 – Financing Plan
Exhibit 3 – Notice Information

EXHIBIT 1

PROGRAM PARTICIPANTS

REGIONAL WATER AUTHORITY

WATER RESILIENCE PROGRAM

Agency (Proposed)

City of Sacramento
City of Roseville
Golden State Water Company
El Dorado Irrigation District
Placer County Water Agency
Sacramento County Water Agency
Sacramento Suburban Water District
El Dorado Water Agency

EXHIBIT 2

FINANCING PLAN

REGIONAL WATER AUTHORITY

WATER RESILIENCE PROGRAM

The fee for each Participant is shown in the table below. A Participant's fee will not be increased without the approval of that Participant.

Proposed Fee Table

Agency	**Not-to-Exceed Fee**
City of Roseville	$ 21,000
City of Sacramento	$ 21,000
El Dorado Irrigation District	$ 21,000
Golden State Water Company	$ 21,000
Placer County Water Agency	$ 21,000
Sacramento County Water Agency	$ 21,000
Sacramento Suburban Water District	$ 21,000
El Dorado Water Agency	$ 21,000
Total	**$ 168,000**

EXHIBIT 3

NOTICE INFORMATION

REGIONAL WATER AUTHORITY

WATER RESILIENCE PROGRAM

Golden State Water Company
Attn: Paul Schubert
3005 Gold Canal Drive
Rancho Cordova, CA, 95670
Phone: (916) 420-6879
Email: PSCHUBERT@gswater.com

City of Roseville
Attn: Sean Bigley
2005 Hilltop Circle
Roseville, CA 95747
Phone: (916) 774-5513
Email: sbigley@roseville.ca.us

City of Sacramento
Attn: Anne Sanger
1395 35th Avenue
Sacramento, CA 95822
Phone: (916) 808-1725
Email: asanger@cityofsacramento.org

El Dorado Irrigation District
Attn: Jim Abercrombie
2890 Mosquito Road
Placerville, CA, 95667
Phone: (530) 642-4041
Email: jmabercrombie@eid.org

Placer County Water Agency
Attn: Andy Fecko
144 Ferguson Road
Auburn, CA 95603
Phone: (530) 823-4965
Email: afecko@pcwa.net

Sacramento County Water Agency
Attn: Kerry Schmitz
827 7th Street, Room 301
Sacramento, CA 95814
Phone: (916) 874-4681
Fax: (916) 874-8693
Email: schmitzk@SacCounty.NET

Sacramento Suburban Water District
Attn: Dan York
3701 Marconi #100
Sacramento, CA 95821
Phone: (916) 679-3973
Fax: 916-972-7639
Email: dyork@sswd.org

El Dorado Water Agency
Attn: Ken Payne
4330 Golden Center Drive, Suite C
Placerville, CA 95667
Phone: (530) 621-5392
Fax: (530) 672-6721
Email: ken.payne@edcgov.us

Regional Water Authority
Attn: James Peifer
5620 Birdcage Street, Suite 180
Citrus Heights, CA 95610
Phone: (916-967-7692
Email: jpeifer@rwah2o

REGIONAL WATER AUTHORITY
PROGRAM AGREEMENT

MAJOR PROJECTS MANAGEMENT SERVICES PROGRAM

This Agreement is made and entered into as of the ____ day of _____, 2020, by and between the Regional Water Authority ("RWA"), a joint exercise of powers authority formed under California Government Code section 6500, and following, and the Members and Contracting Entities of RWA listed in Exhibit 1 to this Agreement, upon their execution of this Agreement (who are collectively referred to in this Agreement as "Participants"), to provide for carrying out a project or program that is within the authorized purposes of RWA, and sharing in the cost and benefits by the Participants.

RECITALS

A. RWA is a joint powers authority, formed to serve and represent regional water supply interests and to assist its members in protecting and enhancing the reliability, availability, affordability and quality of water resources.

B. The joint powers agreement ("RWA JPA") pursuant to which RWA was formed and operates, and as was amended on October 8, 2013, authorizes RWA to enter into a "Project or Program Agreement," which is defined in the RWA JPA as an agreement between RWA and two or more of its Members or Contracting Entities to provide for carrying out a project or program that is within the authorized purposes of RWA, and sharing in the cost and benefits by the parties to the Project or Program Agreement.

C. Article 21 of the RWA JPA states: "The Regional Authority's projects are intended to facilitate and coordinate the development, design, construction, rehabilitation, acquisition or financing of water-related facilities (including sharing in the cost of federal, State or local projects) on behalf of Members and/or Contracting Entities. The Regional Authority may undertake the development, design, construction, rehabilitation, acquisition or funding of all or any portion of such projects on behalf of Members and/or Contracting Entities in the manner and to the extent authorized by such Members and/or Contracting Entities as provided in this Agreement, but shall not accomplish these functions, nor acquire or own water-related facilities in its own name."

D. Article 22 of the RWA JPA states: "Prior to undertaking a project or program, the Members and/or Contracting Entities who elect to participate in a project or program shall enter into a Project or Program Agreement. Thereafter, all assets, benefits and obligations attributable to the project shall be assets, benefits and obligations of those Members and/or Contracting Entities that have entered into the Project or Program Agreement. Any debts, liabilities, obligations or indebtedness incurred by the Regional Authority in regard to a particular project or program, including startup costs advanced by the Regional Authority, shall be obligations of the

participating Members and/or Contracting Entities, and shall not be the debts, liabilities, obligations and indebtedness of those Members and/or Contracting Entities who have not executed the Project or Program Agreement."

E. RWA and the Participants desire to carry out a program as more fully described below and share in the costs and benefits of the program, as a Project or Program Agreement as provided for in Articles 21 and 22 of the RWA JPA.

In consideration of the promises, terms, conditions and covenants contained herein, the parties to this Agreement hereby agree as follows:

1. Recitals Incorporated. The foregoing recitals are hereby incorporated by reference.

2. Defined Terms. Terms defined in the RWA JPA will have the same meaning in this Agreement.

3. Description of the Program. The RWA and the Participants desire to create and carry out a Major Projects Management Services Program ("Program"). The Program will pay for one half of a full-time equivalent employee and expenses. The other half of the costs for the employee and expenses will be paid for a Water Resilience Program subscription program. The Program will help support member agency efforts to jointly and cooperatively participate in various regulatory and administrative processes, including processes like the Bay Delta Water Quality Control Plan and other environmental and regulatory matters that affect the surface water supplies in the region. Through the Program, Participants can access RWA's availability to manage, on behalf of the Participants, large-scale regional efforts to participate in regulatory or administrative processes. Specific work activities will be identified in an annual Work Plan to be approved by the Program Committee as described in Article 4 below.

4. Program Committee. The Participants hereby form a Program Committee consisting of one representative (and alternates) designated by each Participant. The Program Committee will meet as necessary from time to time to administer and implement this Agreement on behalf of the Participants. The Program Committee will appoint a Chair and Vice-Chair from among its members. A majority of the total members of the Program Committee will constitute a quorum. Each member of the Program Committee will have one vote, either by its representative or an alternate. To proceed with a vote to take action, a quorum must be present at a meeting, with a two thirds majority of the number present required for an affirmative vote.

5. Program Staffing and Resources. The program will involve the hiring of an employee by RWA and cover the costs of expenses.

6. Work Products. Participants shall have full access to the work products of the Program. To the extent the Program is being utilized to support any work that is otherwise confidential, that information will remain confidential to the Participants and to RWA. In order to

protect confidentiality, for any management services provided to the Participants for confidential work as part of the program, RWA will be party to any confidentiality agreement among the parties for that work. In such circumstances, the confidential information shall be held in confidence by RWA and shall not be available to any RWA member that is not party to the agreement establishing confidentiality.

7. Sharing in Program Costs and Benefits. The assessments for each Participant are further described and attached hereto as Exhibit 2 ("Financing Plan"). Each of the Participants will make one or more payments to RWA for completion of the Program. In accordance with the provisions of Articles 21 and 22 of the RWA JPA, any debts, liabilities, obligations or indebtedness incurred by RWA in regard to the Program will be the obligations of the Participants, and will not be the debts, liabilities, obligations and indebtedness of those Members and/or Contracting Entities who have not executed this Agreement. The initial total annual cost for the program is estimated to be $168,000. Notwithstanding article 4, future annual costs and allocations will be determined through an annual Work Plan approved by a two thirds majority vote of the entire Program Committee.

8. Role of RWA. The RWA will a) ensure that the interests of Members and Contracting Entities of RWA who do not participate in this Program are not adversely affected in performing this Agreement, b) provide information to the Participants on the status of implementation of the Program, c) assist the Program Committee in carrying out its activities under this Agreement, d) secure consultant support services as approved by the Program Committee; and e) manage consultant support services in completion of the Program. Notwithstanding article 4, initial consultant services will be approved by a two thirds majority vote of the entire Program Committee.

9. Authorization to Proceed with the Program. The Program is authorized to proceed upon the commitment of $200,000 from Program Participants to fund initial costs of the Resilience Program and the Program collectively. Upon execution of this Agreement, the Participants agree to fund their portion of the Program costs in an amount and manner as described in Exhibit 2 ("Financing Plan") to this Agreement.

10. Term. This Agreement will remain in effect for so long as any obligations under this Agreement and/or obligations from other sources of funding secured remain outstanding.

11. Withdrawal. A Participant may withdraw from this Agreement without requiring termination of this Agreement, effective upon ninety days' notice to RWA and the other Participants, provided that, the withdrawing Participant will remain responsible for any indebtedness incurred by the Participant under this Agreement prior to the effective date of withdrawal. If any surplus funds remain after the withdrawing Participant has met all of its financial obligations under this Agreement, then such funds will be returned to the withdrawing Participant in proportion to the total contribution made by each Participant.

12. Amendments. Notwithstanding article 4, this Agreement may be amended from time

to time with the approval by the RWA and approval of a two thirds majority vote of the entire Program Committee.

13. Privileges and Immunities. All of the privileges and immunities from liability; exemptions from laws, ordinances and rules; and all pension, relief, disability, worker's compensation and other benefits that apply to the activity of officers, agents or employees of RWA or the Participants when performing their respective functions for those agencies will, to the extent permitted by law, apply to them to the same degree and extent while engaged in the performance of any of the functions and other duties under this Agreement. It is further understood and agreed by RWA and the Participants that, notwithstanding anything contained herein, the employees of RWA and of each Participant shall continue to be entirely and exclusively under the direction, supervision and control of the employing party.

14. No Third Party Beneficiary. RWA and the Participants understand and agree that this Agreement creates rights and obligations solely between RWA and the Participants and is not intended to benefit any other party. No provision of this Agreement shall in any way inure to the benefit of any third person so as to constitute any such third person as a third-party beneficiary of this Agreement or any of its items of conditions, or otherwise give rise to any cause of action in any person not a party hereto.

15. Liabilities. With respect to this Agreement, RWA and the Participants expressly agree that the debts, liabilities and obligations of RWA and of each Participant shall remain the debts, liabilities and obligations of that party alone and shall not be the debts, liabilities and obligations of any other party to this Agreement, except as may be otherwise set forth herein or in an amendment to this Agreement.

16. Audits and Accounting. All funds provided and expenses incurred under this Agreement shall be separately accounted for and maintained, with books and records of such funding and expenses open to inspection by the Participants. Funding under this Agreement shall be subject to and consistent with the audit and accounting procedures set forth in Articles 27 and 28 of the RWA JPA.

17. General Provisions. Any notice to be given under this Agreement shall be made by: (a) depositing in any United States Post Office, postage prepaid, and shall be deemed received at the expiration of 72 hours after its deposit; (b) transmission by facsimile copy; (c) transmission by electronic mail; or (d) personal delivery. This Agreement shall be governed by the laws of the State of California. The contact information for each Participant with respect to this section of the Agreement is set forth in Exhibit 3 ("Notice Information"). This Agreement may be executed by the parties in counterpart and by facsimile or PDF signatures, each of which when executed and delivered shall be an original and all of which together will constitute one and the same document.

18. Signatories' Authority. The signatories to this Agreement represent that they have authority to execute this Agreement and to bind the Participant on whose behalf they execute it.

The foregoing Program Agreement is hereby agreed to by RWA and the Participants.

Dated: _____, 2020

James Peifer
Executive Director
Regional Water Authority

_____, 2020

_____
Signature

_____
Name

_____
Agency

List of Agreement Exhibits

Exhibit 1 – Program Participants
Exhibit 2 – Financing Plan
Exhibit 3 – Notice Information

EXHIBIT 1

PROGRAM PARTICIPANTS

REGIONAL WATER AUTHORITY

MAJOR PROJECTS MANAGEMENT SERVICES PROGRAM

Agency (Proposed)

Carmichael Water District
City of Folsom
City of Roseville
City of Sacramento
Golden State Water Company
El Dorado Irrigation District
Placer County Water Agency
Sacramento County Water Agency
Sacramento Suburban Water District
San Juan Water District

EXHIBIT 2

FINANCING PLAN

REGIONAL WATER AUTHORITY

MAJOR PROJECTS MANAGEMENT SERVICES PROGRAM

The fee for each Participant is shown in the table below. A Participant's fee will not be increased without the approval of that Participant.

Proposed Fee Table

Agency	**Not-to-Exceed Fee**	
Carmichael Water District	$	6,500.00
City of Folsom	$	18,812.50
City of Roseville	$	18,812.50
City of Sacramento	$	18,812.50
El Dorado Irrigation District	$	18,812.50
Golden State Water Company	$	11,000.00
Placer County Water Agency	$	18,812.50
Sacramento County Water Agency	$	18,812.50
Sacramento Suburban Water District	$	18,812.50
San Juan Water District	$	18,812.50
Total	**$**	**168,000.00**

EXHIBIT 3

NOTICE INFORMATION

REGIONAL WATER AUTHORITY

MAJOR PROJECTS MANAGEMENT SERVICES PROGRAM

Carmichael Water District
Attn: Cathy Lee
7837 Fair Oaks Blvd
Carmichael, CA 95608
Phone: (916) 483-2452
Email: cathy@carmichaelwd.org

City of Folsom
Attn: Marcus Yasutake
50 Natoma Street
Folsom, CA 95630
Phone: (916) 461-6161
Email: myasutake@folsom.ca.us

Golden State Water Company
Attn: Paul Schubert
3005 Gold Canal Drive
Rancho Cordova, CA, 95670
Phone: (916) 420-6879
Email: PSCHUBERT@gswater.com

City of Roseville
Attn: Sean Bigley
2005 Hilltop Circle
Roseville, CA 95747
Phone: (916) 774-5513
Email: sbigley@roseville.ca.us

City of Sacramento
Attn: Anne Sanger
1395 35th Avenue
Sacramento, CA 95822
Phone: (916) 808-1725
Email: asanger@cityofsacramento.org

El Dorado Irrigation District
Attn: Jim Abercrombie
2890 Mosquito Road
Placerville, CA, 95667
Phone: (530) 642-4041
Email: jmabercrombie@eid.org

Placer County Water Agency
Attn: Andy Fecko
144 Ferguson Road
Auburn, CA 95603
Phone: (530) 823-4965
Email: afecko@pcwa.net

Sacramento County Water Agency
Attn: Kerry Schmitz
827 7th Street, Room 301
Sacramento, CA 95814
Phone: (916) 874-4681
Fax: (916) 874-8693
Email: schmitzk@SacCounty.NET

Sacramento Suburban Water District
Attn: Dan York
3701 Marconi #100
Sacramento, CA 95821
Phone: (916) 679-3973
Fax: 916-972-7639
Email: dyork@sswd.org

San Juan Water District
Attn: Paul Helliker
P.O. Box 2157
Granite Bay, CA 95746
Phone: (916) 791-6933
Fax: (916) 791-6983
Email: phelliker@sjwd.org

Regional Water Authority
Attn: James Peifer
5620 Birdcage Street, Suite 180
Citrus Heights, CA 95610
Phone: (916-967-7692
Fax: (916) 967-7322
Email: jpeifer@rwah2o.org