



EAST BAY DISCHARGERS AUTHORITY  
2651 Grant Avenue  
San Lorenzo, CA 94580-1841  
(510) 278-5910  
FAX (510) 278-6547

*A Joint Powers Public Agency*

NOTICE: In compliance with AB 361 (2021), the meeting scheduled below will be conducted virtually via Zoom video conferencing.

- Members of the public may participate in the meeting by clicking on the following Zoom link: <https://us02web.zoom.us/j/83944888857>
- You may also participate via telephone by dialing 1(669) 900-6833 and entering Meeting ID number 839 4488 8857.

## **ITEM NO. 15**

### **OPERATIONS & MAINTENANCE COMMITTEE AGENDA**

**Monday, September 12, 2022**

**8:30 A.M.**

**East Bay Dischargers Authority  
2651 Grant Avenue, San Lorenzo, CA 94580**

**Committee Members: Johnson (Chair); Cutter**

**OM1. Call to Order**

**OM2. Roll Call**

**OM3. Public Forum**

**OM4. EBDA Permit Compliance**

(The Committee will be updated on EBDA's NPDES compliance.)

**OM5. Status Report**

(The Committee will be updated on EBDA's O&M activities.)

**OM6. Motion Authorizing the General Manager to Execute an Agreement with Garland/DBS, Inc. for Roof Replacements at the EBDA Administration Building, the MDF SBS Storage Building, and OLEPS in the Amount of \$501,606**

(The Committee will consider the motion.)

**OM7. Motion Authorizing the General Manager to Issue a Purchase Order to National Auto Fleet Group for a Ford F-150 Vehicle in the Amount of \$38,316**

(The Committee will consider the motion.)

**OM8. Motion Authorizing the General Manager to Execute Amendment No. 5 to the Contract with Brown and Caldwell for Due Diligence Work Related to Acceptance of Cargill Mixed Sea Salt Brine for Discharge at the EBDA Outfall in the Amount of \$114,932, for a Total Not to Exceed Amount of \$514,195**

(The Committee will consider the motion.)

**OM9. Motion Authorizing the General Manager to Enter into a Cooperative Agreement to Provide Funding for Shared Deployment of Precipitation Forecasting System with Sonoma County Water Agency**

(The Committee will consider the motion.)

**OM10.Adjournment**

Any member of the public may address the Commission at the commencement of the meeting on any matter within the jurisdiction of the Commission. This should not relate to any item on the agenda. It is the policy of the Authority that each person addressing the Commission limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Commission on an agenda item should do so at the time the item is considered. It is the policy of the Authority that oral comments be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available in the Boardroom and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, contact Juanita Villasenor at [juanita@ebda.org](mailto:juanita@ebda.org) or (510) 278-5910. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>.

<p><b>The next O&amp;M Committee meeting will be held Monday, October 17, 2022, at 9:00 a.m.</b></p>
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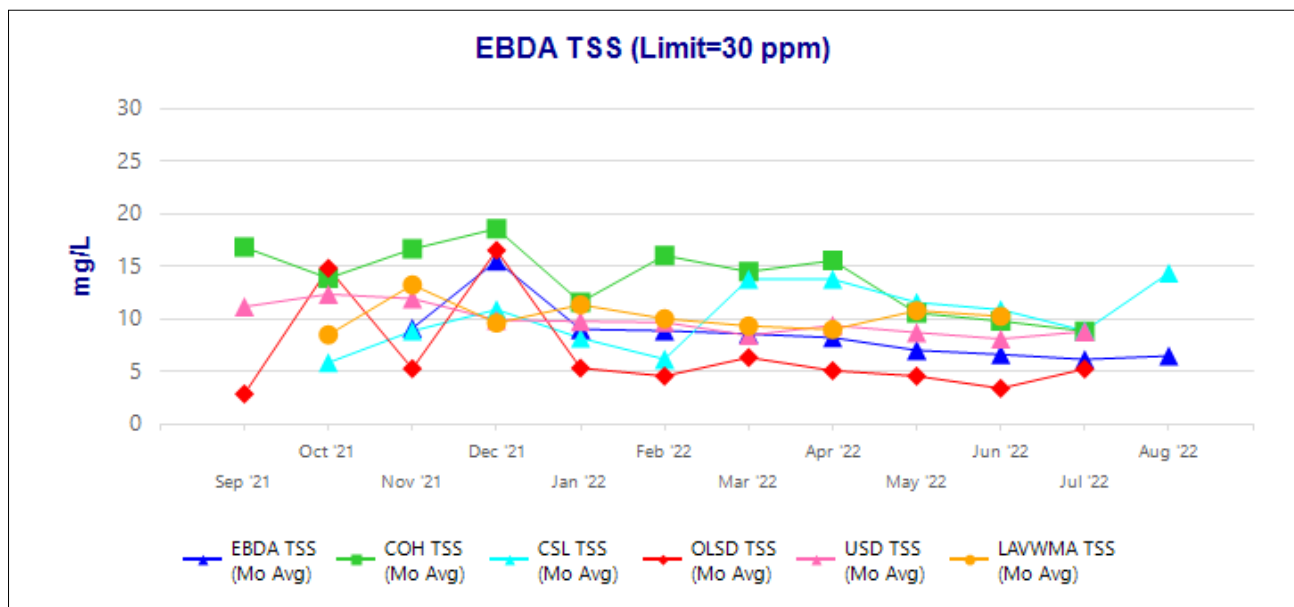
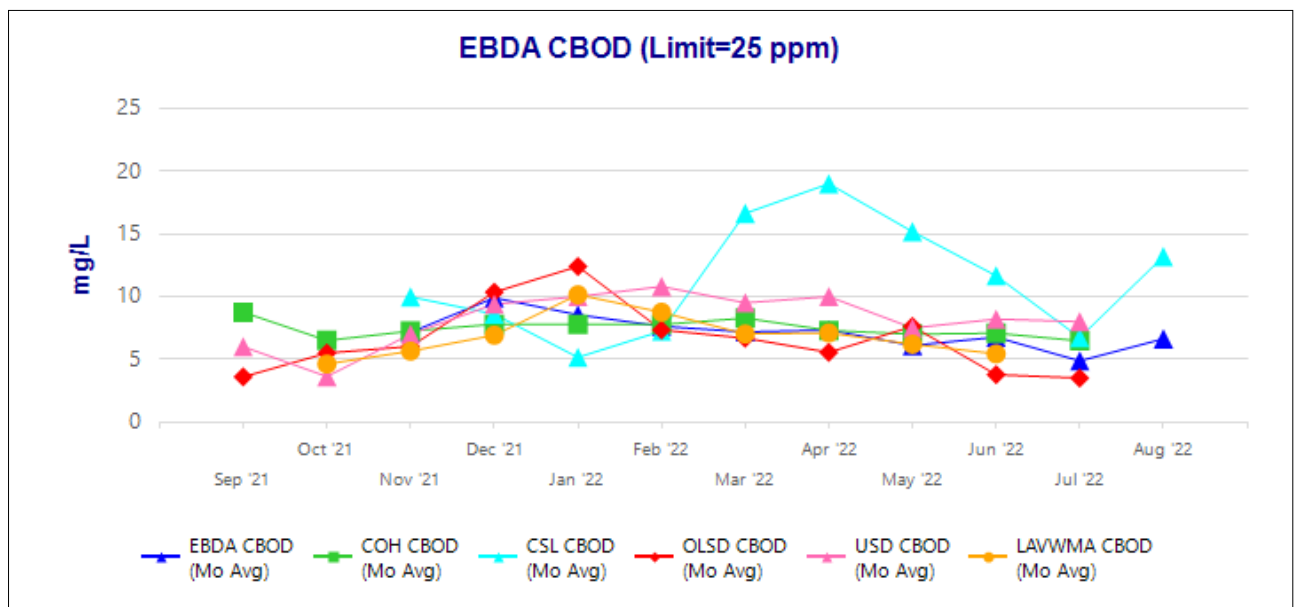
## ITEM NO. OM4 EBDA PERMIT COMPLIANCE

### Recommendation

For the Committee's information only; no action is required.

### Discussion

There were no NPDES permit violations in June or July, and preliminary data from August are also free of permit exceedances. Member Agency CBOD and TSS performance are shown below. A table with bacterial indicators is also included.



## EBDA Bacterial Indicators

Date	FECAL	ENTERO
	MPN/ 100mL	MPN/ 100mL
Limit (90th Percentile)	1100	
Limit (Geomean)	500	240
<b>September 2021 Geomean</b>	<b>26</b>	<b>10</b>
<b>October 2021 Geomean</b>	<b>33</b>	<b>4</b>
<b>November 2021 Geomean</b>	<b>13</b>	<b>8</b>
<b>December 2021 Geomean</b>	<b>22</b>	<b>8</b>
<b>January 2022 Geomean</b>	<b>4</b>	<b>2</b>
<b>February 2022 Geomean</b>	<b>6</b>	<b>6</b>
<b>March 2022 Geomean</b>	<b>7</b>	<b>4</b>
<b>April 2022 Geomean</b>	<b>2</b>	<b>7</b>
<b>May 2022 Geomean</b>	<b>5</b>	<b>48</b>
<b>June 2022 Geomean</b>	<b>5</b>	<b>57</b>
7/4/2022	4	4
7/5/2022	2	9
7/6/2022	11	4
7/11/2022	3	< 2
7/12/2022	26	66
7/13/2022	33	10
7/18/2022	651	< 2
7/19/2022	22	3
7/20/2022	17	13
7/25/2022	224	4
7/26/2022	23	5
<b>July 2022 Geomean</b>	<b>20</b>	<b>6</b>
8/1/2022	23	6
8/2/2022	11	31
8/3/2022	8	< 2
8/8/2022	7	8
8/9/2022	170	15
8/15/2022	13	19
8/16/2022	33	46
8/22/2022	5	15
8/23/2022	240	2407
8/29/2022	2	38
8/30/2022	4	1226
<b>August 2022 Geomean</b>	<b>15</b>	<b>34</b>

## ITEM NO. OM5 STATUS REPORT

### Union Effluent Pump Station (UEPS)

No change; all equipment is operational.

### Hayward Effluent Pump Station (HEPS)

#### **Effluent Pump Replacement Project**

Project bid documents are still under review. Staff expects the project to go out to bid shortly, with installation of the new pumps occurring in mid-2023.

#### **Security Camera Installation**

On July 15, 2022, Calcon completed the installation of four security cameras at HEPS. In the past, if EBDA staff received a HEPS MCC intruder alarm, the City of Hayward operators would be called to investigate the alarm. Now, EBDA staff can view the cameras via computer or cell phone and can investigate the alarm. Below are examples of the views from the cameras.



## **Oro Loma Effluent Pump Station (OLEPS)**

### **Emergency Outfall Upgrade**

EBDA staff worked with Carollo Engineers (Carollo) on an evaluation of the OLEPS emergency outfall. The purpose of the evaluation was to determine the outfall's maximum capacity and whether modifications to the outfall weir would increase system detention time and delay or prevent an unanticipated bypass in the event of a catastrophic failure at OLEPS. The evaluation was completed and discussed with the MAC and the Commission. Carollo recommended that the existing lumber weir be replaced with a permanent concrete weir at an increased elevation. Carollo is in the process of preparing a one-page drawing and pertinent material specifications that will be used for construction of the new elevated weir. In addition, the drawing will include specifications for the preparation of the existing concrete surface and associated reinforcing. EBDA staff will then request contractor quotes to construct the new weir. Funds for this project were previously approved by the Commission as part of the Renewal and Replacement Fund Project List.

### **Main Electrical Switchboard Upgrade**

On July 14, 2022, PG&E disconnected the power at OLEPS from 12:30 am to 11:00 am to facilitate the completion of the main electrical switchboard upgrade project. The shutdown allowed for the installation of new breakers, new busbar sections to connect the new breakers, new main electrical switchboard front panels, and upgraded power monitoring equipment. The San Leandro force main crew operated valves allowing the UEPS and HEPS flows to bypass OLEPS during the electrical shutdown. Additionally, OLSD diverted its flow from OLEPS for 8 hours out of the 10.5-hour shutdown. During the remainder of the shutdown, EBDA operated one diesel pump. This shutdown was completed successfully and the upgraded main electrical switchboard has been operating without any issues.

Prior to completing the project, Schneider Electric, the project contractor, must fabricate and install new blanks or spacers to cover the space between the new breakers and the front panels. Schneider Electric will also issue a credit of approximately \$4,800 to reimburse EBDA for expenses incurred during the June 23, 2022 shutdown that was cancelled due to their oversights.

## **Skywest Pump Station**

### **Recycled Water Production**

During the month of July 2022, the Skywest Recycled Water System operated for two days and produced 1.10 million gallons of recycled water.

In August 2022, the Skywest Recycled Water System operated for three days and produced 1.52 million gallons of recycled water.

## **Marina Dechlorination Facility (MDF)**

### **Total Residual Chlorine (TRC) Effluent Limit Implementation and Automation Upgrades**

As discussed previously, in 2021 the Regional Water Quality Control Board adopted a blanket permit amendment revising the TRC effluent limits for all wastewater dischargers to San Francisco Bay. The permit amendment raises EBDA's TRC effluent limit from 0.0 mg/L at all times to 0.98 mg/L, measured as a one-hour average. The new limit will take effect as soon as the EPA approves the underlying Basin Plan Amendment, which is now expected in early 2023 due to extended consultation with U.S. Fish & Wildlife Service. Work on this project is on hold until the new TRC effluent limit takes effect.

### **Sodium Bisulfite (SBS) Storage Building Heating System Replacement**

On August 15, 2022, Calcon started the installation of the SBS building's new heating control system, in preparation for heater installation. B.A. Morrison is scheduled to start the installation of the heaters on September 19, 2022.

### **Force Main**

No change; all equipment is operational.

### **Operations Center**

No change; all equipment is operational.

### **Miscellaneous Items**

#### **Underground Service Alerts**

EBDA received seventeen (17) Underground Service Alert (USA) tickets during the month of July 2022. Nine required an Electronic Positive Response (EPR), and of the nine, five required calls/emails to the excavators, and three required field verification.

EBDA received seven (7) Underground Service Alert (USA) tickets during the month of August 2022. Two required an Electronic Positive Response (EPR) and calls/emails to the excavators, and one required field verification.

#### **COVID-19 Response**

All EBDA staff members are fully vaccinated and boosted. Staff will continue to work with the Commission to determine, on a month-to-month basis, whether Commission and Committee meetings will continue to be conducted via Zoom or whether to resume in-person meetings. To continue conducting remote meetings, the Commission must adopt a resolution compliant with AB 361 – see Item No. 11.



## **Special Projects**

### **Roof Replacement Projects**

Staff is recommending approval of a motion authorizing the General Manager to execute an agreement with Garland/DBS, Inc. for roof replacements at the EBDA Administration Building, the MDF Sodium Bisulfite (SBS) Storage Building, and OLEPS in the amount of \$501,606. See Item No. OM6.

### **Cargill Brine Project**

Staff is continuing to work with the Authority's CEQA consultant, Ascent Environmental, on preparation of the Environmental Impact Report (EIR) for the project. As discussed last meeting, a revised Notice of Preparation of the EIR was posted on July 8, 2022, incorporating the latest preferred pipeline route through Hayward. Only one comment letter was received during the new 30-day comment period, and that was from Cargill, responding formally to comments submitted by the Bay Conservation and Development Commission. A draft of the EIR is currently undergoing internal review, and staff expects to release it for public comment this fall. Information about the project and the CEQA process are being kept up to date here: <https://ebda.org/projects/cargill-partnership/>.

Staff is also working with the Authority's infrastructure consultant, Brown & Caldwell, to solidify plans to monitor and mitigate risks to the Authority's assets that could result from the brine. This includes development of a corrosion monitoring plan, which would be included as part of the Authority's operating contract with Cargill. Staff is requesting an amendment to Brown & Caldwell's contract to continue this work. See Item No. OM8.

### **Advanced Quantitative Precipitation Information (AQPI) Project**

The regional AQPI project continues to move forward with a goal of improving prediction of rainfall events in the Bay Area. Installation of the radar at Rocky Ridge has faced some additional delays and is no longer likely to be completed in summer 2022. American Tower, who controls the Rocky Ridge site via lease from EBMUD, will not approve the project's contractor/crane-operator as an "approved vendor" because of an outstanding OSHA case. The installation previously scheduled for the week of July 18, 2022, will therefore be postponed, probably a few months, until the team can get another contractor on board and the building permit transferred to that new contractor.

A new East Bay AQPI Agreement is required to extend the funding terms from the previous agreement, which has expired. See Item No. OM9.



**ITEM NO. OM6 MOTION AUTHORIZING THE GENERAL MANAGER TO EXECUTE AN AGREEMENT WITH GARLAND/DBS, INC. FOR ROOF REPLACEMENTS AT THE EBDA ADMINISTRATION BUILDING, THE MDF SBS STORAGE BUILDING, AND OLEPS IN THE AMOUNT OF \$501,606**

**Recommendation**

Approve a motion authorizing the General Manager (GM) to execute an Agreement with Garland/DBS, Inc. in the amount of \$501,606.

**Background**

EBDA requested that Garland/DBS, Inc. (Garland) complete an assessment of the roofs on the EBDA Administration Building, the MDF Sodium Bisulfite (SBS) Storage Building, and OLEPS. EBDA selected Garland through a competitive bidding process managed by OMNIA Partners, a national bidding structure. Garland has completed several roof replacement projects for EBDA's Member Agencies. This includes replacement of Oro Loma Sanitary District's Administration Building roof, which is adjacent to EBDA's, allowing OLSD's warranty to remain valid. Garland will serve as the General Contractor overseeing the roofing contractor, using Garland's roofing products.

**Discussion**

Garland's assessment report was completed on April 4, 2022, and a job walk with potential bidders was conducted on May 2, 2022. All of the bids received were higher than expected. On June 28, 2022, a second job walk was completed with a different set of roofing contractors. New bids were received in July 2022. Below is a list of the bids.

San Francisco Roofing	\$ 501,606
Waterproofing Associates	\$ 563,291
Pioneer Contractors	\$ 579,652
State Roofing	\$ 673,485

San Francisco Roofing was selected as the subcontractor to Garland. San Francisco Roofing's scope also includes roof-related safety improvements, including installing OSHA skylight screens over three existing skylights at OLEPS, installing an exterior safety railing system for the OLEPS roof access hatch, and replacing the Administration Building roof access hatch with one that has an exterior safety railing system.

\$550,000 was approved by the Commission in June 2022 as part of the FY 2022/2023 Renewal and Replacement Fund Project List, which includes funds for Calcon to coordinate with the roofing contractor regarding the SCADA antennas on the Administration Building, funds for EBDA staff for project management, and contingencies.



Garland/DBS, Inc.  
3800 East 91<sup>st</sup> Street  
Cleveland, OH 44105  
Phone: (800) 762-8225  
Fax: (216) 883-2055



## **ROOFING MATERIAL AND SERVICES PROPOSAL**

East Bay Dischargers Authority  
Multiple Projects  
2651 Grant Ave.  
San Lorenzo, CA 94580

Date Submitted: 09/07/2022  
Proposal #: 25-CA-220546  
MICPA # PW1925

**STATE General Contractor License #: 949380**

Purchase orders to be made out to: Garland/DBS, Inc.

**Please Note:** The following budget/estimate is being provided according to the pricing established under the Master Intergovernmental Cooperative Purchasing Agreement (MICPA) with Racine County, WI and OMNIA Partners, Public Sector (U.S. Communities). The line item pricing breakdown from Attachment C: Bid Form should be viewed as the maximum price an agency will be charged under the agreement. Garland/DBS, Inc. administered an informal competitive process for obtaining quotes for the project with the hopes of providing a lower market-adjusted price whenever possible.

### **Scope of Work: Admin Building**

1. Remove and dispose of all roofing, edge metal, counterflashing, coping, and associated roof material down to structural deck. Remove Direct TV satellite and dispose.
2. Inspect deck and perform any repairs as needed.
3. Cut 3 new scupper drains in northern side parapet wall.
4. Mechanically fasten Tapered insulation providing 1/4" slope and 1/2" asphaltcoated wood fiberboard per manufacturers ASCE-7 Wind Uplift Calcs.
5. Install 2 ply StressPly system in Green-Lock. Allow roof to cure 5 days before coating.
6. Membrane to be run up wall and over parapet per typical Garland Detail.
7. Install new coping using .040 aluminum flat stock.
8. Install new flashings, expansion joints, and associated details for a completely watertight system.
9. Apply Title 24 approved Pyramic Plus LO in 2 coats of 1.5 gallons per 100square feet.
10. Install all conduit on new Dura-Blocks.

### **Garland/DBS Price Based Upon Local Market Competition:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>197,847</b>
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### **Scope of Work: Admin Building Add Alt #1**

1. Remove and dispose of existing hatch and install new hatch and exterior railing system.

**Garland/DBS Price Based Upon Local Market Competition:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>9,518</b>
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**Scope of Work: Pump Station**

1. Remove and dispose of all roofing, edge metal, counterflashing, coping, and associated roof material down to structural deck.
2. Inspect deck and perform any repairs as needed.
3. Adhere ½" 6 sided asphalt coated wood fiberboard board in Insul-Lock HR per manufacturers wind uplift calcs.
4. Install 2 ply StressPly system in Weatherking Plus WC. Allow roof to cure 30 days before coating.
5. Membrane to be run up wall and over parapet per typical Garland Detail.
6. Install new coping using .040 aluminum flat stock.
7. Install White-Star and Gravel at 2 gallons per square and 200 lbs per square.
8. Replace exhaust pipe flue skirts with new aluminum flashing.
9. On the two large vent hoods, wire brush all rust to ensure metal is flake free. Apply Rust-Go Primer at 0.5 gallons per square and coat with White-Knight Plus WC at 2 gallons per square.

**Garland/DBS Price Based Upon Local Market Competition:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>207,571</b>
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**Scope of Work: Pump Station Add Alt #1**

1. Install OSHA skylight screen over 3 existing skylights.

**Garland/DBS Price Based Upon Local Market Competition:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>12,494</b>
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**Scope of Work: Pump Station Add Alt #2**

1. Install exterior safety rails/handles to roof hatch.

**Garland/DBS Price Based Upon Local Market Competition:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>5,951</b>
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**Scope of Work: SBS Building**

1. Remove and dispose of all roofing, edge metal, counterflashing, coping, and associated roof material down to structural deck.
2. Inspect deck and perform any repairs as needed.
3. Increase pipe penetration to allow for a 4" pipe.
4. Adhere tapered insulation providing ¼" slope and ½" asphalt coated wood fiberboard per manufacturers ASCE-7 Wind Uplift Calcs.
5. Install 2 ply StressPly system in Weatherking Plus WC. Allow roof to cure 30 days before coating.
6. Membrane to be run up wall and over parapet per typical Garland Detail.
7. Install new coping using .040 aluminum flat stock.
8. Install new flashings, expansion joints, and associated details for a completely watertight system.
9. Apply Title 24 approved Pyramic Plus LO in 2 coats of 1.5 gallons per 100 square feet.

**Garland/DBS Price Based Upon Local Market Competition:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>68,225</b>
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**Garland/DBS Total Cost Including Add Alternates:**

<b>San Francisco Roofing</b>	<b>\$</b>	<b>501,606</b>
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Please Note – The construction industry is experiencing unprecedented global pricing and availability pressures for many key building components. Specifically, the roofing industry is currently experiencing long lead times and significant price increases with roofing insulation and roofing fasteners. Therefore, this proposal can only be held for 30 days. DBS greatly values your business, and we are working diligently with our long-term suppliers to minimize price increases and project delays which could effect your project. Thank you for your understanding and cooperation.

**Clarifications/Exclusions:**

1. Sales and use taxes are included.
2. Permits are excluded.
3. Bonds are included.
4. Plumbing, Mechanical, Electrical work is excluded.
5. Masonry work is excluded.
6. Interior Temporary protection is excluded.
7. Any work not exclusively described in the above proposal scope of work is excluded.

If you have any questions regarding this proposal, please do not hesitate to call me at my number listed below.

Respectfully Submitted,

*Evan Clark*

[eclark@garlandind.com](mailto:eclark@garlandind.com)

Evan Clark

Garland/DBS, Inc.

(216) 430-3690

**ITEM NO. OM7 MOTION AUTHORIZING THE GENERAL MANAGER TO ISSUE A PURCHASE ORDER TO NATIONAL AUTO FLEET GROUP FOR A FORD F-150 VEHICLE IN THE AMOUNT OF \$38,316**

**Recommendation**

Approve the motion authorizing the General Manager to issue a Purchase Order to National Auto Fleet Group for a new EBDA truck in the amount of \$38,316.

**Background**

EBDA owns and maintains one utility truck, which is used for accessing, operating, and maintaining the Authority's assets, including the pump stations and Transport System. EBDA's current vehicle is a 2008 Ford Ranger, which has reached the end of its useful life. In 2021, the Commission approved funds to purchase a replacement vehicle as part of the FY 2021/2022 Renewal and Replacement Fund Project List. As a result of supply chain constraints, a new vehicle was not available through government purchase programs in FY 2021/2022.

**Discussion**

Staff has procured a quote for a new Ford F-150 vehicle from National Auto Fleet Group through Sourcewell. Sourcewell is a municipal contracting agency that creates cooperative contract purchasing solutions on behalf of over 50,000-member entities including government, education and non-profit agencies nationwide, and it has been used by EBDA's Member Agencies for vehicle and equipment purchases.

\$40,000 was budgeted for the vehicle. With the \$9,100 trade-in of EBDA's Ford Ranger, the new vehicle cost is \$38,316.

Staff considered purchase of an electric F-150, but is recommending purchase of a traditional gasoline-powered truck at this time. This will be the second year of production of the electric F-150. Because EBDA only has one vehicle in its fleet, reliability is of the utmost importance, and therefore staff does not recommend taking the risk associated with an early production vehicle. In addition, the parking area for the EBDA Administration Building, which is collocated with Oro Loma Sanitary District's administration parking, does not currently have electric vehicle charging facilities.



# National Auto Fleet Group

A Division of Chevrolet of Watsonville

490 Auto Center Drive, Watsonville, CA 95076

(855) 289-6572 • (831) 480-8497 Fax

Fleet@NationalAutoFleetGroup.com

09/07/2022

Quote ID#20858 R2

Howard Cin

East Bay Dischargers Authority

2651 Grant Ave

San Lorenzo, CA 94580

Dear Howard Cin,

National Auto Fleet Group is pleased to quote the following vehicle(s) for your consideration.

**One (1) New/Unused (2023 Ford F-150 (X1E) XL 4WD SuperCab 6.5' Box 145" WB, F42),**  
delivered to your department yard, each for

	(1) MSRP	(1) One Unit	Total Savings
Price	\$ 47,040.00	\$ 42,998.96	\$ 4,041.04
Tax (10.2500%)		\$ 4,407.39	
Tire Fee		\$ 8.75	
F/42 Trade-In 1FTYR15E98PA15280		\$ -9,100.00	
<b>Total</b>		<b>\$ 38,315.10</b>	

**-per the attached specifications.**

This vehicle(s) is available under the **Sourcewell Contract 091521-NAF**. Please reference this Contract Number on all Purchase Orders to National Auto Fleet Group.

Payment terms are Net 20 days after receipt of vehicle.

Thank you in advance for your consideration. Should you have any questions, please do not hesitate to call.

Sincerely,

Jesse Cooper

National Fleet Manager

Office (855) 289-6572



# 2023 Fleet/Non-Retail Ford F-150 XL 4WD SuperCab 6.5' Box 145" WB

## WINDOW STICKER

2023 Ford F-150 XL 4WD SuperCab 6.5' Box 145" WB

CODE	MODEL	MSRP
X1E	2023 Ford F-150 XL 4WD SuperCab 6.5' Box 145" WB	\$42,495.00
<b>OPTIONS</b>		
99B	ENGINE: 3.3L V6 PFDI, -inc: auto start-stop technology and flex-fuel capability (STD)	INC
44G	TRANSMISSION: ELECTRONIC 10-SPEED AUTOMATIC, -inc: selectable drive modes: normal, ECO, sport, tow/haul, slippery, deep snow/sand and mud/rut (STD)	\$0.00
64C	WHEELS: 17" SILVER STEEL, (STD)	\$0.00
T7C	TIRES: LT265/70R17C BSW A/T	\$295.00
YZ	OXFORD WHITE	\$0.00
—	STANDARD PAINT	\$0.00
WS	BLACK W/MEDIUM DARK SLATE, CLOTH 40/CONSOLE/40 FRONT-SEATS	\$295.00
53A	TRAILER TOW PACKAGE, -inc: Towing capability up to TBD lbs, tailgate LED, Class IV Trailer Hitch Receiver, towing capability up to TBD lbs, on 3.3L V6 PFDI engine (99B) and 2.7L EcoBoost engine (99P) or up to TBD lbs, on 3.5L EcoBoost engine (998) and 5.0L V8 engine (995), 7/4-pin connector, class IV trailer hitch receiver, smart trailer tow connector ( BLIS w/trailer tow coverage where BLIS is available), Integrated Trailer Brake Controller	\$1,325.00
53B	CLASS IV TRAILER HITCH RECEIVER, -inc: towing capability up to TBD lbs, on 3.3L V6 PFDI engine (99B) and 2.7L EcoBoost engine (99P) or up to TBD lbs, on 3.5L EcoBoost engine (998) and 5.0L V8 engine (995), 7/4-pin connector, class IV trailer hitch receiver, smart trailer tow connector ( BLIS w/trailer tow coverage where BLIS is available)	INC
67T	INTEGRATED TRAILER BRAKE CONTROLLER	INC
413	SKID PLATES, -inc: fuel tank, transfer case and front differential	\$160.00
924	REAR WINDOW FIXED PRIVACY GLASS	\$100.00
57Q	REAR WINDOW DEFROSTER	\$220.00
153	FRONT LICENSE PLATE BRACKET, -inc: Standard in states requiring 2 license plates, optional to all others	\$0.00
18B	BLACK PLATFORM RUNNING BOARDS	\$250.00
942	DAYTIME RUNNING LAMPS, -inc: Non-controllable	\$45.00
582	RADIO: AM/FM SIRIUSXM W/360L	INC
85H	BACK-UP ALARM SYSTEM	\$145.00
524	SYNC 4 W/ENHANCED VOICE RECOGNITION, -inc: 8" LCD capacitive touchscreen w/swipe capability, wireless phone connection, cloud connected, AppLink w/App catalog, 911 Assist, Apple CarPlay and Android Auto compatibility, digital owners manual, conversational voice command recognition and connected navigation, Note: Navigation services require SYNC 4 and FordPass Connect (optional on select vehicles), complimentary connect service and the FordPass app (see FordPass Terms for details), Eligible vehicles receive a complimentary 90-day trial of navigation services that begins on the new vehicle warranty start date, Customers must unlock the navigation service trial by activating the eligible vehicle w/a FordPass member account, If not subscribed by the end of the complimentary period, the navigation service will terminate, Connected service and	\$325.00



features depend on compatible AT&T network availability, Evolving technology/cellular networks/vehicle capability may limit functionality and prevent operation of connected features, FordPass App, compatible w/select smartphone platforms, is available via a download, Message and data rates may apply, Radio: AM/FM SiriusXM w/360L

471	ONBOARD 400W OUTLET	\$340.00
101A	EQUIPMENT GROUP 101A STANDARD	(\$750.00)

Please note selected options override standard equipment

<b>SUBTOTAL</b>	<b>\$45,245.00</b>
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Advert/ Adjustments	\$0.00
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Manufacturer Destination Charge	\$1,795.00
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<b>TOTAL PRICE</b>	<b>\$47,040.00</b>
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Est City: 19 (2022) MPG

Est Highway: 22 (2022) MPG

Est Highway Cruising Range: 506.00 mi

Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

**ITEM NO. OM8 MOTION AUTHORIZING THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 5 TO THE CONTRACT WITH BROWN AND CALDWELL FOR DUE DILIGENCE WORK RELATED TO ACCEPTANCE OF CARGILL MIXED SEA SALT BRINE FOR DISCHARGE AT THE EBDA OUTFALL IN THE AMOUNT OF \$114,932, FOR A TOTAL NOT TO EXCEED AMOUNT OF \$514,195**

**Recommendation**

Approve a motion authorizing the General Manager (GM) to execute Amendment No. 5 to the contract with Brown and Caldwell in the amount of \$114,932.

**Background**

Brown and Caldwell (BC) is an engineering consulting firm focusing on water and wastewater infrastructure. In 2016-2018, BC conducted a condition assessment of the Authority's transport system and outfall. BC has experience supporting wastewater agencies on a range of transport system issues, including a recent project assessing infrastructure risks associated with desalination brine inputs to the Monterey One Water system.

In August 2020, the Commission authorized the GM to enter into a contract with BC for due diligence work to assess infrastructure risks associated with addition of Cargill Mixed Sea Salt (MSS) brine into the transport system. In October 2020, the Commission authorized Amendment 1 to that contract for BC and their subconsultant to perform more detailed condition assessment of the pipe, including taking concrete samples. Staff subsequently authorized Amendment 2 to provide BC with a no-cost extension of their scope. The Commission authorized Amendment 3 in April 2021 for BC to conduct an analysis of corrosion protection alternatives for the segments of EBDA's transport system that have air entrainment. BC concluded through that effort that several corrosion mitigation options were feasible and that sliplining would be the most cost-effective. In November 2021, the Commission authorized Amendment 4, under which BC analyzed corrosion risks and mitigation measures for the Oro Loma Effluent Pump Station (OLEPS) and Marina Dechlorination Facility (MDF). The analysis concluded that the brine connection should be placed downstream of OLEPS to avoid corrosion impacts to that facility, and that improvements should be made to protect MDF from corrosion prior to brine discharge, including pipe coatings and valve replacements.

**Discussion**

Staff is recommending an addition to BC's contract with four new sub-tasks:

- Monitoring Plan Development: The risk of corrosion to the Transport System from the point of brine connection just downstream of OLEPS to the Bay is expected to be low because the force main segment flows full and there is therefore limited oxygen for a corrosion reaction to occur. However, because there is a minimal risk, it will be prudent to monitor the pipe for any

signs of corrosion and to develop accelerated monitoring and mitigation strategies, should early-stage corrosion be identified. Under this sub-task, BC will develop a monitoring plan for the Transport System. Under the terms of the Operating Agreement, Cargill will be required to reimburse EBDA for implementation of this Plan.

- Cost Estimating and Scheduling: Under this sub-task, Cargill will estimate the cost of sliplining the Transport System from OLEPS to MDF. If corrosion is identified through implementation of the Monitoring Plan, this estimate will provide a conservative benchmark for protecting the pipe. Staff expects that the Operating Agreement will require Cargill to assure the Authority on an ongoing basis that sufficient funds are available to cover this cost of mitigation, should it be required. This sub-task also includes development of a construction schedule for implementing improvements to protect MDF prior to brine discharge commencing.
- Brine Loading Analysis: Cargill has requested permission to discharge brine pipeline contents to local sewers in the event of an emergency pipe break or failure. Under this subtask, BC would evaluate the quantities and time periods over which brine could be released to sewer without negatively impacting the Hayward or Union wastewater treatment plants.
- MDF Risk Analysis: Cargill's consultant, Wiss, Janney, Elstner (WJE) recently completed a study indicating that corrosion risk may be low where there is minimal oxygen present, including in pipeline segments that flow full and have low levels of dissolved oxygen. Cargill has requested that BC further analyze the risks at MDF in light of the WJE conclusions. Under this task, BC will re-look at the risks at MDF to confirm whether all proposed modifications to prevent corrosion need to be performed prior to brine discharge, or whether any could be delayed and the assets monitored for signs of corrosion.

The proposed fee for these additional tasks is \$114,932. Table 1 below summarizes total fees for the project.

Table 1. Project Fee	
Phase	Total Fees
Effluent Outfall Evaluation for Receiving Brine Water Project	\$102,684
Amendment 1 - Transport Pipeline Condition Assessment	\$68,427
Amendment 2 - No-cost Extension	\$0
Amendment 3 - Corrosion Mitigation Alternatives Analysis	\$123,478
Amendment 4 - OLEPS and Marina Wye Corrosion Evaluation	\$104,674
Amendment 5 - No-cost Extension	\$0
Amendment 6 - EBDA/Cargill Contract Support	\$114,932
Total	\$514,195

Cargill has agreed to reimburse the Authority fully for this amendment, including a 5% markup for administration.

**Amendment 6: Scope of Work**  
**East Bay Dischargers Authority**  
**Effluent Outfall Evaluation for Receiving Brine Water**  
**August 30, 2022**

**Purpose**

Brown and Caldwell (BC) has assisted the East Bay Dischargers Authority (Authority or EBDA) with a due diligence effort to evaluate potential impacts to the Authority's facilities from accepting Mixed Sea Salts (MSS) brine from the Cargill, Incorporated (Cargill) solar salt facility. Preliminary evaluations have included an assessment of the following:

- Precipitation and sedimentation potential for brine mixed with treated secondary effluent.
- Impacts to EBDA's chlorination and dechlorination facilities.
- Potential for accelerated corrosion of the transport pipeline and potential corrosion mitigation alternatives.
- Potential for accelerated corrosion of facility components at the Oro Loma Effluent Pumping Station (OLEPS) and Marina Dechlorination Facility (MDF).

Additional tasks have been identified that must be completed to identify language and terms in the contract that will be executed between EBDA and Cargill, including the following:

- Development of a monitoring plan to assess precipitation, sedimentation, and corrosion of the steel reinforcement in the 96-inch diameter reinforced concrete pipe (RCP) between the OLEPS and MDF.
- Preparation of a cost estimate for installation of a segmental slipliner for the 96-inch diameter RCP between OLEPS and MDF.
- Update previous cost estimates completed for this project to 2022 dollars and repackage estimate to include recommended corrosion protection project elements that will be implemented prior to EBDA's potential acceptance of Cargill brine.
- Development of a construction schedule for the proposed improvements at MDF.
- Evaluate the maximum amount of brine that can be discharged to the sanitary sewer upstream of the Union Sanitary District (USD) Wastewater Treatment Plant (WWTP) or the City of Hayward Water Pollution Control Facility (WPCF) without impacting these facilities in the event of a failure of the brine conveyance pipeline.
- Re-evaluate risk to MDF facilities from brine discharge with a low DO concentration in effluent.

**Authority and Cargill Tasks**

The Authority will provide the following information to BC as part of execution of this project prior to the kickoff of the Brine Loading Analysis task:

- Additional water quality sampling performed on the brine (or blended brine) by Cargill from January 2022 through December 2022 not yet provided to BC.
- Expected water quality of brine, including:
  - Sodium
  - Calcium
  - Magnesium
  - Potassium
  - Ferric
  - Aluminum

- Chloride
- Sulfate
- Ammonia
- Nitrate
- Nitrite
- Phosphorus
- Alkalinity
- TDS
- TSS
- BOD
- City of Hayward treated water goals and requirements, including the following. It should be noted that BC has separately requested this data from the City of Hayward for a separate project. Data received by BC will not be re-requested for this project.
  - Discharge to EBDA requirements
  - Recycled water quality requirements
  - Secondary effluent flow and water quality to Russel Center Energy Center (RCEC) requirements and agreement
  - Primary and secondary treatment objectives and operating strategy
  - Equalization practices and capabilities
  - Current influent and effluent water quality
- USD treated water goals and requirements, including:
  - Discharge to EBDA requirements
  - Recycled water quality requirements
  - Primary and secondary treatment objectives and operating strategy
  - Equalization practices and capabilities
  - Current influent and effluent water quality

## **Amendment 6 Scope of Services**

BC will complete the following tasks as part of Amendment 6.

### **Phase 001. Project Management**

Perform Project Management activities. The current project management task is expanded to include budget to perform project administration and conduct project meetings for work scoped under this amendment.

#### **Task 001.001 – Project Administration**

Perform Project Administration tasks for up to an additional 4 months.

#### **Task 001.002 – Project Meetings with Authority Staff and Cargill**

Prepare for and hold two (2) kick-off meetings; one for the commencement of the monitoring program task, and one for the commencement of the USD/Hayward plant impacts analysis. Prepare for and hold (2) progress meetings for each of these tasks. BC has assumed that meetings will be no more than two (2) hours duration each and that they will be conducted virtually using Microsoft Teams for the duration of the project. Key team members shall be included in each meeting (a total of three [3] BC staff).

Prepare and circulate meeting agendas via email 5 days prior to each meeting. Prepare meeting minutes and circulate via email within 5 days following each meeting.

## **Phase 002. Reporting**

Remains unchanged.

## **Phase 003. Agreement Assistance**

Remains unchanged.

## **Phase 004. Prepare Amendment**

Remains unchanged.

## **Phase 005. Transport Pipeline Condition Assessment**

Remains unchanged.

## **Phase 006. Corrosion Protection Options Initial Screening**

Remains unchanged.

## **Phase 007. Corrosion Protection Alternatives Analysis**

Remains unchanged.

## **Phase 008. Additional Technical Support**

Provide as-needed technical support for the overall Cargill Brine Project up to the limit of the budget. The additional technical support task is expanded to include budget to provide additional support for the duration of this amendment. The revised task includes up to 67 hours of support.

## **Phase 009. OLEPS and Marina Wye Corrosion Evaluation**

Remains unchanged.

## **Phase 010. EBDA/Cargill Contract Support**

BC will complete the following tasks to identify terms and language in the contract between EBDA and Cargill.

### **Task 010.001 – Monitoring Plan Development**

Develop a monitoring plan to assess precipitation, accumulation of sediment and corrosion impacts from the Cargill brine discharge throughout the duration of the project.

The monitoring plan will include the following components:

1. Frequency and location of data collection, including baseline data collection and future sampling events. Evaluate data collection methods.
2. Execution plan for data collection (i.e use of divers, pipeline shut down requirements, access requirements).
3. Estimate of cost for execution of monitoring plan (including specialty subconsultants).
4. Identification of possible decision points for further action (i.e. more frequent data collection, modifications to brine discharge program and/or execution of a capital project for corrosion protection).

Perform senior technical staff QC review of technical memorandum prior to delivery to the Authority.



Summarize development of monitoring plan in a technical memorandum (TM) and submit electronically to the Authority and Cargill for review and comment. Respond to comments and issue an updated TM.

Deliverables:

- One draft and one final TM

Assumptions:

- QC review of technical memorandum by BC senior technical staff will be conducted prior to delivery to the Authority.
- The Authority will provide one set of consolidated comments to be returned to BC 10 business days after the submittal of the draft.
- Draft and final documents will be submitted electrically as PDFs.

### **Task 010.002 – Cost Estimating and Scheduling**

BC understands that the Authority and Cargill need a preliminary cost estimate for a corrosion protection or structural repair project, in the event that the monitoring program identifies accelerated corrosion in the 96-inch diameter RCP transport pipe between OLEPS and MDF.

A segmental slipliner will serve as the representative corrosion protection project. This task will assume approximately 2 miles of slipliner constructed and will include an allowance for bypass pumping and assumes work will be completed during periods of minimum flow in the Transport Pipeline. The slipliner cost estimate will represent a AACEI Class 5, concept level estimate for project construction.

Develop a combined project cost estimate for improvements required prior to EBDA acceptance of Cargill brine. This will include:

- Update previously prepared AACEI Class 5 estimates to 2022 dollars for the replacement of air relief valves between OLEPS and MDF and the recommended improvements to MDF identified in Phase 009, considering recent inflation and impacts to the supply chain.
- Develop AACEI Class 5 estimates for access improvements recommended to facilitate the monitoring plan (Task 010.001).
- Baseline data collection required for the monitoring plan (Task 010.001).

Construction cost estimates shall be based on a AACEI Class 5 order of magnitude estimate. Class 5 estimates are generally prepared based on very limited information. The range of accuracy with a Class 5 estimate ranges between -50% on the low side, and +100% on the high side. Contingency ranges between 35 to 100 percent.

Develop a preliminary construction schedule for the assumed improvements to be implemented prior to the acceptance of brine, including improvements at MDF, replacement of ARVs, and access improvements. The schedule will be completed in Microsoft Project.

The schedule will identify project elements including bypass setup and execution, removal and replacement of existing valves, and installation of spray-in-place liner.

Summarize development of preliminary cost estimate and submit electronically to the Authority and Cargill for review and comment. Respond to comments and issue an updated preliminary cost estimate.

Deliverable:

- One draft and one final estimated project construction schedule

- One draft and one final AACEI Class 5 construction cost estimate for the assumed rehabilitation of the 96-inch diameter transfer pipeline.
- One draft and one final of the update of the existing AACEI Class 5 construction cost estimates previously prepared for the assumed system improvements.

Assumptions:

- QC review of technical memorandum by BC senior technical staff will be conducted prior to delivery to the Authority.
- The Authority will provide one set of consolidated comments to be returned to BC 10 business days after the submittal of the draft.
- Draft and final documents will be submitted electronically as PPDFs.

### **Task 010.003 – Brine Loading Analysis**

This task evaluates the impact of a brine pipeline break on wastewater treatment performance at the City of Hayward's Water Pollution Control Facility (WPCF) and Union Sanitary District's Wastewater Treatment Plant (WWTP) if the spilled brine were sent to the sanitary sewer upstream of either or both of these facilities.

BC will review the information provided by the Authority and Cargill. BC will summarize the water quality requirements for each facility (including recycled water quality).

BC will conduct two one-hour conference calls (one with Hayward and one with USD) to discuss plant operations, confirm water quality requirements, and identify potential impacts of emergency brine discharge on plant operations. Work on this task will not proceed until after these conference calls have been completed.

BC will document assumptions about the concentrations of total dissolved solids and/or specific ions that may increase the risk of a process upset. It is important to note that most parameters will not have a firm, referenceable maximum value. BC will use the data available to assume the allowable concentrations.

BC will use a mass balance approach to estimate concentrations of total dissolved solids and the main ions in the brine for a range of brine additions to each plant. These values will be compared to water quality requirements and allowable concentrations for each facility to identify the maximum allowable brine discharge to each facility to estimate the quantity of flow and load that each facility can handle without increasing risk of a process upset or exceedance of water quality requirements.

BC will document findings in a TM (draft and final).

Deliverable:

- One draft and one final TM

Assumptions:

- The impacts assessment to USD will be based on a previously completed Study. EBDA/USD will provide this report for BC to review prior to commencement of this task.
- BC will not proceed with this task without authorization from EBDA.
- QC review of technical memorandum by BC senior technical staff will be conducted prior to delivery to the Authority.
- The Authority will provide one set of consolidated comments to be returned to BC 10 business days after the submittal of the draft.

- Draft and final documents will be submitted electronically as PDFs.

#### **Task 010.004 – MDF Risk Assessment**

This task re-assesses the corrosion risk to MDF facilities given the findings of the “Laboratory Test of Influence of Dissolved Oxygen on Corrosion Rate” Report prepared by Wiss, Janney, Elstner Associates, Inc. dated July 2021. The corrosion risk identified in the “Brine Evaluation at Oro Loma Effluent Pump Station and Marina Dechlorination Facility” completed by BC in April 2022 will be re-assessed considering the measured DO concentration of EBDA’s effluent at MDF.

Perform senior technical staff QC review of technical memorandum prior to delivery to the Authority.

Summarize development of findings in an addendum to the Oro Loma/MDF report and submit electronically to the Authority and Cargill for review and comment. Respond to comments and issue an updated Addendum. Deliverable:

- One draft and one final Addendum

Assumptions:

- The Authority will provide one set of consolidated comments to be returned to BC 10 business days after the submittal of the draft.
- Draft and final documents will be submitted electronically as PDFs

#### **General Assumptions:**

- The project duration is assumed to be 4 months (September 2022 through January 2023).
- Deliverables for individual tasks will be provided as they are completed per the schedule presented in Table 2.
- Monitoring Plan cost estimates will not include detailed costs associated with EBDA staff effort to execute monitoring plan. An allowance will be identified based on EBDA input.
- This scope does not include execution of the pipeline monitoring plan or any sample collection.
- Field work is not included in this scope.
- Development of the project schedule for improvements at MDF conservatively assumes that bypass of effluent flows will be required and that no near shore outfalls will be utilized.

## Compensation

BC will perform the work on a time-and-materials basis, for a limiting fee not to exceed \$114,932. Table 1 presents the estimated fee. BC labor will be billed using a 3.23 effective labor multiplier. Labor costs include phone, fax, and computer charges. Attachment 1 presents a detailed fee estimate for Amendment 6.

Table 1. Project Fee	
Phase	Total Fees
Effluent Outfall Evaluation for Receiving Brine Water Project	\$102,684
Amendment 1 - Transport Pipeline Condition Assessment	\$68,427
Amendment 2 – No-cost Extension	\$0
Amendment 3 – Corrosion Mitigation Alternatives Analysis	\$123,478
Amendment 4 – OLEPS and Marina Wye Corrosion Evaluation	\$104,674
Amendment 5 – No-cost Extension	\$0
Amendment 6 – EBDA/Cargill Contract Support	\$114,932
Total	\$514,195

## Schedule

The work defined herein shall begin not more than ten (10) business days after BC receives the signed contract from the Authority.

The estimated time for completion for the project is four months following authorization. Delays in obtaining background information, scheduling of meetings, and receipt of comments will impact overall project schedule. Table 2 presents a summary of project milestones with estimated dates. A detailed schedule is presented in Attachment 2.

Table 2. Amendment 6 Schedule	
Milestone	Estimated Timeline
NTP	September 15, 2022
Monitoring Plan	
Monitoring Plan Kickoff	September 21, 2022
Monitoring Plan Development	September 22, 2022 through November 9, 2022, 2022
Submit Draft Monitoring Plan	November 9, 2022
EBDA/Cargill Review	November 10, 2022 through November 23, 2022
Monitoring Plan Review Meeting	Week of November 14, 2022
Final Monitoring Plan	December 7, 2022
Cost Estimates and Schedule	September 15, 2022 through October 26, 2022
Brine Loading Analysis	
Brine Loading Analysis Kickoff	October 5, 2022
Brine Loading Analysis	October 6, 2022 through November 23, 2022
Submit Draft Brine Loading Analysis	November 23, 2022
EBDA/Cargill Review	November 24, 2022 through December 7, 2022
Brine Loading Analysis Review Meeting	Week of November 28, 2022
Final Report	December 21, 2022
MDF Risk Assessment	September 22, 2022 through November 2, 2022

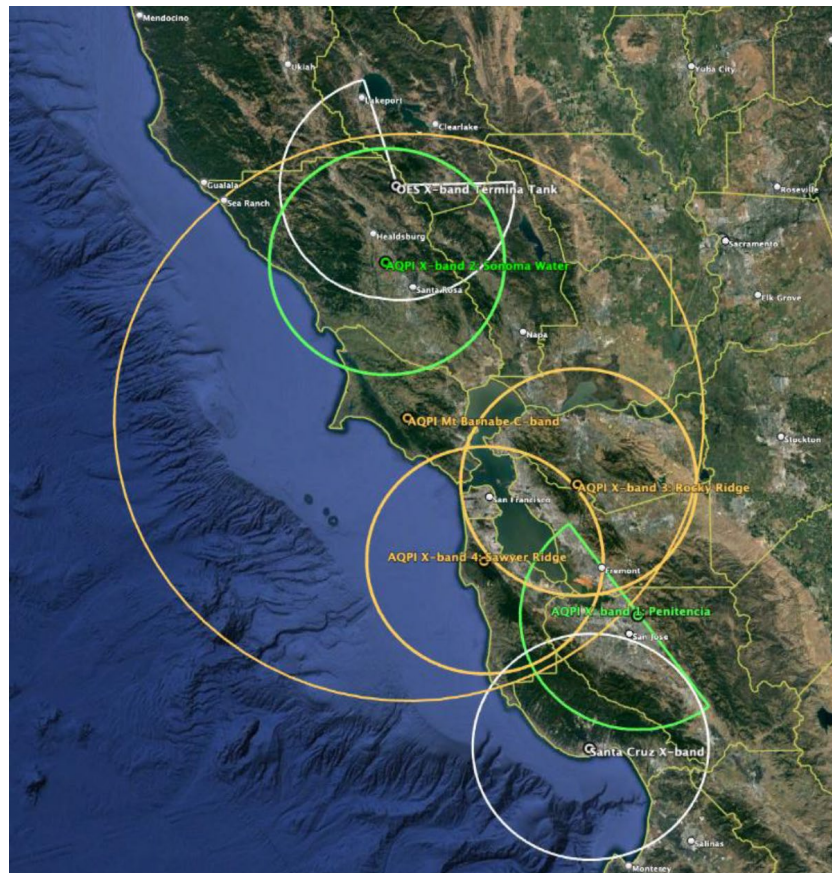
**ITEM NO. ~~OM9~~ MOTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO  
A COOPERATIVE AGREEMENT TO PROVIDE FUNDING FOR SHARED  
DEPLOYMENT OF PRECIPITATION FORECASTING SYSTEM WITH SONOMA  
COUNTY WATER AGENCY**

## Recommendation

Approve the motion authorizing the General Manager to enter into a Cooperative Agreement to provide funding for a shared deployment of a precipitation forecasting system with Sonoma County Water Agency (Sonoma Water) and five other East Bay water management agencies as part of the Advanced Quantitative Precipitation Information (AQPI) Project.

## Background

[AQPI](#) is a Bay Area regional project funded by the California Department of Water Resources (DWR) aimed at improving prediction of precipitation, streamflow, and storm surge through data gathering and model improvement. The attached fact sheet provides an overview of the project. EBDA is part of a consortium of East Bay agencies working to install an X-band radar in the East Bay at Rocky Ridge to improve forecasting for our local microclimates. The radar would be linked to the regional system, shown here:



[Sonoma Water](#) is the administrator for the DWR grant and is therefore serving as the administrator for related projects, including the East Bay X-band installation. A Cooperative Agreement between Sonoma Water, EBDA, and four other East Bay agencies – East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County Water District, and Contra Costa County Flood Control and Water Conservation District – was approved by the Commission on January 16, 2020. While the radar itself is funded by the grant, as is technical support by scientists at the National Oceanographic and Atmospheric Administration, local agencies are required to cover local installation costs. Through the Cooperative Agreement, the East Bay agencies are required to reimburse Sonoma Water for costs associated with leasing space for the installation from American Tower and other permitting and operations costs. The EBDA contribution to the project is \$29,000, which was included in EBDA's FY2019/2020 budget and has been carried over since.

### **Discussion**

A series of delays has stalled implementation of the Rocky Ridge X-band radar, most relating to design and construction requirements imposed by American Tower for installation of the radar on the site they operate. In the meantime, the Cooperative Agreement approved in 2020 expired on December 31, 2021.

The proposed Cooperative Agreement is nearly identical to the Agreement approved by the Commission in 2020. One notable change is the addition of an additional partner, Alameda County Flood Control and Water Conservation District – Zone 7. The new Agreement expires December 31, 2023. Installation of the Rocky Ridge radar is expected later in 2022.

Sonoma Water and partners are in the process of securing funding for the long-term operations and maintenance of the AQPI radar system from state and federal sources. The plan is for the system to be managed by the Center for Western Weather and Water Extremes (CW3E) at the Scripps Institution of Oceanography at UC San Diego. EBDA is part of the Local Partner Agencies Committee (LPAC), which meets regularly to receive updates on radar installation status and discuss long-term funding and operations.





## Improving Monitoring and Forecasting of Precipitation and Coastal Flooding in the San Francisco Bay Area

### THE CHALLENGE

When big storms hit California, current technology does not always provide forecasters with the level of detail needed to inform reservoir operations, flood protection, combined sewer-stormwater systems, and emergency preparedness. Accurate and timely precipitation information is critical for making decisions regarding public safety, infrastructure operations, and resource allocations. Standard weather radars are often unable to give an accurate picture of what is happening in the complex landscape of California's coastal mountain ranges. Experimental monitoring and prediction of precipitation in the San Francisco Bay region is being developed to enhance public safety through early warning and storm tracking when hazardous weather events come onshore.

### THE SOLUTION

The Advanced Quantitative Precipitation Information (AQPI) System is a regional project funded by the California Department of Water Resources. The experimental AQPI System consists of improved weather radar data for precipitation estimation; additional surface measurements of precipitation, streamflow and soil moisture; and a suite of forecast modeling systems to improve lead time on

precipitation and coastal Bay inundation from extreme storms—especially high-moisture laden *atmospheric rivers*. These conveyor belts of water vapor in the sky can bring drought-busting precipitation or hazardous storm conditions to the West Coast.

AQPI observing assets include a coastal Doppler C-band weather radar along the Sonoma County coast which will point offshore to improve tracking of incoming storms and four gap-filling X-band radar units strategically located to provide high-resolution coverage over populated and flood prone urban areas throughout the San Francisco Bay region. The radar data will be assimilated by atmospheric models to improve short-term prediction of precipitation. With these additional observations, the AQPI System will also improve runoff and coastal flooding predictions in and around the Bay. This information will be valuable to wastewater and flood protection managers, and will provide better inputs to urban water models.

To address climate change and sea level rise with possibly more extreme storms the AQPI System will implement the USGS Coastal Storm Modeling System (CoSMoS) to forecast flooding around the San Francisco Bay coastline.

### NOAA CONTRIBUTIONS

NOAA is responsible for building the experimental AQPI System, deploying surface meteorological and streamflow instrumentation, developing high resolution quantitative precipitation estimation (QPE), quantitative precipitation forecast (QPF), and tributary streamflow forecast products, as well as prototyping AQPI products for delivery to end users. In particular, the new radar data will be assimilated into an experimental version of the NOAA High Resolution Rapid Refresh (HRRR) model.

NOAA's National Water Model will be coupled to the coastal storm model (CoSMoS) developed by the USGS for coastal flooding forecasts in and around the Bay coastline.

### ANTICIPATED BENEFITS

The high resolution surface meteorological data and radar-based precipitation observations in complex terrain will provide a process understanding that can be used to improve operational rainfall estimates, identify forecast challenges and inform the NOAA Unified Forecast System model development.

Real-time access to the experimental data will provide forecasters in the National Weather Service Western Region with



# AQPI KEY FEATURES

Five new, state-of-the-art radar systems to improve monitoring of precipitation offshore and within the Bay region.

High-resolution precipitation forecasts.

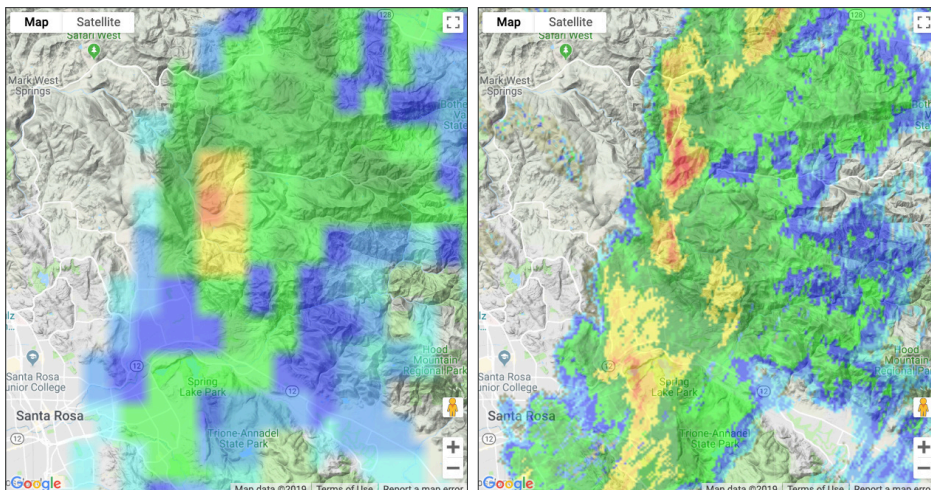
Coastal flooding, storm surge, and tributary streamflow forecasts.



additional data to evaluate operational forecast model performance and to better understand how extreme precipitation events are evolving as storms encounter coastal mountain ranges in the San Francisco Bay area.

The experimental AQPI System can aid water managers in securing water supplies while mitigating flood risk and minimizing potential water quality impacts to the Bay from storm runoff and wastewater infrastructure. The system can be expected to provide benefits exceeding costs by a ratio of at least 4:1. These benefits accrue through:

- Avoided flood damage costs from early warnings.
- Forecast-based operations to maximize reservoir capture for water supply and fisheries flows.
- Minimization of water quality impacts from combined sewer.
- Enhancement of public safety for the various transportation modes (pedestrian, highways, marine and airports).



Radar imagery as seen from (left) NEXRAD and (right) AQPI radar near Santa Rosa, CA. The much higher resolution provided by the AQPI radar more accurately shows areas of heavy rainfall (warm colors) and potential flooding.

These benefits will become increasingly important as costs associated with extreme weather events continue to escalate. Since 2015, weather-related disasters across the U.S. caused over 3,800 fatalities and \$480 billion in economic damages. Recent examples in the Bay Area include a flooding event in 2017 which produced over \$70 million in damages in Santa Clara, CA, and a series of northern Bay area rainfall events in 2019, resulting in over \$150 million in flood damages and a presidential disaster declaration.

For more information, visit: <https://psl.noaa.gov/aqpi/> and <https://www.sonomawater.org/aqpi/>.

## CONTACT

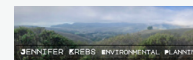
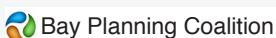
### Mackenzie Solomon

Office of Legislative & Intergovernmental Affairs  
National Oceanic & Atmospheric Administration  
14th Street & Constitution Ave. NW  
Room A100, Washington, DC 20230

**Phone:** 202.482.2497

**Email:** Mackenzie.Solomon@noaa.gov

## PARTNERS



## **Cooperative Agreement to Provide Funding for Shared Deployment of Precipitation Forecasting System**

This Cooperative Agreement (“Agreement”) is by and among **Sonoma County Water Agency**, a body corporate and politic of the State of California (“Sonoma Water”), **East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County Water District, East Bay Dischargers Authority, Contra Costa County Flood Control and Water Conservation District, and Alameda County Flood Control and Water Conservation District – Zone 7** (each a “Participant” and collectively “Participants”). The effective date of this Agreement is the date the Agreement is last signed by a party to this Agreement (“Effective Date”).

### **RECITALS**

- A. The San Francisco Bay Area Advanced Quantitative Precipitation Information System Project (“AQPI”) is a regional effort that will install improved weather radar and other observing systems and develop a suite of numerical forecast modeling systems covering the multijurisdictional San Francisco Bay Area.
- B. The AQPI will provide accurate and timely information that will be of significant value to a variety of decision makers, allowing them to mitigate flood risks; better manage reservoirs to secure and preserve water supplies; minimize water quality impacts to San Francisco Bay from wastewater overflows; anticipate air, sea and land transportation challenges; and have improved lead-time on coastal and Bay Area inundation from severe storms, especially high-moisture laden atmospheric rivers.
- C. The AQPI is a collaboration of federal, State, and local government agencies. Project partners include the National Ocean and Atmospheric Administration, Colorado State University’s Cooperative Institute for Research in the Atmosphere, United States Geological Survey - Pacific Coast and Marine Science Center, Center for Western Weather and Water Extremes at Scripps Institute of Oceanography, as well as, local water, wastewater, and flood control entities in the San Francisco Bay Area, including the San Francisco Public Utilities Commission and Santa Clara Valley Water District.
- D. The AQPI is financed under State of California, Department of Water Resources Grant Agreement No. 4600011485 (“Grant”) that awarded \$19.84 million in grant funds from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, administered by the State of California, Department of Water Resources.
- E. The Grant covers the majority of costs associated with the AQPI, but local cost share is required for several siting and operational tasks.
- F. Sonoma Water, acting as grantee and lead administrative agency, will manage administration for the AQPI including contracting with the Department of Water Resources and project partners.
- G. Sonoma Water and the Participants are interested in precipitation forecasting issues and the relationship between those issues and their effect on government operations.
- H. The Participants wish for Sonoma Water and Contra Costa County Flood Control and Water Conservation District to retain the services of a consultant or consultants (each, a

“Consultant”) with expertise in deploying a precipitation forecasting system such as an X-Band Radar system at a site in the East Bay. Contra Costa County Flood Control and Water Conservation District has contracted with a Consultant for the structural analysis and design of the radar station platform connections. Sonoma Water also will contract with a contractor (“Contractor”) to install and construct the precipitation forecasting system.

- I. Sonoma Water and the Participants have identified what appears to be a suitable site with existing infrastructure, which is currently owned by East Bay Municipal Utility District and leased and operated by American Tower, L.P. at a site known as Rocky Ridge in the Las Trampas Regional Wilderness Park (“Las Trampas Site”).
- J. Sonoma Water entered into a sublease agreement with American Tower, L.P. (“AMT”), on mutual behalf of Participants to allow for the deployment and operations of the precipitation forecasting system at the Las Trampas Site. Participants are willing to share in the costs associated with deploying the precipitation forecasting system at the Las Trampas Site. Sonoma Water is willing to enter into the desired agreements, administer the agreements, and provide overall project management and coordination under the terms described below.
- K. The precipitation forecasting system referenced in this Agreement is the property of Sonoma Water pursuant to its agreement with the State Department of Water Resources, and is being loaned to Participants for the purpose of determining whether the Las Trampas Site is suitable for the permanent installation of a precipitation forecasting system, i.e., that the precipitation forecasting system does not cause interference with other equipment already located at the Las Trampas Site and that the site provides the coverage desired by Participants.
- L. Should the Las Trampas Site ultimately be deemed suitable for a permanent precipitation forecasting system, a new, long-term agreement will be entered into among the Participants to cover the installation of a new, permanent X-Band Radar System at the site, and to cover long-term maintenance and operational costs.
- M. On April 20, 2021, Participants entered into a Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System in substantially the same form as this instant Agreement (“2021 Agreement”). Participants have identified the need to amend the 2021 Agreement to accommodate an anticipated timeline for implementation of the 2021 Agreement and to add the Zone 7 Water Agency as a Participant.
- N. This Agreement, containing amendments to the 2021 Agreement, shall replace the 2021 Agreement upon final execution by all Participants.

In consideration of the foregoing recitals and the mutual covenants contained herein, the parties hereto agree as follows:

## **AGREEMENT**

### **1. RECITALS**

- 1.1. The above recitals are true and correct and are incorporated herein.

## 2. **COMMUNICATION/DESIGNATED REPRESENTATIVES**

- 2.1. The designated representatives below shall, upon execution of this Agreement, have authority to grant discretionary approvals identified in this Agreement. Except as otherwise specifically provided in this Agreement, any notice, submittal, or communication required or permitted to be served on a Participant, may be delivered personally, or be sent by United States first class mail, postage prepaid addressed as indicated below:

<b>Sonoma Water</b>	<b>East Bay Municipal Utility District</b>
Project Manager: Dale Roberts 404 Aviation Boulevard Santa Rosa, CA 95403-9019 Phone: 707-547-1979 Email: dale.roberts@scwa.ca.gov Designated Representative: Dale Roberts	Contact: David Briggs 375 11th Street Oakland, CA 94607 Phone: 510-287-5046 Email: david.briggs@ebmud.com Designated Representative: David Briggs
<b>Alameda County Flood Control District</b>	<b>Alameda County Water District</b>
Contact: Hank Ackerman 399 Elmhurst Street Hayward, CA 94544-1395 Phone: 510-670-5553 Email: hank@acpwa.org Designated Representative: Daniel Woldesenbet, PhD, PE	Contact: Leonard Ash 43885 S. Grimmer Boulevard Fremont, CA 94538 Phone: 510-668-6539 Email: Leonard.Ash@acwd.com Designated Representative: Ed Stevenson
<b>East Bay Dischargers Authority</b>	<b>Contra Costa County Public Works</b>
Contact: Jackie Zipkin 2651 Grant Avenue San Lorenzo, CA 94580 Phone: 510-278-5910 Email: JZipkin@ebda.org  Designated Representative: Jackie Zipkin	Contact: Mark Boucher 255 Glacier Drive Martinez, CA 94553 Phone: 925-313-2274 Email: mark.boucher@pw.CCCounty.us Designated Representative: Brian Balbas
<b>Alameda County Flood Control and Water Conservation District – Zone 7</b>	
Contact: Carol Mahoney 100 N Canyons Parkway Livermore, CA 94551 Phone: 925-454-5064 Email: carol@zone7water.com Designated Representative: Valerie Pryor	

### **3. SONOMA WATER RESPONSIBILITIES**

- 3.1. Sonoma Water shall: (i) coordinate the installation of precipitation forecasting equipment; (ii) coordinate and procure data analysis consulting services; (iii) prepare and negotiate a lease agreement with AMT for the purpose of siting and accessing the precipitation forecasting equipment; (iv) provide contract administration, all for an amount not to exceed a total of \$190,000, and (v) ensure that all data from the precipitation forecasting equipment and all analysis of that data is provided to the Participants in a format the Participants are able to use.
- 3.2. Sonoma Water shall act as liaison with AMT and other AQPI project partners, and provide any necessary project management, direction, and coordination. This responsibility includes coordinating necessary meetings, providing status updates, and facilitating the dissemination of information to Participants and their Designated Representatives specified in Section 2.1.
- 3.3. Sonoma Water shall provide Participants with a written accounting of all expenditures made during this Agreement. Should Sonoma Water complete its responsibilities under this Agreement for less than the not-to-exceed amount listed in Section 3.1 above, Sonoma Water shall divide proportionally any remaining funds and disburse them among the Participants based on the percentage each Participant provided to the AQPI project pursuant to this Agreement, unless otherwise agreed by all Participants in writing. Expenses incurred by Participants after June 1, 2019, are eligible for cost reimbursement for the purposes of this Agreement. Expenses incurred by Participants may be credited to and offset a Participant's deposit amounts set forth in Section 4.1 below. If a Participant's expenditures exceed its deposit amount set forth in Section 4.1, that excess amount may be reimbursed to the Participant from Sonoma Water at Sonoma Water's discretion upon a final accounting of deposits and expenses.
- 3.4. Sonoma Water shall maintain for no less than three years following the termination of this Agreement, complete and accurate records of all associated transactions in compliance with generally accepted accounting principles as promulgated by the American Institute of Certified Public Accountants and the Governmental Accounting Standards Board. Such records shall be available to each Participant upon reasonable notice for inspection and analysis during business hours.
- 3.5. Insurance and Indemnification Requirements:
  - a. Sonoma Water shall include the following indemnity language in all the contracts it manages or enters into related to the deployment of the precipitation forecasting system referenced in this Agreement:
    - i. Consultant/Contractor expressly agrees to defend, indemnify, and hold harmless Sonoma Water, East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County

Water District, East Bay Dischargers Authority, Contra Costa County Flood Control and Water Conservation District, Alameda County Flood Control and Water Conservation District - Zone 7, and their respective Directors, Board and/or Committee Members, officers, agents and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from Consultant/Contractor's, its Directors', Officers', Board and/or Committee Members', agents', employees', and/or sub-contractors' performance under this agreement.

- b. Sonoma Water shall, at a minimum, require that all the contracts it manages or enters into related to the deployment of the precipitation forecasting system referenced in this Agreement contain the following insurance provisions, to the extent they apply to the applicable scope of work:
  - i. Insurance Limits: The insurance shall be the greater of (1) the minimum coverage and limits specified; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the named insured. The insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. It shall be explicitly stated that no representations are made that the minimum insurance requirements of the contract are sufficient to cover the obligations of the Named Insured.
  - ii. Workers Compensation Insurance: Workers Compensation Insurance shall be maintained during the life of any contract for all of its employees on the project, and the named insured shall require any subconsultant to provide it with evidence of Workers Compensation Insurance. Workers' Compensation insurance including Employer's Liability insurance with minimum limits as follows:
    - a) Coverage A. Statutory Benefit,
    - b) Coverage B. Employer's Liability of not less than:
      - Bodily Injury by accident: \$1,000,000 each accident
      - Bodily Injury by disease: \$1,000,000 each employee
      - Bodily Injury per employee: \$1,000,000 policy limit
  - iii. Waiver of Subrogation: Workers' Compensation, Commercial General and Automobile Liability policies, including any applicable excess and umbrella insurance, must contain a waivers of subrogation endorsement providing that each sub-consultant/sub-contractor and each insurer waive any and all rights of recovery by subrogation, or otherwise, against Sonoma Water, East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County Water District, East Bay Dischargers, and Alameda County Flood Control and Water Conservation District - Zone 7.
  - iv. Primary and Non-Contributory: All insurance shall be primary and non-contributory and Sonoma Water, East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda



County Water District, East Bay Dischargers Authority, Contra Costa County Flood Control and Water Conservation District, and Alameda County Flood Control and Water Conservation District - Zone 7 shall not be required to contribute to it.

- v. Additional Insured Endorsement: There must be endorsements naming Sonoma Water, East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County Water District, East Bay Dischargers Authority, Contra Costa County Flood Control and Water Conservation District, and Alameda County Flood Control and Water Conservation District - Zone 7 as Additional Insureds under all applicable Commercial General and Automobile Liability policies.
- vi. Non-Exclusion: All insurance policies and Additional Insured Endorsement(s) shall not exclude liability and damages to work arising out of, pertaining to, or in any way relating to services performed by sub-consultants/sub-contractors.
- vii. Premises or Operations: Insurance policies and Additional Insured Endorsement(s) Coverage shall be included for all premises and operations in any way related to the contract.
- viii. Work of Subcontractors: Insurance policies and Additional Insured Endorsements shall not exclude liability and damages to work arising out of, pertaining to, or in any way relating to services performed by sub-consultants/sub-contractors.
- ix. Commercial General Liability Insurance: Commercial General Liability Insurance for bodily injury, personal and advertising injury, and property damage shall cover all premises, contractual liability, products and completed operations, ongoing operations and personal injury and shall not contain any "prior work" coverage limitation or exclusion applicable to any services performed by or on behalf of any Consultant/Contractor performing services on behalf of Sonoma Water, East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District and Alameda County Flood Control and Water Conservation District - Zone 7, Alameda County Water District, East Bay Dischargers Authority, Contra Costa County Flood Control and Water Conservation District without any exclusion for work subcontracted to others in an amount no less than \$2 million per occurrence and \$2 million aggregate.
- x. Automobile Liability Insurance: Business Automobile Liability Insurance covering "All Autos" or "Owned, Non-Owned, and hired autos."
- xi. Professional Liability Insurance: Professional liability insurance with minimum limits of \$2 million per claim.

- 3.6. Sonoma Water shall comply with all relevant laws, grant requirements, and permit requirements, if any, pertinent to any procurements, expenditures of funds, operations, construction, improvement, labor compliance, or other implementation of this Agreement. Sonoma Water shall consult with Participants

on the scope of work or specifications for any contract entered hereunder and shall ensure that any contract hereunder provides sufficient rights, access, or licenses to enable the shared deployment and use of the site.

#### **4. PARTICIPANT RESPONSIBILITIES**

- 4.1. Subject to Section 3.3 above, each Participant shall deposit the amounts listed below with Sonoma Water by July 31, 2022, or 30 days after receiving an invoice from Sonoma Water, whichever is later, to cover its anticipated pro-rata share of contract costs and expenses as follows:
- a. Participant Type 1: East Bay Municipal Utility District \$45,000
  - b. Participant Type 2: Alameda County Flood Control & Water Conservation District \$40,000
  - c. Participant Type 3: Alameda County Water District \$31,000
  - d. Participant Type 4: East Bay Dischargers Authority \$29,000
  - e. Participant Type 5: Contra Costa County Flood Control and Water Conservation District \$20,000
  - f. Participant Type 6: Alameda County Flood Control and Water Conservation District – Zone 7 \$25,000

#### **5. TERMINATION**

- 5.1. Any Participant may terminate its participation in this Agreement by giving 60 calendar days advance written notice to each Participant of its intent to terminate its participation in this Agreement. Termination shall not relieve the Participant of its obligation to pay costs and expenses related to any consultant contract or lease entered into by Sonoma Water or otherwise allocated prior to the Effective Date of the termination. Sonoma Water's right to terminate may be exercised by Sonoma Water's General Manager. If Sonoma Water terminates this Agreement, it shall prevent additional expenditures from being made under this Agreement to the degree reasonably practicable and disburse any unexpended funds as provided in Section 3.3.

#### **6. INDEMNIFICATION**

- 6.1. Each Participant expressly agrees to defend, indemnify, and hold harmless Sonoma Water and its Directors, Board and/or Committee Members, officers, agents and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from that Participant's, its respective Directors', Board and/or Committee Members', officers', agents', employees', and/or subcontractors' negligence or willful misconduct in performing this Agreement.
- 6.2. Sonoma Water expressly agrees to defend, indemnify, and hold harmless the Participants, their respective, Directors, Board and/or Committee Members, officers, agents and employees from and against any and all loss, liability, expense,

claims, suits, and damages, including attorneys' fees, arising out of or resulting from Sonoma Water's, its Directors', Officers', Board and/or Committee Members', agents', employees', and/or sub-contractors' negligence or willful misconduct in performing this Agreement.

## **7. TERMINATION OF 2021 AGREEMENT**

- 7.1. Upon full execution of this Agreement by all Participants, the 2021 Agreement shall be considered terminated and shall be superseded by this Agreement, which shall be the operative agreement.

## **8. ADDITIONAL REQUIREMENTS**

- 8.1. Term of Agreement: The term of this Agreement begins on the Effective Date and shall expire on December 31, 2023, unless terminated earlier in accordance with the provisions of Article 5 (Termination).
- 8.2. Amendments: Changes to this Agreement may only be made by written amendment, signed by all parties.
- 8.3. Construction: To the fullest extent allowed by law, the provisions of this Agreement shall be construed and given effect in a manner that avoids any violation of statute, ordinance, regulation, or law. The parties covenant and agree that in the event that any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired, or invalidated, provided that the remainder of this Agreement can be interpreted to give effect to the intentions of the parties.
- 8.4. Making of Agreement: Participants and Sonoma Water acknowledge that they have each contributed to the making of this Agreement and that, in the event of a dispute over the Agreement's interpretation; the language of the Agreement will not be construed against one Participant in favor of another. Participants and Sonoma Water acknowledge that they have each had an adequate opportunity to consult with counsel in the negotiation and preparation of this Agreement.
- 8.5. No Third-Party Beneficiaries: Nothing contained in this Agreement shall be construed to create, and the parties do not intend to create, any rights in third parties.
- 8.6. Applicable Law and Forum: This Agreement shall be construed and interpreted according to the substantive law of the State of California. Any action to enforce the terms of this Agreement or for the breach thereof shall be brought and tried in the County of Sonoma.
- 8.7. Captions: The captions in this Agreement are solely for convenience of reference. They are not a part of this Agreement and shall have no effect on its construction or interpretation.

- 8.8. Merger: This writing is intended both as the final expression of the Agreement between the Parties with respect to the subject matter hereof and as a complete and exclusive statement of the terms of the Agreement, pursuant to Code of Civil Procedure section 1856. Each Participant acknowledges that, in entering into this Agreement, it has not relied on any representation or undertaking, whether oral or in writing, other than those which are expressly set forth in this Agreement. No modification of this Agreement shall be effective unless and until such modification is evidenced by a writing signed by both parties.
- 8.9. Entire Agreement: This Agreement is the entire Agreement between the parties.
- 8.10. Counterparts: This Agreement may be executed in multiple counterparts and all counterparts so executed shall constitute a single binding agreement. Original counterpart signature pages may be affixed to an original of this Agreement to create a single, complete agreement. Any counterpart executed by a Participant and/or Sonoma Water and transmitted by electronic transmission shall be treated as an original signature page at the time of receipt. The actual original signature page shall also be mailed to Sonoma Water within ten days of the date of the electronic transmission.
- 8.11. Survival of Terms: All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- 8.12. Time of Essence: Time is and shall be of the essence of this Agreement and every provision.
- 8.13. Signature(s): Participants shall use either manual or digital signature(s) to execute this Agreement, and to execute documents required to be executed by this Agreement. Digital signature(s) must comply with Government Code section 16.5. By using digital signature(s), Participants warrant and represent that they intend the digital signature to have the same force and effect as the use of a manual signature. Electronic signature(s) are not allowed.

Signatures appear on the following pages.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date last signed by the parties to the Agreement.

Reviewed as to funds:

TW 21/22-090

By: \_\_\_\_\_  
Sonoma County Water Agency  
Division Manager - Administrative  
Services

Approved as to form:

By: \_\_\_\_\_  
Adam Brand, Deputy County Counsel

**Sonoma County Water Agency**

By: \_\_\_\_\_  
Grant Davis  
General Manager  
Authorized per Sonoma County Water  
Agency's Board of Directors Action on  
December 14, 2021

Date: \_\_\_\_\_

**Alameda County Water District**

By: \_\_\_\_\_  
Ed Stevenson  
General Manager

Date: \_\_\_\_\_

**Alameda County Flood Control & Water  
Conservation District**

By: \_\_\_\_\_  
Daniel Woldesenbet, PhD, PE  
Director

Date: \_\_\_\_\_

Approved as to form:  
Donna R. Ziegler, County Counsel

By: \_\_\_\_\_  
Kathy Lee, Deputy County Counsel

**East Bay Municipal Utility District**

By: \_\_\_\_\_  
David Briggs, PhD, PE  
Manager of Water Operations

Date: \_\_\_\_\_

**East Bay Dischargers Authority**

By: \_\_\_\_\_  
Jacqueline T. Zipkin  
General Manager

Date: \_\_\_\_\_

**Contra Costa County Flood Control and  
Water Conservation District**

By: \_\_\_\_\_  
Brian M. Balbas  
Chief Engineer

Date: \_\_\_\_\_

**Alameda County Flood Control and Water  
Conservation District – Zone 7**

By: \_\_\_\_\_  
Valerie L. Pryor  
General Manager

Date: \_\_\_\_\_