

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

In the matter of:	)	
	)	
<b>EAST BAY MUNICIPAL</b>	)	<b>SETTLEMENT AGREEMENT AND</b>
<b>UTILITY DISTRICT,</b>	)	<b>STIPULATION FOR ENTRY OF</b>
<b>CONTRA COSTA COUNTY</b>	)	<b>ADMINISTRATIVE CIVIL LIABILITY</b>
	)	<b>ORDER</b>
<b>October 14, 2015, November 27,</b>	)	
<b>2015, and May 3, 2016,</b>	)	<b>R2-2017-1031</b>
<b>unplanned discharges of</b>	)	
<b>chlorinated potable water</b>	)	
	)	

**Section I: INTRODUCTION**

1. This Settlement Agreement and Stipulation for Entry of Administrative Civil Liability Order (Stipulated Order) is entered into by and between the California Regional Water Quality Control Board, San Francisco Bay Region, Prosecution Team (Prosecution Team); the California Department of Fish and Wildlife Office of Spill Prevention and Response (CDFW-OSPR); and the East Bay Municipal Utility District (EBMUD) (collectively Parties), and is presented to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), or its delegate, for adoption as an Order by settlement, pursuant to Government Code section 11415.60. This Stipulated Order resolves the violations alleged herein by the imposition of administrative civil liability against EBMUD in the amount of **\$893,190**.

**Section II: RECITALS**

2. EBMUD is a water purveyor and operates a drinking water system in Alameda County and Contra Costa County. EBMUD operates and maintains potable water mains located near San Ramon Creek in Walnut Creek, a San Ramon Creek tributary in Danville, and Las Trampas Creek in Lafayette.
3. On October 14, 2015, EBMUD allegedly discharged approximately 72,000 gallons of potable water with a chlorine residual up to 2 mg/L to San Ramon Creek in violation of Water Code section 13376, Clean Water Act section 301 (33 U.S.C. § 1311), and the San Francisco Bay Water Quality Control Plan (Basin Plan). The unpermitted discharge occurred from a break in a 24-inch steel mortared lined and coated water main, the cause of which the Discharger has not been able to determine.<sup>1</sup> The

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<sup>1</sup> Water Code section 13376 and Clean Water Act section 301 (33 U.S.C. § 1311) prohibit the discharge of pollutants to surface water except as authorized by an NPDES permit. EBMUD applied for coverage under

discharge killed 104 fish, including mosquitofish, Sacramento suckers, hitch, and California roach. The majority species appeared to be hitch or California roach/hitch hybrids.

4. On November 27, 2015, EBMUD allegedly discharged approximately 2.2 million gallons (MG) of potable water with a chlorine residual up to 2 mg/L to Las Trampas Creek in violation of Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States, Order WQ 2014-0194-DWQ (Drinking Water Permit) section V. The unplanned discharge violated the Drinking Water Permit's receiving water limitation for toxicity because it killed at least 19 fish (2 large Sacramento suckers and 17 California roach) in Las Trampas Creek.
5. On May 3, 2016, EBMUD allegedly discharged approximately 191,400 gallons of potable water with a chlorine residual of between 2.3 and 2.5 mg/L to an unnamed tributary to San Ramon Creek in violation of Drinking Water Permit section V. The unplanned discharge violated the Drinking Water Permit's receiving water limitation for toxicity because it killed 386 fish (59 Sacramento suckers, 140 California roach, 75 mosquitofish, 100 three-spined stickleback, 2 fathead minnows, 6 green sunfish and 4 bluegill) in San Ramon Creek.
6. California Fish and Game Code (CFGF) section 5650, without regard to intent, prohibits the discharge of deleterious materials to state waters. Chlorinated potable water is deleterious to fish and wildlife resources.
7. Pursuant to Water Code section 13385, the above-referenced unauthorized discharges are each subject to administrative civil penalties not to exceed \$10,000 per day of violation and \$10 per gallon discharged and not cleaned up in excess of 1,000 gallons.
8. The settlement amount for the Water Code violations (\$764,190) is less than the liability amount the Prosecution Team calculated or asserted using Steps 1 through 10 of the State Water Resources Control Board's (State Water Board's) Water Quality Enforcement Policy (May 2010) (Enforcement Policy) as shown in Attachments A, B, and C. The final proposed administrative civil liability amount for all three Water Code violations was reduced by \$190,000 in consideration of hearing and/or litigation risks related to equitable factors and mitigating circumstances.
9. The settlement amount includes California Department of Fish and Wildlife costs associated with spill response and investigation (\$9,000) and associated penalties

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the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the U.S., Order WQ 2014-0194-DWQ (Drinking Water Permit), on June 24, 2015, but the State Water Board did not authorize coverage until October 23, 2015. As such, the violation is an unpermitted discharge of pollutants to waters of the U.S. The discharge, however, would also have violated the Drinking Water Permit had authorization been granted because it adversely affected the beneficial uses of San Ramon Creek.

under the CFGC section 5650.1 (\$40,000), and \$80,000 for the National Fish and Wildlife Foundation to address environmental damages.

10. To resolve the alleged violations in Section II, paragraphs 3 through 6, by consent and without further administrative proceedings, the Parties have agreed to the imposition of an administrative civil liability of **\$893,190** against EBMUD. EBMUD shall make payments in the amounts and to the recipients described in Section III, paragraph 12. The payment of \$382,095 to the “State Water Pollution Cleanup and Abatement Account” is due no later than 30 days following Regional Water Board execution of this Order. The remaining \$382,095 in penalties pursuant to the Water Code shall be treated as a suspended liability pending completion of an Enhanced Compliance Action (ECA) and shall be dismissed upon the ECA’s completion as provided in paragraph 20.
11. The Parties have agreed to settle the matter without administrative or civil litigation and to present this Stipulated Order to the Regional Water Board, or its delegate, for adoption as an Order by settlement, pursuant to Government Code section 11415.60.
12. The Prosecution Team believes that the resolution of the alleged violations is fair and reasonable and fulfills all of its enforcement objectives, that no further action is warranted concerning the violations except as provided in this Stipulated Order, and that this Stipulated Order is in the public’s best interest.

### **Section III: STIPULATIONS**

The Parties incorporate the foregoing Recitals and stipulate to the following:

13. **Administrative Civil Liability:** EBMUD hereby agrees to the imposition of an administrative civil liability totaling **\$893,190** to resolve the alleged violations as set forth in Section II as follows:
    - a. **For the Regional Water Board:** No later than 30 days after the Regional Water Board, or its delegate, signs this Stipulated Order, EBMUD shall submit a check for \$382,095 made payable to the “State Water Pollution Cleanup and Abatement Account,” reference the Order number on page one of this Stipulated Order, and mail the check to:

State Water Resources Control Board Accounting Office  
Attn: ACL Payment  
P.O. Box 1888  
Sacramento, CA 95812-1888
- EBMUD shall email a copy of the check to the State Water Board Office of Enforcement ([Paul.Ciccarelli@waterboards.ca.gov](mailto:Paul.Ciccarelli@waterboards.ca.gov)) and the Regional Water Board ([Michael.Chee@waterboards.ca.gov](mailto:Michael.Chee@waterboards.ca.gov)).

**b. For CDFW-OSPR:**

- i. No later than 30 days after the Regional Water Board, or its delegate, signs this Stipulated Order, EBMUD shall pay \$49,000 to the Fish and Wildlife Pollution Account for outstanding costs associated with spill response and investigation (\$9,000) and associated penalties under the CFGC section 5650.1 (\$40,000). Payment shall be made by check or money order payable to the “CDFW Fish and Wildlife Pollution Account” and shall be sent by certified mail to:

California Department of Fish and Wildlife – Office of Spill Prevention  
and Response

Attn: Ms. Marguerite Diaz, Associate Government Program Analyst  
P.O. Box 160362  
Sacramento, CA 95816-0362

- ii. No later than 30 days after the Regional Water Board, or its delegate, signs this Stipulated Order, the Settling Respondent shall pay \$80,000 to the National Fish and Wildlife Foundation (NFWF) for environmental damages to be expended by NFWF to fund riparian habitat restoration projects within an appropriate geographic proximity to the spill with priority placed on funding projects, where feasible, within the EBMUD Service Area. Payment shall be made by check or money order payable to “The National Fish and Wildlife Foundation” and shall be sent by certified mail to:

California Department of Fish and Wildlife – Office of Spill Prevention  
and Response

Attn: Ms. Marguerite Diaz, Associate Government Program Analyst  
P.O. Box 160362  
Sacramento, CA 95816-0362

14. **ECA Description:** The ECA allows EBMUD to make capital or operational improvements beyond those required by law and separate from projects designed merely to bring EBMUD into compliance. The ECA involves installation of approximately 970 leak detection loggers at 485 locations (the precise number may be adjusted depending on field conditions). The total cost to purchase 970 leak detection loggers will be about \$1.16 million. The estimated cost does not include EBMUD staff costs to install and monitor the devices, or respond to any leaks identified. The goal of the ECA is to minimize the risk of unplanned discharges of potable water to local creeks by installing leak detection loggers on water distribution pipes to detect and repair leaks near creeks when they are small, and detect pipe breaks faster than the current approach. The complete ECA description, project milestones, budget, and reporting schedule are contained in Attachment D, incorporated herein by reference.

## 15. Representations and Agreements Regarding the ECA

- a. As a material condition for the Regional Water Board's acceptance of this Stipulated Order, EBMUD represents that it will use the suspended \$382,095 (ECA Amount) to implement the ECA set forth in Attachment D. EBMUD understands that its promise to implement the ECA, in its entirety and in accordance with the implementation schedule, is a material condition of this settlement of liability between EBMUD and the Regional Water Board.
- b. EBMUD agrees to (1) spend the ECA Amount as described in this Stipulated Order; (2) provide certified, written report(s) to the Regional Water Board consistent with the terms of this Stipulated Order detailing ECA implementation; and (3) provide as part of the final report due on September 30, 2020, (ECA Completion Date) a certification by a responsible official, signed under penalty of perjury, that EBMUD followed all applicable environmental laws and regulations in implementing the ECA, including the California Environmental Quality Act (CEQA), Porter-Cologne Act, and federal Clean Water Act. EBMUD further agrees that the Regional Water Board has the right to require a third-party audit of the funds expended to implement the ECA at EBMUD's cost, and that EBMUD bears ultimate responsibility for meeting all deadlines and requirements specified in Attachment D.

16. **Publicity Associated with the ECA:** Whenever EBMUD or its agents or subcontractors publicize one or more elements of the ECA, they shall state in a **prominent manner** that the project is undertaken as part of a settlement to a Regional Water Board enforcement action against EBMUD.
17. **Progress Reports and Inspection Authority:** EBMUD shall provide reports describing progress implementing the ECA to the Regional Water Board as described in Attachment D. EBMUD agrees that Regional Water Board staff, or its third party oversight staff, have permission to inspect the ECA at any time without notice.
18. **Certification of ECA Completion:** On or before the ECA Completion Date, a responsible official of EBMUD shall submit a final report as described in Attachment D and certified statement that documents EBMUD's expenditures during the ECA completion period and documents that EBMUD completed the ECA in accordance with the terms of this Stipulated Order. The expenditures may include external payments to outside vendors, but may not include the normal, routine work undertaken by EBMUD staff. In making such certification, the signatories may rely upon normal organizational project tracking systems that capture employee time expenditures and external payments to outside vendors, such as equipment and information technology suppliers or consultants. Documentation of ECA completion may include photographs, invoices, receipts, certifications, and other materials reasonably necessary for the Regional Water Board to evaluate ECA completion and the costs incurred. EBMUD shall provide Regional Water Board staff with any

additional information that is reasonably necessary to verify EBMUD's ECA expenditures and completion.

19. **Time Extension for ECA:** The Executive Officer of the Regional Water Board may extend the ECA deadlines contained in this Stipulated Order if EBMUD demonstrates delays from reasonably unforeseen circumstances, such as a reasonably unforeseen delay in installing the leak detection loggers at the intended locations, provided that EBMUD continues to undertake all appropriate measures to meet deadlines. EBMUD shall make any deadline extension request in writing at least 30 days prior to the deadline. Any approval of an extension by the Executive Officer or its delegate must be in writing.
20. **Regional Water Board Acceptance of Completed ECA:** Upon EBMUD's satisfaction of its obligations under this Stipulated Order, ECA completion, and any audits, the Executive Officer will issue a "Satisfaction of Order." The Satisfaction of Order shall terminate any further EBMUD obligations under this Stipulated Order and result in the dismissal of the remaining penalty amount.
21. **Failure to Expend All Suspended Funds on the Approved ECA:** If EBMUD is unable by the ECA Completion Date to demonstrate to the reasonable satisfaction of the Executive Officer that the entire ECA Amount was spent on the completed ECA, EBMUD shall pay the difference between the ECA Amount and the amount EBMUD can demonstrate was actually spent on the ECA (the Difference). The Executive Officer shall issue a "Notice of Violation" that will require Settling Respondent to pay the Difference to the "State Water Pollution Cleanup and Abatement Account" within 30 days of the Notice of Violation's issuance date. EBMUD shall submit payment consistent with the payment method described in Section III, paragraph 12.a. Payment of the Difference shall satisfy EBMUD's obligations to implement the ECA.
22. **Failure to Complete the ECA:** If the ECA is not fully implemented by the ECA Completion Date, or if there has been a material failure to satisfy a project milestone, the Executive Officer shall issue a Notice of Violation. The amount of suspended liability owed shall be determined via a Motion for Payment of Suspended Liability before the Regional Water Board or its delegate. EBMUD shall be liable to pay the entire ECA Amount, or, if shown by EBMUD, some portion thereof less the value of any completed milestones as stipulated to by the Parties in writing, or as determined by the Motion for Payment of Suspended Liability. Unless the Regional Water Board or its delegate determines otherwise, EBMUD shall not be entitled to any credit, offset, or reimbursement from the Regional Water Board for expenditures made on the ECA prior to the Notice of Violation's issuance date. Within 30 days of the Regional Water Board's or its delegate's determination of the suspended liability amount assessed for EBMUD to pay, EBMUD shall submit payment consistent with the payment method described in Section III, paragraph 12.a. Payment of the assessed amount shall satisfy EBMUD's obligations to implement the ECA.

**23. Regional Water Board is not Liable:** Neither the Regional Water Board members nor Regional Water Board staff, attorneys, or representatives shall be liable for any injury or damage to persons or property resulting from negligent or intentional acts or omissions by EBMUD, its directors, officers, employees, agents, representatives, or contractors in carrying out activities pursuant to this Stipulated Order, nor shall the Regional Water Board, its members, or staff be held as parties to or guarantors of any contract entered into by EBMUD, its directors, officers, employees, agents, representatives, or contractors in carrying out activities pursuant to this Stipulated Order.

**24. Compliance with Applicable Laws:** EBMUD understands that payment of administrative civil liability in accordance with the terms of this Stipulated Order and/or compliance with the terms of this Stipulated Order is not a substitute for compliance with applicable laws, and that continuing violations of the type alleged herein may subject it to further enforcement, including additional administrative civil liability.

**25. Party Contacts for Communications related to this Stipulated Order:**

**For the Regional Water Board:**

Michael Chee  
San Francisco Bay Regional Water  
Quality Control Board  
1515 Clay Street, 14th Floor  
Oakland, CA 94612  
Michael.Chee@waterboards.ca.gov  
(510) 622-2300

**For EBMUD:**

Michael Ambrose  
Manager of Regulatory Compliance  
East Bay Municipal Utility District  
375 11th Street  
Oakland, CA 94607  
Michael.Ambrose@ebmud.com  
(510) 287-1256

**For CDFW-OSPR:**

Lisa V. Wolfe  
Attorney III  
CDFW-OSPR  
1700 K. Street, Suite 250  
Sacramento, CA 95811

**26. Attorney's Fees and Costs:** Except as otherwise provided herein, each Party shall bear all attorneys' fees and costs arising from the Party's own counsel in connection with the matters set forth herein.

**27. Matters Addressed by this Stipulated Order:** Upon the Regional Water Board's or its delegate's adoption, this Stipulated Order represents a final and binding resolution and settlement of the alleged violations as of the effective date of this Stipulated Order. The provisions of this paragraph are expressly conditioned on the full payment of the administrative civil liability by the deadlines specified in Section III,

paragraph 12, and EBMUD's full satisfaction of the obligations described in Paragraph 13.

28. **Public Notice:** EBMUD understands that this Stipulated Order must be noticed for a 30-day public review and comment period prior to consideration by the Regional Water Board or its delegate. If significant new information is received that reasonably affects the propriety of presenting this Stipulated Order to the Regional Water Board, or its delegate, for adoption, the Prosecution Team may unilaterally declare this Stipulated Order void and decide not to present it to the Regional Water Board or its delegate. EBMUD agrees that it may not rescind or otherwise withdraw its approval of this proposed Stipulated Order.
29. **Addressing Objections Raised During Public Comment Period:** The Parties agree that the procedure contemplated for the Regional Water Board's or its delegate's adoption of the Order, and public review of this Stipulated Order is lawful and adequate. The Parties understand that the Regional Water Board, or its delegate, have the authority to require a public hearing on this Stipulated Order. In the event that procedural objections are raised or the Regional Water Board requires a public hearing prior to the Order becoming effective, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the procedure and/or this Stipulated Order as necessary or advisable under the circumstances.
30. **Interpretation:** This Stipulated Order shall be construed as if the Parties prepared it jointly. Any uncertainty or ambiguity shall not be interpreted against any one Party. The Parties are represented by counsel in this matter.
31. **Modification:** The Parties shall not modify this Stipulated Order by oral representation made before or after its execution. All modifications must be in writing, signed by all Parties, and approved by the Regional Water Board or its delegate.
32. **If the Order Does Not Take Effect:** In the event that the Order does not take effect because the Regional Water Board or its delegate does not approve it, or the State Water Board or a court vacates it in whole or in part, the Parties acknowledge the Prosecution Team and EBMUD expect to proceed to a contested evidentiary hearing before the Regional Water Board to determine whether to assess administrative civil liabilities for the underlying alleged violations, unless the Prosecution Team and EBMUD agree otherwise. Also, in the event the Order does not take effect, the Parties acknowledge that CDFW-OSPR may pursue enforcement of EBMUD's alleged CFGC section 5650 violations through administrative or civil litigation channels. The Parties agree that all oral and written statements and agreements made during the course of settlement discussions will not be admissible as evidence in future hearings or other proceedings. The Parties agree to waive any and all objections based on settlement communications in this matter, including, but not limited to the following:

- a. Objections related to prejudice or bias of any of the Regional Water Board members or their advisors and any other objections that are premised in whole or in part on the fact that the Regional Water Board members or their advisors were exposed to some of the material facts and the Parties' settlement positions as a consequence of reviewing the Stipulation and/or the Order, and therefore may have formed impressions or conclusions prior to any contested evidentiary hearing on the violation alleged herein in this matter; or
  - b. Laches or delay or other equitable defenses based on the time period for administrative or judicial review to the extent this period has been extended by these settlement proceedings.
33. **Waiver of Hearing:** EBMUD has been informed of the rights Water Code section 13323, subdivision (b), provides and hereby waives its right to a hearing before the Regional Water Board prior to the Order's adoption.
34. **Waiver of Right to Petition or Appeal:** EBMUD hereby waives its right to petition the Regional Water Board's adoption of the Order in the form agreed to among the Parties for review by the State Water Board, and further waives its rights, if any, to appeal the same to a California Superior Court and/or any California appellate-level court. This explicit waiver of rights includes potential future decisions by the Regional Water Board or its delegate directly related to this Stipulated Order, including but not limited to time extensions, ECA completion, and other terms contained in this Stipulated Order.
35. **Covenant Not to Sue:** EBMUD covenants not to sue or pursue any administrative or civil claim against any State agency or the State of California, their officers, Board members, employees, representatives, agents, or attorneys arising out of or relating to any matter expressly addressed by this Stipulated Order or the ECA.
36. **No Admission of Liability:** In settling this matter, EBMUD does not admit to any of the allegations stated herein, or that it has been or is in violation of the Water Code or any other federal, State, or local law or ordinance, with the understanding that in the event of any future enforcement actions by the Regional Water Board, the State Water Board, or any other Regional Water Quality Control Board, this Stipulated Order may be used as evidence of a prior enforcement action consistent with Water Code sections 13327 or 13385, subdivision (e).
37. **Necessity for Written Approvals:** All approvals and decisions of the Regional Water Board under the terms of this Stipulated Order shall be communicated to EBMUD in writing. No oral advice, guidance, suggestions, or comments from Regional Water Board employees or officials regarding submissions or notices shall be construed to relieve EBMUD of its obligation to obtain any final written approval this Stipulated Order requires.

38. **Authority to Bind:** Each person executing this Stipulated Order in a representative capacity represents and warrants that he or she is authorized to execute this Stipulated Order on behalf of and to bind the entity on whose behalf he or she executes the Stipulated Order.
39. **No Third Party Beneficiaries:** This Stipulated Order is not intended to confer any rights or obligations on any third party or parties, and no third party or parties shall have any right of action under this Stipulated Order for any cause whatsoever.
40. **Severability:** This Stipulated Order is severable; if any provision is found invalid, the remainder shall remain in full force and effect.
41. **Counterpart Signatures; Facsimile and Electronic Signature:** This Stipulated Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one document. Further, this Stipulated Order may be executed by facsimile or electronic signature, and any such facsimile or electronic signature by any Party hereto shall be deemed to be an original signature and shall be binding on such Party to the same extent as if such facsimile or electronic signature were an original signature.
42. **Effective Date:** This Stipulated Order shall be effective and binding on the Parties upon the date the Regional Water Board, or its delegate, enters the Order incorporating the terms of this Stipulated Order.

**IT IS SO STIPULATED.**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION, PROSECUTION TEAM**

Date:

9/13/17

By:



Thomas Mumley  
Assistant Executive Officer

Approved as to form:

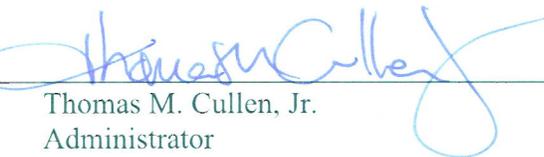
By:



Paul D. Ciccarelli  
Attorney  
State Water Resources Control Board  
Office of Enforcement

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE OFFICE OF SPILL  
PREVENTION AND RESPONSE**

Date: 8/28/17

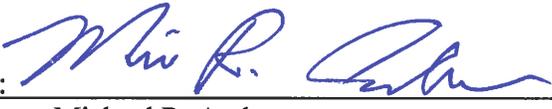
By:   
Thomas M. Cullen, Jr.  
Administrator

Approved as to form:

By:   
Lisa Wolfe  
Attorney III  
California Department of Fish and Wildlife

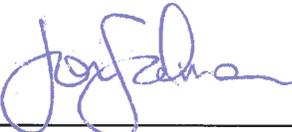
**EAST BAY MUNICIPAL UTILITY DISTRICT**

Date: 9/13/17

By: 

Michael R. Ambrose  
Manager of Regulatory Compliance

Approved as to form:

By: 

for the Office of General Counsel

**ORDER OF THE REGIONAL WATER BOARD**

- 43. This Order incorporates the foregoing Sections I through III by this reference as if set forth fully herein.
- 44. In accepting this Stipulation, the Regional Water Board has considered, where applicable, each of the factors prescribed in Water Code section 13385, subdivision (e) and has applied the Penalty Calculation Methodology set forth in the State Water Resource Control Board’s Enforcement Policy, which is incorporated herein by this reference. The Regional Water Board’s consideration of these factors and application of the Penalty Calculation Methodology is based upon information obtained by the Prosecution Team in investigating the allegations set forth in the Stipulation, or otherwise provided to the Regional Water Board.
- 45. This is an action to enforce the laws and regulations administered by the Regional Water Board. The Regional Water Board finds that issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, § 21000 et seq.) in accordance with section 15321, subdivision (a)(2), Title 14, of the California Code of Regulations. Additionally, this Order generally accepts the plans proposed for the ECA prior to implementation. Mere submittal of plans is exempt from CEQA as submittal will not cause a direct or indirect physical change in the environment.
- 46. The Executive Officer of the Regional Water Board is authorized to refer this matter directly to the Attorney General for enforcement if EBMUD fails to perform any of its obligations under the Order.

**IT IS HEREBY ORDERED** pursuant to Water Code section 13323 and Government Code section 11415.60, on behalf of the California Regional Water Quality Control Board, San Francisco Bay Region.

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Bruce H. Wolfe  
Executive Officer  
California Regional Water Quality Control Board  
San Francisco Bay Region

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Date

**ATTACHMENT A**

**Factors in Determining  
Administrative Civil Liability**

**EAST BAY MUNICIPAL UTILITY DISTRICT  
DISCHARGE OF 72,000 GALLONS OF CHLORINATED POTABLE WATER TO SAN  
RAMON CREEK  
WALNUT CREEK, CONTRA COSTA COUNTY**

The State Water Resources Control Board Water Quality Enforcement Policy (Enforcement Policy) establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors required by Water Code section 13385, subdivision (e). Each factor in the Enforcement Policy and its corresponding category, adjustment, and amount for the alleged violation is presented below. The Enforcement Policy should be used as a companion document in conjunction with this administrative civil liability assessment since the penalty methodology and definition of terms are not replicated herein. The Enforcement Policy is at: [http://www.waterboards.ca.gov/water\\_issues/programs/enforcement/docs/enf\\_policy\\_final111709.pdf](http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf)

**ALLEGED VIOLATION**

On October 14, 2015, the East Bay Municipal Utility District (Discharger) discharged approximately 72,000 gallons of potable water with a chlorine residual up to 2 mg/l to San Ramon Creek in violation of Water Code section 13376, Clean Water Act section 301 (33 U.S.C. § 1311), and the San Francisco Bay Water Quality Control Plan (Basin Plan).<sup>1</sup> The unpermitted discharge occurred from a break in a 24-inch steel mortared lined and coated water main, the cause of which the Discharger has not been able to determine. The discharge killed 104 fish, including mosquitofish, Sacramento suckers, hitch, and California roach. The majority of impacted species appeared to be hitch or California roach/hitch hybrids. The Discharger is subject to administrative civil liabilities pursuant to Water Code section 13385(a)(1).

<b>PENALTY FACTOR</b>	<b>ASSESS- MENT</b>	<b>DISCUSSION</b>
Harm or Potential Harm to Beneficial Uses	4	<b>Harm or Potential for Harm:</b> Above moderate A score of 4 (above moderate) is selected because the chlorinated potable water discharge to San Ramon Creek killed 104 fish. The environmental impacts from the potable water discharge were observed and substantial, and posed a “more than moderate threat to beneficial uses . . . .” (State Water Board, Water Quality Enforcement Policy [2010], p. 12.) The Basin Plan designates the following beneficial uses of San Ramon Creek: warm freshwater habitat (WARM), wildlife habitat (WILD), water contact recreation (REC1) and noncontact water recreation

<sup>1</sup> Water Code section 13376 and Clean Water Act section 301 (33 U.S.C. § 1311) prohibit the discharge of pollutants to surface water except as authorized by an NPDES permit. EBMUD applied for coverage under the Statewide NPDES Permit for Drinking Water System Discharges to Waters of the U.S., Order WQ 2014-014-0194-DWQ (Drinking Water Permit), on June 24, 2015, but the State Water Board did not authorize coverage until October 23, 2015. As such, the violation is an unpermitted discharge of pollutants to waters of the U.S. The discharge, however, would also have violated the Drinking Water Permit had authorization been granted because it adversely impacted the beneficial uses of San Ramon Creek.

PENALTY FACTOR	ASSESSMENT	DISCUSSION
		(REC2). The beneficial use most impacted by the chlorinated potable water discharge was WARM. A selection of 4 (above moderate) is therefore appropriate.
Physical, Chemical, Biological, or Thermal Characteristics	2	<b>Degree of Toxicity:</b> Moderate A moderate toxicity risk (score of 2) is appropriate because the discharge “[had] some level of toxicity or pose[d] a moderate level of concern regarding receptor protection.” ( <i>Ibid.</i> , at 13.) Specifically, the discharge consisted of up to 2 mg/l chlorine residual, which is about 100 times the U.S. EPA Water Quality Criterion of 0.019 mg/L for acute (lethal) effects to aquatic life.
Susceptibility to Cleanup or Abatement	1	<b>Susceptibility to Cleanup:</b> no The discharge was not susceptible to cleanup because it quickly comingled with receiving water and flowed downstream. The Enforcement Policy requires a score of 1 where less than 50 percent of a discharge is susceptible to cleanup or abatement. ( <i>Ibid.</i> , at 13.)
Per Gallon and Per Day Factor for Discharge Violations	0.310	<b>Deviation from Requirement:</b> Major The assessment is from Tables 1 and 2 of the Enforcement Policy based on the sum of the above factors and the degree of deviation from requirement.  A “Major” deviation from requirement is selected because the violation caused toxicity in San Ramon Creek thus rendering ineffective the essential function of the requirement that was violated. The Discharger violated Water Code section 13376 by discharging pollutants to surface waters without an NPDES permit. The NPDES permit most applicable to this type of discharge is the Drinking Water Permit. One of the essential functions of Water Code section 13376 and all NPDES permits, including the Drinking Water Permit, is to protect water quality and beneficial uses. Had the discharge been authorized under the Drinking Water Permit (see footnote above), it would have violated the permit’s Receiving Water Limitation V.E, which requires that a discharge “not cause or contribute to an occurrence of . . . toxicity <sup>2</sup> .” The unauthorized discharge produced a detrimental physiological response in aquatic life: a fish kill. Thus, the discharge rendered ineffective the permit limitation and in turn rendered ineffective an essential function of Water Code section 13376.
Adjustment for High Volume Discharges	none	Application of a high volume adjustment for this incident is unwarranted because 72,000 gallons is not a high volume, and any adjustment would result in an inappropriately low penalty considering the circumstances.
<b>Initial Liability</b>	<b>\$223,200</b>	The initial liability is calculated as follows: [Per gallon factor (0.310), multiplied by the maximum per day amount (\$10), multiplied by the volume exceeding 1,000 gallons that is discharged and not cleaned up (72,000 gallons minus 1,000 gallons)] plus [Per day factor (0.310), multiplied by the maximum per day amount of liability allowed (\$10,000), multiplied by the number of days of violation (1) as shown below:  = [(0.310) x \$10/gallons x 71,000 gallons] + [(0.310) x \$10,000/day x 1 day]
<b>Adjustments for Discharger Conduct</b>		
Culpability	1.0	A neutral culpability multiplier of 1.0 is appropriate because the discharge was unplanned, and there is no evidence that the Discharger had prior indication the

<sup>2</sup> The Drinking Water Permit defines toxicity as “toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.”

PENALTY FACTOR	ASSESSMENT	DISCUSSION
		<p>water main would break. The Discharger reported that the pipe was relatively new (installed in 1971), and there had not been leaks or breaks from that pipe segment.</p> <p>For these reasons, this pipe segment was not on the Discharger’s priority list for replacement or rehabilitation. The Discharger has an asset management program that evaluates pipe and appurtenance leak potential based on age, material and leak history; and has a risk based priority ranking system for rehabilitation and replacement.</p> <p>The Discharger has increased, and plans to increase further, its annual water distribution pipeline replacement rate from approximately 10 miles per year in FY2014 to 15 miles per year over the next five years. The approximate cost of the increased annual replacement rate over the next five years is \$63 million, which includes a pilot study to research ways to make the pipeline repair process more efficient. The Discharger’s long-term plan is to increase its replacement rate to 40 miles per year, which is about 1.0 percent of the entire system.</p>
Cleanup and Cooperation	1.1	<p>A higher than neutral multiplier is appropriate because the Discharger failed to properly conduct an environmental impact assessment following the discharge due to miscommunication between the Discharger’s field staff and its Environmental Compliance Staff (ECS). The Discharger only became aware of the impacts a day after the discharge, when the California Department of Fish and Wildlife called to report dead fish in San Ramon Creek downstream of the discharge.</p> <p>The Discharger arrived at the discharge location 63 minutes after becoming aware of the discharge and its field staff immediately deployed best management practices (BMPs), namely sediment controls and dechlorination tablets (in mats and strips), at the only storm drain inlet that was located on the street next to the discharge.</p> <p>Based on the Discharger’s field staff report, its ECS concluded that the discharge volume was much smaller than the actual volume and that the discharge only entered into the one storm drain inlet where field staff applied BMPs. Thus, the ECS did not go to the scene to take water quality samples or assess impacts downstream on the day of the discharge. In actuality, there were multiple flow pathways to San Ramon Creek. These include a drain inlet on South Broadway, sheet flow along Iron Horse Trail and down the creek bank, and directly into the creek from underneath a culvert. The Discharger reports that it has since improved upon communication protocols between its field staff and ECS.</p> <p>Samples the day after the discharge indicated no residual chlorine detected in San Ramon Creek, but the discharge had likely flowed further downstream and dissipated by then.</p>
History of Violations	1.1	<p>The Discharger has a history of violations associated with its water mains. An Administrative Civil Liability Order was issued in 2012 for two planned water main discharges in 2010, one of which resulted in a fish kill and the other for failure to adequately implement BMPs. Therefore, in accordance with the Enforcement Policy, a minimum multiplier of 1.1 is appropriate. (<i>Ibid.</i>, at 17.)</p>
<b>Total Base Liability</b>	<b>\$270,072</b>	<p>The <b>Total Base Liability Amount</b> is calculated by multiplying the initial liability amount from above by each factor relating to the Discharger’s conduct.</p>
Ability to Pay and	1.0	<p>The Discharger has not demonstrated an inability to pay the proposed amount. In addition, the Discharger’s Water System budgets for fiscal year (FY) 2016 (July 1, 2015, to June 30, 2016) and FY 2017 (July 1, 2016, to June 30, 2017) are \$667</p>

<b>PENALTY FACTOR</b>	<b>ASSESSMENT</b>	<b>DISCUSSION</b>
Continue in Business		million and \$733 million, respectively, which appear more than adequate to pay the penalty.
Economic Benefit	1.0	The Regional Water Board Prosecution Staff did not find a significant economic benefit associated with the violations since this was an unplanned discharge due to an unanticipated break in a water main. The circumstances of the violation have no direct association with economic benefit to the Discharger. The proposed penalty recaptures economic benefit plus 10 percent.
<b>Other Factors as Justice May Require</b>		
Staff Costs	none	For this case, Regional Water Board Prosecution Staff cost is not assessed.
Other Factors	none	
Maximum Liability	\$720,000	Water Code section 13385 allows up to \$10,000 for each day in which the violation occurs; and \$10 for each gallon exceeding 1,000 gallons that is discharged and not cleanup. The maximum liability is based on 71,000 gallons and one day of violation.
<b>Final Liability</b>	<b>\$270,000 (rounded)</b>	The final liability amount is the total base liability after appropriate adjustments for ability to pay, economic benefit, other factors, and maximum liability.

**ATTACHMENT B**

**Factors in Determining  
Administrative Civil Liability**

**EAST BAY MUNICIPAL UTILITY DISTRICT  
DISCHARGE OF 2.2 MILLION GALLONS OF CHLORINATED POTABLE WATER  
TO LAS TRAMPAS CREEK  
LAFAYETTE, CONTRA COSTA COUNTY**

The State Water Resources Control Board Water Quality Enforcement Policy (Enforcement Policy) establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors required by Water Code section 13385, subdivision (e). Each factor in the Enforcement Policy and its corresponding category, adjustment, and amount for the alleged violation is presented below. The Enforcement Policy should be used as a companion document in conjunction with this administrative civil liability assessment since the penalty methodology and definition of terms are not replicated herein. The Enforcement Policy is at: [http://www.waterboards.ca.gov/water\\_issues/programs/enforcement/docs/enf\\_policy\\_final111709.pdf](http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf)

**ALLEGED VIOLATION**

On November 27, 2015, the East Bay Municipal Utility District (Discharger) discharged approximately 2.2 million gallons (MG) of potable water with a chlorine residual up to 2 mg/l to Las Trampas Creek in violation of Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States, Order WQ 2014-0194-DWQ (Drinking Water Permit or Permit) section V. The unplanned discharge violated the Drinking Water Permit’s receiving water limitation for toxicity because it killed at least 19 fish (2 large Sacramento suckers and 17 California roach) in Las Trampas Creek.

The discharge started at 4:32 p.m. and lasted until 10:45 p.m., when the Discharger was able to reduce and control flow to 5 to 10 gallon per minute to maintain positive pressure in the system for public health while repairs were completed. (This smaller discharge volume is not included in this assessment because the Discharger applied effective best management measures (BMPs) in compliance with the Drinking Water Permit.) The unplanned discharge occurred from a longitudinal failure of a 16-inch cast iron water main. The Discharger is subject to administrative civil liabilities pursuant to Water Code section 13385(a)(2).

<b>PENALTY FACTOR</b>	<b>ASSESS- MENT</b>	<b>DISCUSSION</b>
Harm or Potential Harm to Beneficial Uses	4	<b>Harm or Potential for Harm:</b> Above moderate A score of 4 (above moderate) is selected because the Discharger’s Fisheries and Wildlife Biologist staff observed 19 dead fish in Las Trampas Creek on November 30, 2015. The environmental impacts from the unplanned discharge were observed and substantial, and posed a “more than moderate threat to beneficial uses . . . .” (State Water Board, Water Quality Enforcement Policy [2010], p. 12.)  The San Francisco Bay Water Quality Control Plan designates the following beneficial uses of Las Trampas Creek: cold freshwater habitat (COLD),

PENALTY FACTOR	ASSESSMENT	DISCUSSION
		preservation of rare and endangered species (RARE), warm freshwater habitat (WARM), wildlife habitat (WILD), water contact recreation (REC1) and noncontact water recreation (REC2). The beneficial use most impacted by the chlorinated potable water discharge was WARM. A selection of 4 (above moderate) is therefore appropriate.
Physical, Chemical, Biological, or Thermal Characteristics	2	<b>Degree of Toxicity:</b> Moderate A moderate toxicity risk (score of 2) is selected because the discharge “[had] some level of toxicity or pose[d] a moderate level of concern regarding receptor protection.” ( <i>Ibid.</i> , at 13.) Specifically, the discharge consisted of up to 2 mg/l chlorine residual, which is about 100 times the U.S. EPA Water Quality Criterion of 0.019 mg/L for acute (lethal) effects to aquatic life.
Susceptibility to Cleanup or Abatement	1	<b>Susceptibility to Cleanup:</b> no The discharge was not susceptible to cleanup because it quickly comingled with receiving water and flowed downstream. The Enforcement Policy requires a score of 1 where less than 50 percent of a discharge is susceptible to cleanup or abatement. ( <i>Ibid.</i> , at 13.)
Per Gallon and Per Day Factor for Discharge Violations	0.310	<b>Deviation from Requirement:</b> Major The assessment is from Tables 1 and 2 of the Enforcement Policy based on the sum of the above factors and the degree of deviation from requirement.  A “Major” deviation from requirement is selected because the discharge caused toxicity in Las Trampas Creek thus rendering ineffective the essential function of the Drinking Water Permit receiving water limitation that was violated. The Drinking Water Permit Receiving Water Limitation V.E. requires that the discharge “not cause or contribute to an occurrence of . . . toxicity <sup>1</sup> .” However, the unplanned chlorinated potable water discharge contained toxic concentrations that produced detrimental physiological responses in aquatic life (i.e., fish kill) thus rendering the receiving water limitation requirement ineffective.
Adjustment for High Volume Discharges	\$1/gallon	Regional Water Board Prosecution Staff has applied a high volume adjustment of \$1 per gallon for this incident, as authorized under the Enforcement Policy. This adjustment is appropriate because 2.2 MG is a high volume and potable water is similar to recycled water in that both contain chlorine residual at concentrations that are toxic to aquatic life.
<b>Initial Liability</b>	<b>\$684,790</b>	The initial liability is calculated as follows: [Per gallon factor (0.310), multiplied by the high-volume-adjusted per gallon (\$1/gal), multiplied by the volume exceeding 1,000 gallons that is discharged and not cleaned up (2.2 MG minus 1,000 gallons)] plus [Per day factor (0.310), multiplied by the maximum per day amount of liability allowed (\$10,000), multiplied by the number of days of violation (1) as shown below]:  = [(0.310) x \$1/gal x (2.2 MG – 1,000 gallons)] + [(0.310) x \$10,000/day x 1 day]
<b>Adjustments for Discharger Conduct</b>		
Culpability	1.0	A neutral culpability multiplier of 1.0 is appropriate because the discharge was unplanned, and the Discharger did not have any prior indication the water main would break before the discharge occurred. Staff does not have evidence of improper maintenance of the water main.

<sup>1</sup> The Drinking Water Permit defines toxicity as “toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.”

PENALTY FACTOR	ASSESSMENT	DISCUSSION
		<p>The Discharger reported that this pipe segment was not on the Discharger’s priority list for replacement or rehabilitation. The Discharger has an asset management program that evaluates pipe and appurtenance leak potential based on age, material and leak history; and has a risk based priority ranking system for rehabilitation and replacement.</p>
<p>Cleanup and Cooperation</p>	<p>1.0</p>	<p>A neutral cleanup and cooperation factor of 1.0 is appropriate overall because, as described below, the Discharger’s response to the incident was appropriate considering the requirements of the Drinking Water Permit and the extent of the discharge.</p> <p>Upon arriving at the discharge location 28 minutes after becoming aware of the incident, the Discharger addressed immediate public safety concerns and closed affected roads for public and employee safety. In addition, the Discharger used sedimentation control and dechlorination BMPs in some locations where possible during the emergency discharge and releases during repairs.</p> <p>The Discharger also complied with the 24-hour NPDES permit notification requirement by leaving a voice message with Regional Water Board staff the day after the discharge on November 28, 2015. The Discharger also confirmed this notification with a written report submitted within five business days to Regional Water Board staff in an email dated December 4, 2015.</p> <p>The Discharger conducted two creek assessments on Saturday, November 28, 2015, and on Monday, November 30, 2015. Between 8:00 a.m. and 10:30 a.m. on the 28th, the Discharger’s Environmental Compliance staff and Fisheries and Wildlife staff biologist observed water entering Las Trampas Creek through four discharge pathways. Two sediment deposits were noted where water flowed down embankments into the creek. Water in the creek downstream of the release was turbid, preventing a complete visual assessment of the creek. The sediment deposits spread out in an area roughly 10 feet long, 5 feet wide and a few inches deep. The Discharger did not observe any dead fish or impacted species during this limited creek assessment.</p> <p>Based on the November 30, 2015, creek assessment, the Discharger discovered 19 dead fish floating in debris jams or on the creek bottom along the same stretch of Las Trampas Creek as previously assessed.</p> <p>The Discharger repaired the broken water main on November 28, 2015, by replacing a 20-foot segment.</p> <p>The Discharger has increased, and plans to increase further, its annual water distribution pipeline replacement rate from approximately 10 miles per year in FY2014 to 15 miles per year over the next five years. The approximate cost of the increased annual replacement rate over the next five years is \$63 million, which includes a pilot study to research ways to make the pipeline repair process more efficient. The Discharger’s long-term plan is to increase its replacement rate to 40 miles per year, which is about 1.0 percent of the entire system.</p>
<p>History of Violations</p>	<p>1.1</p>	<p>The Discharger has a history of violations associated with its water mains. An Administrative Civil Liability Order was issued in 2012 for two planned water main discharges in 2010, one of which resulted in a fish kill and the other for failure to adequately implement BMPs. Therefore, in accordance with the Enforcement Policy, a minimum multiplier of 1.1 is appropriate. (<i>Ibid.</i>, at 17.)</p>

PENALTY FACTOR	ASSESSMENT	DISCUSSION
<b>Total Base Liability</b>	<b>\$753,269</b>	The <b>Total Base Liability Amount</b> is calculated by multiplying the initial liability amount from above by each factor relating to the Discharger's conduct.
Ability to Pay and Continue in Business	1.0	The Discharger has not demonstrated an inability to pay the proposed amount. In addition, the Discharger's Water System budgets for fiscal year (FY) 2016 (July 1, 2015, to June 30, 2016) and FY 2017 (July 1, 2016, to June 30, 2017) are \$667 million and \$733 million, respectively, which appear more than adequate to pay the penalty.
Economic Benefit	1.0	The Regional Water Board Prosecution Staff did not find a significant economic benefit associated with the violations since this was an unplanned discharge due to an unanticipated break in a water main. The circumstances of the violation have no direct association with economic benefit to the Discharger. The proposed penalty recaptures economic benefit plus 10 percent.
<b>Other Factors as Justice May Require</b>		
Staff Costs	none	For this case, Regional Water Board Prosecution Staff cost is not assessed.
Other Factors	<b>A Lower Penalty Amount is Justified</b>	<p>The Prosecution Team believes that the amount determined using the above factors is inappropriately high after considering additional information provided by EBMUD. For the following reasons, the Total Base Liability Amount should be reduced to <b>\$486,000</b>:</p> <p>The Permit provides regulatory coverage for short-term emergency, unplanned discharges of potable water resulting from a water purveyor's essential operation and maintenance activities undertaken to provide delivery of safe drinking water. Emergency discharges include, among other things, unplanned discharges that occur due to system failures for which the water purveyor is not aware of the discharge until after the discharge has commenced. Discharges authorized under the Permit are determined to not adversely affect or impact beneficial uses of the receiving waters when properly managed through BMPs. For emergency discharges, the Discharger must implement BMP procedures as soon as feasible while concurrently protecting public health and safety.</p> <p>The Permit also contains a strict prohibition. Emergency discharges shall not cause or contribute to the occurrence of "[t]oxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life" in the receiving water. (Permit section IV.V.E.)</p> <p>Here, the Discharger effectively managed the unplanned discharge and tried to protect water quality per the Permit's requirements. A catastrophic pipe break caused the unplanned discharge. The Discharger responded within 30 minutes of the reported break and diligently tried to implement BMPs. The initial deployment of BMPs, however, was ineffective because the flow rate (roughly 100 times greater than a typical priority main break) washed away the BMPs.</p> <p>The Prosecution Team acknowledges that a water purveyor's response to an emergency, unplanned main break is reactive. The Discharger can only deploy BMPs until the main break is discovered and the circumstances of the break allow implementation of effective BMPs. Despite the Discharger's identification of isolation valves, reduction of flow, and subsequent implementation of effective BMPs, it violated the prohibition. To the Discharger's credit, the Discharger's response likely reduced the overall environmental impacts of the discharge.</p>

<b>PENALTY FACTOR</b>	<b>ASSESSMENT</b>	<b>DISCUSSION</b>
		<p>The Prosecution Team assessed a Major deviation from requirement due to the strict prohibition language. This assessment is the main factor behind the high Initial Liability Amount. The Prosecution Team—in recognition of the strict prohibition, the Permit’s purpose, and the unique facts above—believes that an appropriate Total Base Liability Amount is \$486,000, which is commensurate with a penalty amount assessed had the violation been classified as a Moderate deviation from the requirement rather than a Major deviation. The reduction of liability in this manner is not intended to alter the manner in which the “deviation from requirements” standard is applied for similar violations in the future but is meant to recognize the unique circumstances of this case.</p>
<p>Maximum Liability</p>	<p>\$22,000,000</p>	<p>Water Code section 13385 allows up to \$10,000 for each day in which the violation occurs; and \$10 for each gallon exceeding 1,000 gallons that is discharged and not cleanup. The maximum liability is based on 2,199,000 gallons and one day of violation.</p>
<p><b>Final Liability</b></p>	<p><b>\$486,000</b></p>	<p>The final liability amount is the total base liability after appropriate adjustments for ability to pay, economic benefit, other factors, and maximum liability.</p>

**ATTACHMENT C**

**Factors in Determining  
Administrative Civil Liability**

**EAST BAY MUNICIPAL UTILITY DISTRICT  
DISCHARGE OF 191,400 GALLONS OF CHLORINATED POTABLE WATER TO AN  
UNNAMED TRIBUTARY TO SAN RAMON CREEK  
DANVILLE, CONTRA COSTA COUNTY**

The State Water Resources Control Board Water Quality Enforcement Policy (Enforcement Policy) establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors required by Water Code section 13385, subdivision (e). Each factor in the Enforcement Policy and its corresponding category, adjustment, and amount for the alleged violation is presented below. The Enforcement Policy should be used as a companion document in conjunction with this administrative civil liability assessment since the penalty methodology and definition of terms are not replicated herein. The Enforcement Policy is at: [http://www.waterboards.ca.gov/water\\_issues/programs/enforcement/docs/enf\\_policy\\_final111709.pdf](http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf)

**ALLEGED VIOLATION**

On May 3, 2016, the East Bay Municipal Utility District (Discharger) discharged approximately 191,400 gallons of potable water with a chlorine residual of between 2.3 and 2.5 mg/l to an unnamed tributary to San Ramon Creek in violation of Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States, Order WQ 2014-0194-DWQ (Drinking Water Permit) section V. The unplanned discharge violated the Drinking Water Permit’s receiving water limitation for toxicity because it killed 386 fish (59 Sacramento suckers, 140 California roach, 75 mosquitofish, 100 three-spined stickleback, 2 fathead minnows, 6 green sunfish and 4 bluegill) in San Ramon Creek.

The discharge started at 4:56 a.m. and lasted until 7:50 a.m., when the Discharger was able to close the necessary valve. The unplanned discharge occurred due to a break in a 10-inch cast iron water main at a bell joint. The Discharger is subject to administrative civil liabilities pursuant to Water Code section 13385(a)(2).

<b>PENALTY FACTOR</b>	<b>ASSESS- MENT</b>	<b>DISCUSSION</b>
Harm or Potential Harm to Beneficial Uses	4	<b>Harm or Potential for Harm:</b> Above moderate A score of 4 (above moderate) is selected because the discharge killed 386 fish in San Ramon Creek on May 4, 2016. The environmental impacts from the unplanned discharge were observed and substantial, and posed a “more than moderate threat to beneficial uses . . . .” (State Water Board, Water Quality Enforcement Policy [2010], p. 12.)  The San Francisco Bay Water Quality Control Plan designates the following beneficial uses of San Ramon Creek: warm freshwater habitat (WARM), wildlife habitat (WILD), water contact recreation (REC1) and noncontact water recreation

PENALTY FACTOR	ASSESSMENT	DISCUSSION
		(REC2). The beneficial use most impacted by the chlorinated potable water discharge was WARM.
Physical, Chemical, Biological, or Thermal Characteristics	2	<b>Degree of Toxicity:</b> Moderate A moderate toxicity risk (score of 2) is selected because the discharge “[had] some level of toxicity or pose[d] a moderate level of concern regarding receptor protection.” ( <i>Ibid.</i> , at 13.) Specifically, the discharge consisted of up to 2.5 mg/l chlorine residual, which is about 130 times the U.S. EPA Water Quality Criterion of 0.019 mg/L for acute (lethal) effects to aquatic life.
Susceptibility to Cleanup or Abatement	1	<b>Susceptibility to Cleanup:</b> no The discharge was not susceptible to cleanup because it quickly comingled with receiving water and flowed downstream. The Enforcement Policy requires a score of 1 where less than 50 percent of a discharge is susceptible to cleanup or abatement. ( <i>Ibid.</i> , at 13.)
Per Gallon and Per Day Factor for Discharge Violations	0.310	<b>Deviation from Requirement:</b> Major The assessment is from Tables 1 and 2 of the Enforcement Policy based on the sum of the above factors and the degree of deviation from requirement.  A “Major” deviation from requirement is selected because the discharge caused toxicity in San Ramon Creek thus rendering ineffective the essential function of the Drinking Water Permit receiving water limitation that was violated. The Drinking Water Permit Receiving Water Limitation V.E. requires that the discharge “not cause or contribute to an occurrence of . . . toxicity <sup>1</sup> .” However, the unplanned chlorinated potable water discharge produced detrimental physiological responses in aquatic life (i.e., fish kill) thus rendering the receiving water limitation requirement ineffective.
Adjustment for High Volume Discharges	\$3/gal	A high volume adjustment for this incident is selected because 191,400 gallons is a marginally high volume discharge. The Enforcement Policy allows a reduction of the maximum per gallon amount (\$10/gallon) for high volume discharges and recommends a maximum of \$1/gallon for high volume discharges of recycled water unless “reducing [the] maximum amounts results in an inappropriately small penalty . . . a higher amount, up to the maximum per gallon, may be used.” ( <i>Ibid.</i> at 14.)  Potable water is similar to recycled water in that both contain chlorine residual at concentrations that are toxic to aquatic life. However, application of \$1/gallon for this incident would result in an inappropriately small penalty due to its impact on beneficial uses. The Prosecution Team used \$3/gallon to calculate the initial liability amount because the resulting penalty is a suitable deterrent and bears a reasonable relationship to the gravity of the violation and the harm to beneficial uses.
<b>Initial Liability</b>	<b>\$180,172</b>	The initial liability is calculated as follows: [Per gallon factor, multiplied by the maximum per gallon amount (\$10) or if applied the adjusted high volume per gallon amount, multiplied by the volume exceeding 1,000 gallons that is discharged and not cleaned up] plus [Per day factor, multiplied by the maximum per day amount of liability allowed (\$10,000), multiplied by the number of days of violation as shown below:  $= [(0.310) \times \$3/\text{gallons} \times 190,400 \text{ gallons}] + [(0.310) \times \$10,000/\text{day} \times 1 \text{ day}]$

<sup>1</sup> The Drinking Water Permit defines toxicity as “toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.”

PENALTY FACTOR	ASSESSMENT	DISCUSSION
<b>Adjustments for Discharger Conduct</b>		
Culpability	1.0	<p>A neutral culpability multiplier of 1.0 is appropriate because the discharge was unplanned, and the Discharger did not have any prior indication the water main would break before the discharge occurred. Staff does not have evidence of improper maintenance of the water main.</p> <p>The Discharger reported that this pipe segment was not on the Discharger’s priority list for replacement or rehabilitation. The Discharger has an asset management program that evaluates pipe and appurtenance leak potential based on age, material and leak history; and has a risk based priority ranking system for rehabilitation and replacement. Under a risk model in line with the methodology recommended in Water Research Foundation Report #4408 (2012), the 10,400-foot reach of pipeline on which the May 3, 2016, leaked occurred was considered to have a “low” risk of failure at the time of the main break.</p>
Cleanup and Cooperation	1.0	<p>A neutral cleanup and cooperation factor of 1.0 is appropriate overall because, as described below, the Discharger’s response to the incident was reasonable considering the requirements of the Drinking Water Permit.</p> <p>Upon arriving at the discharge location 41 minutes after becoming aware of the incident, the Discharger addressed immediate public safety concerns and closed an affected road for public and employee safety. In addition, the Discharger used sedimentation control and dechlorination best management practices (BMPs) in locations where possible during the emergency discharge.</p> <p>The Discharger also complied with the 24-hour NPDES permit notification requirement by sending an email to Regional Water Board staff and the Town of Danville (the municipal separate storm sewer system operator) the day of the discharge on May 3, 2016. The Discharger also confirmed this notification with a written report submitted within five business days to Regional Water Board staff in an email dated May 10, 2016.</p> <p>The Discharger repaired the broken water main on May 3, 2016, by installing a new 4.5-foot section of pipe.</p> <p>The Discharger conducted two creek assessments on May 3 and 4, 2016. At approximately 8:30 a.m., on May 3, the Discharger’s Environmental Compliance staff observed turbid water and two dead bullfrog tadpoles in the creek downstream of the confluence with the unnamed tributary. Based on this initial observation, the Discharger deployed its Fisheries and Wildlife Biologist (Biologist) to assess the creek impacts.</p> <p>At approximately 10:30 a.m., on May 3, the Discharger’s Biologist arrived and assessed that sediment from the discharge deposited a bar in the creek at the confluence. The Discharger’s Biologist also observed that the turbidity was noticeably higher for approximately one mile downstream of the confluence than it was upstream. Due to the high turbidity, the Discharger’s Biologist determined that a biological impact survey of the creek could not be completed until the turbidity settled out. However, the Discharger’s Biologist did observe a 3-inch sunfish exhibiting signs of distress in the creek about a half mile downstream of the confluence.</p>

PENALTY FACTOR	ASSESS-MENT	DISCUSSION
		<p>Between 9:30 a.m. and 2:00 p.m. on May 4, the Discharger’s Biologist conducted a fisheries impacts assessment at 8 locations along a 2.5 mile stretch of the creek and found approximately 386 dead fish and 13 dead bullfrog tadpoles in slack waters behind concrete drop structures, in eddies, and in vegetation debris jams.</p> <p>The Discharger has increased, and plans to increase further, its annual water distribution pipeline replacement rate from approximately 10 miles per year in FY2014 to 15 miles per year over the next five years. The approximate cost of the increased annual replacement rate over the next five years is \$63 million, which includes a pilot study to research ways to make the pipeline repair process more efficient. The Discharger’s long-term plan is to increase its replacement rate to 40 miles per year, which is about 1 percent of the entire system.</p>
History of Violations	1.1	The Discharger has a history of violations associated with its water mains. An Administrative Civil Liability Order was issued in 2012 for two planned water main discharges in 2010, one of which resulted in a fish kill and the other for failure to adequately implement BMPs. Therefore, in accordance with the Enforcement Policy, a minimum multiplier of 1.1 is appropriate. ( <i>Ibid.</i> , at 17.)
<b>Total Base Liability</b>	<b>\$198,190 (rounded)</b>	The <b>Total Base Liability Amount</b> is calculated by multiplying the initial liability amount from above by each factor relating to the Discharger’s conduct.
Ability to Pay and Continue in Business	1.0	The Discharger has not demonstrated an inability to pay the proposed amount. In addition, the Discharger’s Water System budgets for fiscal year (FY) 2016 (July 1, 2015, to June 30, 2016) and FY 2017 (July 1, 2016, to June 30, 2017) are \$667 million and \$733 million, respectively, which appear more than adequate to pay the penalty.
Economic Benefit	1.0	The Regional Water Board Prosecution Staff did not find a significant economic benefit associated with the violations since this was an unplanned discharge due to an unanticipated break in a water main. The circumstances of the violation have no direct association with economic benefit to the Discharger. The proposed penalty recaptures economic benefit plus 10 percent.
<b>Other Factors as Justice May Require</b>		
Staff Costs	none	For this case, Regional Water Board Prosecution Staff cost is not assessed.
Maximum Liability	\$1,914,000	Water Code section 13385 allows up to \$10,000 for each day in which the violation occurs; and \$10 for each gallon exceeding 1,000 gallons that is discharged and not cleanup. The maximum liability is based on 190,400 gallons and one day of violation.
<b>Final Liability</b>	<b>\$198,190</b>	The final liability amount is the total base liability after appropriate adjustments for ability to pay, economic benefit, other factors, and maximum liability.

## ATTACHMENT D

### **East Bay Municipal Utility District Proposal for Enhanced Compliance Action (ECA) Water Distribution Pipe Leak Monitoring and Response Near Creeks**

- 1. Project Title:** Water Distribution Pipe Leak Monitoring and Response Near Creeks Project
- 2. Service Area:** East San Francisco Bay Region
- 3. Name of Responsible Entity:** East Bay Municipal Utility District (EBMUD)
- 4. Estimated Cost for Project Completion:** EBMUD will install approximately 970 leak detection loggers at 485 locations (the precise number may be adjusted depending on field conditions). The total cost to purchase 970 leak detection loggers will be about \$1.16 million. This does not include costs for EBMUD staff to install and monitor the devices, or respond to any leaks identified.
- 5. EBMUD Contact Information:**

Michael Ambrose, Manager of Regulatory Compliance  
East Bay Municipal Utility District  
375 11<sup>th</sup> Street  
Oakland, CA 94607  
Tel. No.: (510) 287-1256  
Email: michael.ambrose@ebmud.com
- 6. Project Goals and Description:** The goal of this project is to minimize the risk of unplanned discharges of potable water to local creeks by installing leak detection loggers on water distribution pipes to detect and repair leaks near creeks when they are small, and detect pipe breaks faster than the current approach.

EBMUD has approximately 4,165 miles of water distribution pipelines spread out over its 331-square-mile service area. These pipes were installed over time using various materials of varying lengths and diameters. The pipes may leak or break for a number of reasons, such as corrosion, water pressure fluctuations, fault creep, external damage, landslide, etc. In general, pipes leak before they break or burst. There are three basic phases in responding to a leak or break: awareness, location, and repair. In most cases, EBMUD becomes aware of a leak or break when someone notices and reports the discharging water. Small leaks that do not surface and remain underground are difficult to identify.

Acoustic leak detection can be used to identify and locate small leaks, especially those that do not reach the surface and remain underground. Water escaping a pipe under pressure creates a sound wave that travels down the pipe walls and water column. As the sound travels down the pipe and water column, it loses energy as it encounters joints and fittings. The

ability to use acoustic detection depends on several variables, including the distance from the sensor to the leak, water pressure, pipe materials, pipe size, surrounding soil, etc. A leak detection logger uses an acoustic sensor connected to a recording device that can be programmed to turn on and off at different times to listen for leaks. The sensor is an electro-mechanical transducer that converts the mechanical sound waves from the water escaping the pipe into electrical signals.

EBMUD has identified 485 locations where 12-inch water distribution pipes cross or pass within 100 feet of a creek that may contain fish. EBMUD has larger diameter pipes installed near or crossing creeks, but it selected the 12-inch pipes for this project because the leak detection technology is proven for this pipe size and can be quickly deployed at these locations.

Typically, two leak detection loggers will be deployed at each of the 485 locations to monitor leakage and detect possible pipe breaks. The loggers will be battery-powered and installed on two fire hydrants in the area (although there may be situations where the pipe crosses or comes near a creek and only one fire hydrant is present, thus only one logger will be installed). The loggers will be programmed to listen frequently (hourly). When a potential leak or break is detected, the logger will send an alarm via a web-based application that processes the information and can send leak notification alerts to responsible EBMUD staff. EBMUD staff can then access sound files and suspected points of interest through a web-based user interface. Files associated with known interference will be filtered so field resources are not unnecessarily deployed. The two loggers will also be used to determine the approximate location of the leak.

After a potential leak or break has been detected, an EBMUD crew will deploy to the site and conduct a more intense leak detection investigation to confirm the presence of a pipe leak. If the presence and location of a pipe leak is confirmed, the leak repair will be scheduled in accordance with EBMUD's existing priority system.

7. **Water Quality and Beneficial Uses:** Using these loggers, EBMUD staff can respond to leaks before they surface and respond to pipe breaks sooner, thus reducing the volume of water lost and the environmental impact of unplanned potable water discharges due to sediment deposition and chloramine toxicity.
8. **Confirmation that the ECA Contains Only Measures that Go Above and Beyond Applicable Obligations of the Discharger:** EBMUD is under no prior obligation to install the leak detection equipment described here; therefore, the project qualifies as an ECA.
9. **Demonstration that the ECA Does Not Directly Benefit, in a Fiscal Manner, a Water Board's Functions, its Members, or its Staff:** While the installation of leak detection loggers on water pipes in environmentally sensitive areas will advance the Regional Water Board's goals in protecting water and riparian habitats from pollution, and enhancing water quality, the project funding will not directly benefit Regional Water Board functions, members, or staff in a fiscal manner. EBMUD funding of this project will directly relate to the alleged violations addressed through the Water Board's imposition of an Administrative

Civil Liability. EBMUD will implement the project in the same region where the discharges that are the subject of this Administrative Civil Liability occurred. The project does not advance a project or activity directly under the purview or under the direction of the Regional Water Board, its members, or staff, nor is it related to any abatement order or other legal or administrative mandate imposed upon the Regional Water Board.

**10. Project Schedule, Milestones, and Deliverables:** EBMUD is responsible for providing all deliverables described below and in Table 1 for each project phase.

- a. **Purchase Contract Award:** The EBMUD Board of Directors has provided the authority to purchase the leak detection loggers.
- b. **Plan for Deployment:** EBMUD shall purchase and install all leak detection loggers for this project during the first quarter following adoption of the Stipulated Order.
  - Deliverable: Quarterly Report #1.
- c. **Quarterly Reports:** EBMUD shall submit certified Quarterly Reports on its progress with project implementation as described in Table 1.
- d. **Final Report:** EBMUD shall provide a final report documenting completion of the project. The final report shall include a summary of all tasks completed, including a description of the implementation and deployment of the loggers, and summary of leaks and breaks found and repaired, progress on technology for larger pipes, and accounting of all expenditures. The accounting must clearly document that the final cost of the ECA is equal to or more than the suspended liability of \$382,095. The report shall be completed under penalty of perjury and shall include the certified statements required by the Stipulated Order, section III, paragraphs 15.b and 18.
  - Deliverables: Final Report including the above information

**Table 1 – Deliverables Table**

<b>Due Date</b>	<b>Description</b>	<b>Deliverable</b>
12/31/2017	Quarterly Report, including status of the following items: <ul style="list-style-type: none"> <li>Leak detection loggers purchased (proof of payment, invoices)</li> <li>Leak detection loggers deployed (table with geo-location of each device)</li> <li>Summary of first set of data harvested through the devices</li> </ul>	Quarterly Report #1 (QR#1)
3/31/2018	Quarterly Report, including status of the following items: <ul style="list-style-type: none"> <li>Leak detection logger implementation and deployment summary</li> <li>Number and date of leaks or breaks indicated by acoustic leak detection loggers</li> <li>Number of leaks or breaks indicated by loggers and investigated</li> <li>Number of leaks or breaks indicated by loggers and repaired</li> <li>Number of leaks indicated by loggers and scheduled for investigation or repair</li> <li>Number of pipe failures located within installed leak detection logger device areas but not detected</li> <li>Table of costs to date for leak detection loggers, including invoices (if not completed in QR#1)</li> <li>Narrative summary of research completed to identify technology that can detect leaks on pipe diameters larger than 12 inches</li> </ul>	Quarterly Report #2 (QR#2)
6/30/2018	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #3 (QR#3)
9/30/2018	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #4 (QR#4)
12/31/2018	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #5 (QR#5)
3/31/2019	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #6 (QR#6)
6/30/2019	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #7 (QR#7)
9/30/2019	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #8 (QR#8)
12/31/2019	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #9 (QR#9)
3/31/2020	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #10 (QR#10)
6/30/2020	Quarterly Report, including but not limited to, status of the items highlighted for QR#2	Quarterly Report #11 (QR#11)
9/30/2020	Final Report	Final Report

**11. Reports to the Water Board:** All deliverables, reports, and accounting invoices pertaining to this project shall be submitted to the Regional Water Board, a third party oversight organization (San Francisco Estuary Partnership or “SFEP”), and the State Water Resources

Control Board Office of Enforcement. SFEP will review the reports to ensure that they meet the requirements set forth here and the Stipulated Order. EBMUD will be deemed to have fully performed its ECA-related obligations at such time that it has timely completed the actions, including the reporting and accounting obligations, described in paragraph 10, above, and in compliance with Stipulated Order, section III, paragraphs 15.b and 18.

**12. Third Party Oversight Organization:** EBMUD shall cover the full costs of project oversight. Oversight costs are not considered part of the project's direct cost. EBMUD shall use SFEP to provide third party oversight for this project and shall pay SFEP's invoice for oversight services, which will be sent to EBMUD after the Stipulated Order becomes effective. If the Executive Officer extends the ECA Completion Date past September 30, 2020, EBMUD shall be responsible for any additional oversight costs incurred as a result of the extension.. For oversight of the project, SFEP will report directly to the Regional Water Board.

All reports must be emailed to the following:

Adrien Baudrimont  
San Francisco Estuary Partnership  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
(510) 622-2337  
Adrien.Baudrimont@sfestuary.org

Michael Chee  
Regional Water Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
(510) 622-2333  
Michael.Chee@waterboards.ca.gov

Jasmine Oaxaca  
State Water Resources Control Board  
Office of Enforcement  
801 K Street, 23rd Floor  
Sacramento, CA  
(916) 322-5327  
Jasmine.Oaxaca@waterboards.ca.gov