

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

COMPLAINT NO. R2-2011-0005

ADMINISTRATIVE CIVIL LIABILITY
IN THE MATTER OF

DISCHARGING WITHOUT PERMITS
EAST BAY MUNICIPAL UTILITY DISTRICT
SAUSAL CREEK, OAKLAND, ALAMEDA COUNTY
AND

RELIEZ VALLEY CREEK, LAFAYETTE, CONTRA COSTA COUNTY

This Complaint is issued to the East Bay Municipal Utility District (the Discharger) under the authority of California Water Code (CWC) Section 13323 to assess administrative civil liability pursuant to CWC Section 13385. The Complaint addresses the Discharger's unpermitted discharges of approximately 4,200 gallons of improperly dechlorinated water into Sausal Creek in Oakland and approximately 23,400 gallons of sediment-laden potable drinking water into Reliez Valley Creek in Lafayette.

The Assistant Executive Officer of the California Regional Water Quality Control Board (Regional Water Board) hereby gives notice that:

1. The Discharger is a drinking water purveyor in the State of California, and it operates and distributes chlorinated potable water via water pipelines in Alameda and Contra Costa counties, including in the cities of Oakland and Lafayette.
2. The Discharger is alleged to have violated provisions of the law for which the Regional Water Board may impose civil liability pursuant to CWC Section 13385. This Complaint proposes to assess \$76,600 in penalties for the violations cited based on the considerations described herein.
3. Unless waived, the Regional Water Board will hold a hearing on this matter on May 11, 2011, in the Elihu M. Harris State Building, First Floor Auditorium, 1515 Clay Street, Oakland, California, 94612. The attached Hearing Procedure provides important information on how those proceedings will be conducted and deadlines by which parties must take specific actions and/or submit information.

**STATEMENT OF PROHIBITIONS AND REQUIREMENTS APPLICABLE TO
DISCHARGER**

4. Section 301 of the Federal Water Pollution Control Act (33 U.S.C. § 1311) (Clean Water Act) and CWC section 13376 prohibit the discharge of pollutants from a point source to

surface water except in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit.

5. Chlorine residue and sediment are pollutants under the CWA and subject to NPDES permitting requirements (CWA § 502(6)).

ALLEGED VIOLATIONS OF PROHIBITIONS AND REQUIREMENT APPLICABLE TO THE DISCHARGER

6. Violation One: Over a three day period on August 3, 4, and 5, 2010, the Discharger released approximately 4,200 gallons of improperly dechlorinated water into Sausal Creek in the City of Oakland. The discharge was an unauthorized discharge of pollutants from a point source to waters of the United States in violation of CWC section 13376 and CWA section 301. Accordingly, Violation One is subject to the assessment of liability under CWC section 13385 subds. (a)(1) and (5).
7. Violation Two: A main break in the Discharger's drinking water supply system resulted in the discharge of approximately 23,400 gallons of sediment-laden chlorinated potable water to Reliez Valley Creek beginning on January 13, 2010 and continuing through January 15, 2010. The discharge was an unauthorized discharge of pollutants from a point source to waters of the United States in violation of CWC section 13376 and CWA section 301. Accordingly, Violation Two is also subject to the assessment of liability under CWC section 13385 subds. (a)(1) and (5).

BACKGROUND

8. The Discharger operates a potable water distribution system and, as such, has both planned and unplanned discharges from the system. Planned discharges include hydrant flushing, reservoir dewatering, line testing, and similar discharges. Unplanned discharges include pipe breaks and reservoir overflows.
9. The Discharger does not have permit coverage for its planned or unplanned discharges. Thus, every chlorinated and/or sediment-laden discharge to waters of the United States and/or waters of the state is a violation of applicable requirements to obtain permit coverage for discharges of waste. However, Regional Water Board staff has generally indicated we will not recommend formal enforcement to the Board as long as the Discharger implements and maintains effective BMPs to minimize and control pollutants in the discharges.
10. The existence of these discharges became significantly more important in 1998 as the Discharger phased in chloramine disinfection for its drinking water.¹ This is because chloramines, unlike chlorine, persist in water, and because they remain present, are

¹ --, undated (ca. 1999) document provided by EBMUD management. "History of Dechlorination Field Management Practices."

significantly more likely to have a negative impact on beneficial uses, including acute toxicity to fish, should a discharge reach a receiving water (e.g., Sausal Creek).

11. The Discharger has discussed the issue of the potential impacts of these discharges into sensitive creeks in the East Bay with municipalities and local creek groups at meetings held in 2005, 2006, and 2007. In response to those meeting, the Discharger proposed to develop and implement a protocol to identify sensitive water bodies and respond faster to discharges to those water bodies.
12. Partly in response to concern expressed by government entities including NOAA-NMFS, the Regional Water Board, State Department of Fish and Game, and local municipalities, as well as numerous local creek and environmental groups, the Discharger has implemented BMP protocols to control pollutants from planned and unplanned discharges.
13. The Discharger has also participated in helping to prepare, has prepared, or has funded preparation of documents identifying the need for such measures, including, but not limited to:
 - Woodward-Clyde Consultants, October 19, 1998. Evaluation of Water Main Repair Best Management Practices. This document was prepared for the Discharger.
 - California-Nevada Section, American Water Works Association, 2005. Guidelines for the Development of your Best Management Practices (BMP) Manual for Drinking Water System Releases. Discharger staff was a member of the document's technical review workgroup.
 - Tikkanen, Schroeter, et al., July 9, 2006. Guidance Manual for the Disposal of Chlorinated Water. Discharger staff were coauthors of the manual.
 - EBMUD, 2006. Regulatory Compliance Office: Employee Field Guide (EFG)(formerly "Field Operations Guide"). Discharger's guide, for use by Discharger's staff, provides information on the need to dechlorinate discharges and implement other BMPs.
14. While the Discharger's management typically reports that the BMP protocols are followed and are effective in controlling pollutants, the violations alleged herein demonstrate significant shortcomings in the Discharger's BMP implementation and effectiveness.

FACTUAL BASIS FOR THE ALLEGED VIOLATIONS

The following facts are the basis of the alleged violations in this matter:

15. Violation One: Sausal Creek Discharge

- a. From August 3 until August 5, 2010, the Discharger's maintenance crews were working on a drinking water pipeline in the vicinity of Dimond Park in Oakland. During that work, the Discharger's crews discharged a total of about 4,200 gallons of water,

comprised of approximately 1,500 gallons on August 3, approximately 1,500 gallons on August 4, and approximately 1,200 gallons on August 5, to a storm drain that discharges into Sausal Creek. The water discharged on August 3 and 4 had been super-chlorinated by the Discharger as described in the Discharger's Sausal Creek Discharge Investigative Report of September 3, 2010, and used to disinfect the newly installed drinking water pipeline. The water was then stored in the Discharger's truck for dechlorination. The Discharger did not measure the water's chlorine residual prior to discharging it to a storm drain that discharges into Sausal Creek.

Also per the Discharger's September 3 report, the water discharged on August 5 consisted wholly of "system water," which typically has a lower chlorine residual of about 2.2 mg/L. The Discharger reported that there were two separate batch discharges of system water on August 5. Approximately 1,000 gallons of system water were released, via a dechlorinating diffuser containing sodium sulfite tablets, to a storm drain inlet that leads to Sausal Creek. Another batch of approximately 200 to 400 gallons of system water was used to rinse the Discharger's tanker truck. This water was reportedly dechlorinated in the truck prior to being released to a storm drain at the base of Wellington Street that flows to Sausal Creek. The Discharger did not measure the water's chlorine residual prior to discharging it to the storm drain in either case.

- b. On August 5, 2010, around 11:00 am, Kristin Hathaway of the City of Oakland's Watershed and Stormwater Management Program discovered a rainbow trout fish kill in a pool in Sausal Creek in Dimond Park, while she was on a site visit with consultants for a planned Sausal Creek restoration project. About 200 feet upstream from the pool, she found the Discharger's crews working at the foot of Wellington Street. She observed water draining from the Discharger's worksite into a storm drain with no inlet protection that discharges into Sausal Creek. Photographs taken by Kristin Hathaway on August 5, 2010, and provided to the Regional Water Board via email on August 6, 2010.²

On August 5, the City of Oakland staff informed Regional Water Board staff of the observed fish kill and discharge. That same day, around 1:30 pm, Dale Bowyer of the Regional Water Board and Lesley C. Estes of the City's Watershed and Stormwater Management Division inspected the site. During the inspection, they collected 14 dead rainbow trout from Sausal Creek, leaving in place additional dead unreachable trout. They did not observe any live trout in the pool immediately downstream of the storm drain through which the Discharger had discharged.

- c. On August 11, 2010, Regional Water Board staff Blair Allen and Habte Kifle inspected Sausal Creek and the incident site. Staff observed the Discharger's construction equipment at the intersection of Wellington Street and Vista Street and downhill at the Wellington Street entrance to Dimond Park. With the exception of the Discharger's construction equipment, they did not observe any other likely sources of discharge.

² August 6, 2010, email correspondence and photos of dead fish rainbow trout from Kristin Hathaway to Lesley Estes of the City of Oakland as forwarded to Regional Water Board staff

During the inspection, Regional Water Board staff observed that the flow path from the Discharger's work site to the affected pool was a short distance about 200 feet in length. The reach of Sausal Creek between the discharge point and the impacted pool is only about 150 feet long and is made of a combination of culverted and concrete-lined channel. The work area from which the Discharger discharged was located about 50 feet from the storm drain outfall into the Creek. Thus, chlorinated water discharged to the storm drain would likely still have been chlorinated upon reaching the affected pool and was the likely cause of the observed fish kill.

- d. At the downstream end of the concrete-lined channel, there is a three-foot waterfall onto rock and concrete debris that limits upstream fish migration, especially when the creek flow is at its lowest level, as it was in August, during the period in question. The dead fish were observed in the pool located immediately downstream of that waterfall. The impacted pool was measured to be 20 feet long, 12 feet wide, and 2 feet deep, holding a volume of approximately 480 cubic feet (3,591 gallons) of water. The creek flow rate was measured at about 45 cubic feet per minute (about 337 gallons per minute), a typical low summer flow, not suitable for fish migration without easily exposing themselves to predators. Fish in the impacted pool were confined upstream by the three-foot waterfall and downstream by the one- to two-inch deep shallow creek flow, leaving the fish to use the pool as a refuge. During the discharge, the inability of the fish to leave the pool combined with their exposure to the water discharged by the Discharger resulted in a fish kill.³
- e. Based on the preliminary spill report and observations by City and Regional Water Board staff, it appears that the fish kill was limited to the pool in question. This is consistent with a low volume discharge of chlorinated water to the Creek immediately above the pool.
- f. On August 12, 2010, the Discharger submitted a spill report in response to Regional Water Board staff's verbal request.⁴ The report confirms that between August 3 and August 5, 2010, the Discharger's maintenance crews were working on a drinking water pipeline in the vicinity of the incident area. It states the Discharger's crews discharged a total of about 3,000 gallons of flushing water, comprised of approximately 1,500 gallons on August 3 and approximately 1,500 gallons on August 4. In addition, the report estimates that at least a total of 25 dead rainbow trout were discovered both by the Discharger and City of Oakland staff immediately downstream of the point where the flushing water was discharged.

The Discharger's report also provided a discussion of the amount of chlorine in the flushing water and the amount of dechlorinating agent used to attempt to remove it prior to discharge. The report confirms the water was not tested for chlorine residual or toxicity prior to discharge to ensure effectiveness of the applied dechlorination agent.

³ August 11, 2010, Regional Water Board Inspection Report and Photos

⁴ August 12, 2010, Discharger's Sausal Creek Discharge Investigation Report

- g. On September 3, 2010, the Discharger submitted a more detailed spill report in response to Regional Water Board staff's August 18, 2010, request.⁵ The report addressed the Discharger's planned discharges from August 3 to August 5 and an unplanned discharge on August 16, 2010, into Sausal Creek.

The September 3 report generally agrees with the less-detailed August 12 report, but places the discharges of treated super-chlorinated water one day earlier. Additionally, the September 3 report provided notice of the additional planned discharge of about 1,200 to 1,400 gallons of treated "system water" to the storm drain on August 5. The reports agree that the identified discharges took place in the days immediately preceding the fish kill in Sausal Creek and that the Discharger did not monitor the discharges for chlorine residual prior to discharge.

- h. Given the high initial chlorine concentration and the relatively small volume of wastewater discharged, the approximately 200 foot distance between the discharge point and the impacted pool, the presence of concrete channel and culvert, which would have quickly transmitted the discharge to the pool, and the low creek flow, it is likely that the fish kill resulted from improper dechlorination of the unpermitted discharge. Without test results to demonstrate that the level of chlorine residual or toxicity prior to discharge, it is impossible to know whether or not the Discharger's attempt to dechlorinate were effective. The resulting fish kill immediately downstream of the discharges, however, suggest that it was not.
- i. In an attachment to the Discharger's September 3 spill report, the Discharger's biologist, Bert Mulchaey, inspected the incident area on August 5, 2010, after the Discharger became aware of the fish kill. Mr. Mulchaey confirmed that he observed live fish swimming in a large pool upstream of the discharge point. He also observed live fish approximately 100 yards downstream of the impacted pool. The observations of the Discharger's biologist suggest that the impacts were limited to the pool in which the fish kill was observed and agree with the observations of City of Oakland and Regional Water Board staff.

16. Violation Two: Lafayette (Reliez Valley Creek) Discharge

- a. On January 15, 2010, a Lafayette resident reported to the City of Lafayette's Public Works Services that the resident had observed muddy water in Reliez Valley Creek, which runs through the resident's back yard. Subsequently, City staff notified Regional Water Board staff that the source of the unauthorized discharge was the Discharger's broken potable water pipeline along Pleasant Hill Road in Lafayette.

⁵ September 3, 2010, Discharger's Response to August 18 Request for Information Re: Discharges of Potable Water to Sausal Creek on August 5 and August 16, 2010

- b. On January 19, 2010, City staff emailed to Water Board staff photos showing the muddy water along Reliez Valley Creek, discharging from the storm drains that led to the creek, and discharging from the Discharger's work areas.⁶
- c. On February 2, 2010, in response to Regional Water Board staff's January 20, 2010 request via email, the Discharger submitted a spill report for the Lafayette discharge (see footnote 6). The report states the following:
 - i. The Discharger's dispatch center was notified of the Pleasant Hill Road main break by the Lafayette Police Department at approximately 10:30 pm on January 13, 2010. The Discharger's Distribution Maintenance & Construction Division crews (crews) arrived at the scene within an hour.
 - ii. The Discharger's crews found a weld had broken on a 20-inch steel pipe that had been installed in December 2009, causing the water release.
 - iii. Upon arrival at the site, the Discharger's crews placed a sediment filtering mat containing dechlorinating tablets (sodium sulfite) over a nearby storm drain inlet.
 - iv. The Discharger's crews subsequently placed gravel bags along the flow path upstream of the drop inlet to act as check dams to slow down the flow and settle out solids and they deployed additional dechlorinating tablets at the check dams.
 - v. The Discharger's crews estimated the initial flow rate to be 20 gallons per minute (gpm) and that the discharge lasted for approximately 2.5 hours at this flow rate, which equate to about 3,000 gallons. This time was used to locate the pipeline's shut-off valves. Because it was a brand new pipeline, its as-built drawings were not yet available for field use.
 - vi. Once the shut-off valves were located, the flow was reduced to approximately 5 - 8 gpm for the repair. The Discharger ranked the break as a Priority #5 repair, commanding the highest priority, and qualifying as an emergency repair. The Discharger stated it promptly started the repair, completing it on January 15, 2010, around 7:30 pm. The Discharger reported that the discharge continued at the slower flow rate for an additional 42.5 hours, discharging a total of about 20,400 gallons of chlorinated water at about an 8 gpm flow rate. The low flow rate was needed to maintain positive pressure in the pipe to protect drinking water quality for human health. The Discharger explained the time required for the repair as resulting from the need to excavate eight feet of soil cover over the pipe.
 - vii. The total volume of the chlorinated potable water discharged was about 23,400 gallons.

⁶ Email correspondence and photos relevant to Lafayette discharge, including the Discharger's spill report by email in response to Regional Water Board staff request via email. Photos cited in this item were taken by Donna Feehan of the City of Lafayette on January 15, 2010.

- d. Based on our review of the spill report, the BMPs placed by the Discharger were not effective to prevent the discharge of pollutants. Although turbid, sediment-laden water was discharging to Reliez Valley Creek during the repair via unprotected storm drain inlets, the Discharger did not implement additional and/or improved BMPs to minimize the polluted discharge and adverse impacts to water quality. Furthermore:
 - (i) The Discharger did not collect and analyze water samples for chlorine residual, turbidity, and/or pH in the receiving water, Reliez Valley Creek, to ensure effectiveness of its implemented BMPs. It also did not sample the pipeline discharge.
 - (ii) The Discharger did not assess or make observations to determine whether there were any impacts to aquatic habitat in the downstream receiving water body, Reliez Valley Creek. Based on photos of the incident (see footnote 6), the check dams placed initially were insufficient to appropriately minimize pollutants in the discharge. In addition, the flow bypassed the one storm drain inlet on which filter fabric had been placed. This resulted in the discharge of sediment and turbid water to Reliez Valley Creek during the line break. However, despite this evidence, the BMPs were not improved.

WATER CODE SECTIONS UPON WHICH LIABILITY IS BEING ASSESSED DUE TO NONCOMPLAINEE WITH APPLICABLE REQUIREMENTS

17. Pursuant to CWC section 13385(a), any person who violates CWC section 13376 or CWA section 301, is subject to administrative civil liability pursuant to CWC section 13385(c), in an amount not to exceed the sum of both of the following: (1) ten thousand dollars (\$10,000) for each day in which each violation occurs; and, (2) where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars (\$10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

MAXIMUM ADMINISTRATIVE CIVIL LIABILITY THAT MAY BE IMPOSED

18. **Maximum Liability:** Pursuant to CWC sections 13385(c)(1) & (c)(2), the total maximum potential liability for the identified violations is \$316,000, as described below.
 - (i) Violation One: As stated above, the Discharger released approximately 4,200 gallons of improperly dechlorinated water into Sausal Creek over three day period on August 3, 4, and 5, 2010. The maximum civil liability the Regional Water Board may impose is ten thousand dollars (\$10,000) for each day in which the violation occurred, and an additional liability not to exceed ten dollars (\$10) multiplied by the number of gallons

- by which the volume discharged but not cleaned up exceeds 1,000 gallons. The corresponding maximum potential fine for Violation One is calculated to be \$62,000.
- (ii) Violation Two: As stated above, a main break in the Discharger's drinking water supply system resulted in the discharger of approximately 23,400 gallons of sediment-laden chlorinated potable water to Reliez Valley Creek over three day period from January 13 through January 15, 2010. The maximum civil liability the Regional Water Board may impose is ten thousand dollars (\$10,000) for each day in which the violation occurred, and an additional liability not to exceed ten dollars (\$10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons. The corresponding maximum potential fine for Violation Two is calculated to be \$254,000.

FACTORS CONSIDERED IN DETERMINING ADMINISTRATIVE CIVIL LIABILITY

19. On November 17, 2010, the State Water Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy was approved by the Officer of Administrative Law and became effective on May 20, 2010. The Enforcement Policy establishes a methodology for assessing administrative civil liability. The use of this methodology addresses the factors that are required to be considered when imposing a civil liability as outlined in CWC section 13385(e). The entire Enforcement Policy can be found at:
http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf

The specific required factors in CWC section 13385(e) are the nature, circumstances, extent, and gravity of the violations or violations, whether the discharge is susceptible to cleanup or abatement, and the degree of toxicity of the discharge. With respect to the violator, the required factors are the ability to pay, the effect on the violator's ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of the violations, the degree of culpability, economic benefit or saving, if any, resulting from the violation(s), and other matters that justice may require.

The Enforcement Policy sets forth an approach to determine liability using a penalty calculation methodology that considers the following: the potential harm to beneficial uses; the physical, chemical, biological or thermal characteristics of the discharge; the discharge's susceptibility to cleanup; the violation's deviation from requirements; the Discharger's culpability; cleanup and the Discharger's cooperation; the history of violations; the Discharger's ability to pay; other factors as justice may require; and economic benefit from the avoidance or delay of implementing requirements. These factors address the statute-required factors and are used to calculate penalties consistent with both the CWC and the Enforcement Policy. The penalty methodology was used to calculate the proposed administrative civil liability as detailed in Attachment A.

PROPOSED ADMINISTRATIVE CIVIL LIABILITY

20. Based on the consideration of the above facts, the Assistant Executive Officer of the Regional Water Board proposes that an administrative civil liability be imposed in the amount of \$76,600. This amount consists of \$40,000 for the August 3 and 4 Sausal Creek planned discharge of improperly dechlorinated super-chlorinated water, \$4,800 for the August 5 Sausal Creek planned chlorinated potable water discharge, \$19,800 for the Lafayette unplanned chlorinated potable water discharge, and \$12,000 to recover staff costs.
21. If this matter proceeds to hearing, the Assistant Executive Officer reserves the right to amend the proposed amount of civil liability to conform to the evidence presented, including but not limited to increasing the proposed amount to account for the costs of enforcement (including staff, legal and expert witness costs) incurred after the date of the issuance of this complaint through completion of the hearing.
22. Notwithstanding the issuance of this Complaint, the Regional Water Board retains the authority to assess additional penalties for further unpermitted discharges for which penalties have not yet been assessed and for violations beyond the date of this Complaint that may subject the Discharger to additional administrative civil liability, and/or other appropriate enforcement actions(s), including referral to the Attorney General.
23. Issuance of this Complaint is exempt from the provisions of the California Environmental Quality Act (Public Resources Code 21000 et seq.) in accordance with Section 15321 of Title 14, California Code of Regulations.

Thomas E. Mumley
Assistant Executive Officer

February 18, 2011
Date

Attachment A Specific Factors Considered to Determine Administrative Civil Liability

ATTACHMENT A

Specific Factors Considered to Determine Administrative Civil Liability

Attachment A – ACL Complaint No. R2-2011-0005
Specific Factors Considered to Determine Administrative Civil Liability
For East Bay Municipal Utility District

Each factor in the Enforcement Policy and its corresponding category, adjustment, or amount for each of the violations (Sausal Creek Discharge and Lafayette Discharge) is presented below:

1. **Violation One: Sausal Creek Discharge of August 3 and 4, 2010 – planned discharge of 3,000 gallons of partially treated super-chlorinated water⁷:** The Discharger released approximately 3,000 gallons of partially treated system water and super-chlorinated water into Sausal Creek. The unpermitted discharge had impacts to water quality and beneficial uses, including causing or contributing to the killing of approximately 25 rainbow trout in Sausal Creek.

- a) ***Specific Factor:*** Potential Harm to Beneficial Uses

Category: Above Moderate

Discussion: The unpermitted discharge resulted in above moderate harm to beneficial uses because the discharge caused or contributed to killing approximately 25 rainbow trout in Sausal Creek. The impacts of the improperly treated super-chlorinated water discharge were acute but isolated to a small reach of the receiving waters because volume of the discharge was limited to approximately 3,000 gallons.

- b) ***Specific Factor:*** Characteristics of the Discharge

Category: Discharged material posed significant risk

Discussion: The discharge was comprised of system water and partially treated super-chlorinated water. Chlorine exhibits significant toxicity to aquatic life even at low concentrations. The San Francisco Bay Basin Water Quality Control Plan's (Basin Plan's) receiving water limit for chlorine is 0.0 mg/L.

- c) ***Specific Factor:*** Susceptibility to Cleanup or Abatement

Category: Less than 50% of the discharge was susceptible to cleanup or abatement

Discussion: Once discharged, the discharged material flowed quickly into Sausal Creek, resulting in or contributing to a fish kill. It was not susceptible to cleanup or abatement.

⁷ The August 5 discharge is treated separately for purposes of applying the specific factors for determining administrative civil liability because the water discharged on that day was composed exclusively of system water with a lower chlorine residue and therefore a significantly different potential for harm and characteristic than the water discharged on August 3rd and 4th.

d) ***Specific Factor:*** Deviation from Requirement

Category: Major

Discussion: The Discharger's wastewater was contained in a tanker truck prior to being discharged through a storm drain to Sausal Creek. The discharge options for disposing of this wastewater included reuse for landscape irrigation, discharge to the Discharger's own wastewater treatment plant, or discharge to local sanitary sewer collection system with the approval of local authorities, the City of Oakland. Alternatively, the Discharger is required to obtain authorization from the Regional Water Board and complete appropriate testing and treatment prior to discharging to surface water. At the very least, the Discharger should have tested for chlorine residual before discharging the wastewater to insure that their attempts to dechlorinate the wastewater were effective. The Discharger took none of these water quality protection steps. Furthermore, as discussed in the Background section of the Complaint, the Discharger has developed procedures and protocols for preventing the discharge of pollutants to surface water during these types of planned maintenance activities. The Discharger failed to follow these policies and procedures. Accordingly, the deviation from requirements is Major.

e) ***Specific Factor:*** Volume Discharged

Total Volume: Approximately 3,000 gallons

f) ***Civil Liability:*** Initial amount of Administrative Civil Liability assessed for this violation

Amount: \$32,000

Discussion: Based on the \$10 per gallon statutory requirement, the maximum liability for this discharge is \$40,000. Considering the specific factors (a) through (d) above, the maximum liability is multiplied by a factor of 0.8, resulting in the above initial amount of ACL.

Adjustments to Determination of Initial Liability for the August 3 and 4 Violation

g) ***Specific Factor:*** Culpability

Adjustment: 1.2

Discussion: The Discharger's culpability is high, and consequently, the penalty has been increased by 20% of the initial liability. The fish kill occurred due to the Discharger's negligence, including its failure to test the partially treated wastewater for chlorine residual. The Discharger was in full control of the water, which was sitting in the Discharger's tanker truck. The Discharger neither took other available discharge

options nor tested for chlorine residual to protect water quality and avoid impacts to receiving waters. The Discharger has been involved for many years in discussions with Regional Water Board staff and local creek and environmental groups, including significant discussions specifically on the potential of discharges from the Discharger's potable water system to cause fish kills. The Discharger was aware, or should have been aware, of the significant restoration work completed on Sausal Creek, the presence of sensitive fish populations in the Creek, and the need to protect the Creek from chlorinated discharges. Specifically, the Discharger discussed the issue of sensitive creeks in the East Bay with municipalities and local creeks groups at meetings held in 2005, 2006, and 2007. In response to those meeting, the Discharger proposed to develop and implement a protocol to identify sensitive water bodies and respond faster to discharges to those water bodies.

Despite the Discharger's knowledge of the sensitivity of the area in which this work was being conducted the Discharger's investigation indicated that the maintenance crews did not adequately monitor treated wastewater to demonstrate compliance with water quality objectives. This was the case, even though this had been identified as a problem following past discharges. Discharger's failure to take appropriate precautionary measures while working in a known area of sensitive fish populations and restoration work demonstrates a high culpability for the resulting unauthorized discharge and subsequent fish kill.

h) *Specific Factor:* Cleanup and Cooperation

Adjustment: 1

Discussion: It was not possible to clean up the discharge, nor to mitigate its effects once discharge reached the creek.

i) *Specific Factor:* History of Violations

Adjustment: 1.1

Discussion: The penalty has been increased by 10% of the initial liability amount due to the Discharger's past discharges of chlorinated water to creeks and other waters, including discharges alleged to have caused fish kills, and the Discharger's history of inadequate implementation of BMPs for chlorinated discharges. As described in the Background section of the Complaint, the Discharger has protocols to minimize pollutants in discharges from its potable water distribution system. However, despite past meetings with Discharger officials, managers, and staff, and the past threat of formal enforcement by Regional Water Board staff, Discharger has continued to discharge in violation of applicable requirements.

For example, in an email regarding a June 2008 main break in San Pablo, the Discharger's management reported "...[EBMUD] responded to the main break and

installed sediment control and dechlorination BMPs in a timely manner, and...the BMPs were effective in minimizing the quantity of sediments released and in removing chlorine prior to discharge to the nearby San Pablo Creek.” However, the Discharger’s staff responding to the break reported that while “sand bags and dechlor had been positioned in several locations prior to the creek,” “it was evident looking at the creek that turbidity had been significantly impacted,” and stated “...response time and actions taken...was [sic] very slow causing unnecessary delays in resolving this break.”⁸

During a December 2007 main break in El Cerrito, a resident reported the Discharger had installed a single, inadequate, gravel bag check dam. The resident stated he discussed the BMPs’ inadequacy with Discharger staff present on scene. Staff informed him they had called in for more treatment bags, at least one of which was installed before the main break was stopped. However, the discharge had flowed for an unknown length of time with inadequate BMPs.⁹

During a July 3, 2007, main break in Berkeley, a resident reported the Discharger installed a single check dam, which was ineffective, as water simply flowed around it and into the downstream storm drain. However, the situation remained that way for at least two days, until at least July 5.¹⁰ The Discharger reported that BMPs had been implemented, and estimated a flow rate of 10 gallons per minute associated with the break—an estimated discharge of up to several hundred thousand gallons of chlorinated water to the storm drain.

In her internal memo of February 21, 2006, Regional Water Board staff A.L. Riley summarized a series of illicit chloramine discharges by Discharger reaching from 1999 through 2005.¹¹ These discharges, their impacts, and the Discharger’s approach to them and expected future discharges had been the subject of a series of three meetings in 2005 and 2006 with Discharger staff, an elected director of the Discharger, local creek groups, the Sierra Club, local municipalities, UC Berkeley staff, and Regional Water Board staff. These discharges included:

- A 1999 discharge resulting in a fish kill of 6 fish in Cordonices Creek near Ordway Street, Berkeley;
- A November 12, 2000, line break discharging more than 100,000 gallons of water to Cordonices Creek with a 6.5-hour response time by the Discharger and inadequate implementation of BMPs; and

⁸ Email of John Schroeter, EBMUD, to Laurie Taul, Regional Water Board, dated June 17, 2008, subject “RE: FW: After Action Report Main Break 6/7/08” and Email of David Fulk, EBMUD EH&S Specialist, to John Schroeter, dated June 9, 2008, subject “After Action Report Main Break 6/7/08.”

⁹ Email of George McRae to A.L. Riley, Regional Water Board, dated June 12, 2007, subject “EBMUD Dumping at Del Norte BART.”

¹⁰ Email of Lisa Owens Viani to A.L. Riley, Regional Water Board, dated July 6, 2007, subject “EBMUD water line break Curtis & Channing.”

¹¹ Riley, A.L. February 21, 2006. “Office Memorandum: Illicit Discharges of Chloramines to Streams by East Bay Municipal Utility District.”

- A September 2005 main break in El Cerrito alleged to have discharged to Baxter Creek without apparent chloramine control BMPs for at least 10 days.

In 2007, Regional Water Board staff, concerned with reports of continued inadequate implementation of BMPs, and potential impacts to beneficial uses—particularly in creeks that have been restored or that support fish populations—and interested to identify opportunities to reduce those impacts, drafted a Cleanup and Abatement Order (draft CAO) describing staff’s concerns at continuing violations. The draft CAO was provided to Discharger management on July 6, 2007, and meetings on the issue were held in August and September 2007, with Discharger and Water Board staff and management participating. Following the meetings, based on a commitment by Discharger management to improve BMP implementation, identify sensitive creeks such as Cordonices Creek and Sausal Creek to ensure improved response time, and complete related actions, Regional Water Board staff did not move to ask the Board to consider the CAO.

While this history does not document formal enforcement efforts, it does serve to demonstrate: (1) the ongoing effort by the Regional Board to address these types of violations in an informal manner; (2) the fact that the Discharger was aware that further discharges of this type could subject the Discharger to liability; and (3) that despite this knowledge, the Discharger failed to implement procedures necessary to prevent the type of discharges that are the subject of this Complaint.

- j) **Total Base Liability:** The adjusted civil liability for the August 3 & 4 discharges associated with Violation One.

Amount: \$40,000

Discussion: The adjusted civil liability is calculated to be \$41,600. However, the maximum allowable statutory liability is \$40,000. As a result, the adjusted liability is \$40,000.

2. **Violation One: Sausal Creek Discharge on August 5, 2010 - planned discharge of 1,200 gallons of partially treated chlorinated system water:** The Discharger released approximately 1,200 gallons of partially treated chlorinated system water into Sausal Creek. The unpermitted discharge had impacts to water quality and beneficial uses, including causing or contributing to the killing of approximately 25 rainbow trout in Sausal Creek.

- a) **Specific Factor:** Potential Harm to Beneficial Uses

Category: Above Moderate

Discussion: The unpermitted discharge has the potential for above moderate harm because the discharged system water contained about 2.2 mg/L (or 2,200 micrograms/L) chlorine, and improperly dechlorinated system water can result in acute toxicity to fish

and other aquatic life. For example, a 1982 study by Alabaster and Lloyd found that rainbow trout fingerlings and yearlings, similar to the dead fish observed in Sausal Creek in question, died in 2 hours at a chlorine concentration of 0.3 mg/L (or 300 microgram/L), and in 4-5 hours at a concentration of 0.250 mg/L (or 250 microgram/L).¹² The typical chlorine concentration in system water is more than seven times higher than the toxic levels cited in the referenced study. Here, the unauthorized discharge resulted in or contributed to an above moderate harm to beneficial uses because of the resulting fish kill of approximately 25 rainbow trout in Sausal Creek. The impacts of the discharged chlorinated system water were acute, but isolated to a small reach of the receiving waters because volume of the discharge was limited to approximately 1,200 gallons.

b) *Specific Factor:* Characteristics of the Discharge

Category: Discharged material posed moderate risk

Discussion: The discharge was comprised of partially treated chlorinated system water. Chlorine exhibits significant toxicity to aquatic life even at low concentrations. The San Francisco Bay Basin Water Quality Control Plan's (Basin Plan's) receiving water limit for chlorine is 0.0 mg/L. Had this discharge been permitted, it would have had to meet the receiving water limit of 0.0 mg/L.

c) *Specific Factor:* Susceptibility to Cleanup or Abatement

Category: Less than 50% of the discharge was susceptible to cleanup or abatement

Discussion: Once discharged, the discharged material flowed quickly into Sausal Creek, resulting in a fish kill. It was not susceptible to cleanup or abatement.

d) *Specific Factor:* Deviation from Requirement

Category: Major

Discussion: The discharge of chlorinated/chloraminated system to waters of the United States requires an NPDES permit, but the Discharger did not obtain such a permit prior to discharge. The Discharger released about 1,000 gallons of chlorinated system water to a dechlorinating diffuser containing sodium sulfite tablets prior to being discharged through a storm drain to Sausal Creek. The other approximately 200 – 400 gallons of chlorinated system water were reportedly dechlorinated in the Discharger's truck prior to being discharged through a storm drain to Sausal Creek. The discharge options for disposing of this water included reuse for landscape irrigation, discharge to the

¹² Alabaster and Lloyd study was cited in U.S. Department of Commerce NOAA, National Marine Fisheries Service, Offense Investigation report, *Investigative Report-ESA Polhumes Creek, San mateo CA* (December 12, 2007)

Discharger's own wastewater treatment plant, or discharge to local sanitary sewer collection system with the approval of local authority, the City of Oakland. At the very least, the Discharger should have tested for chlorine residual before discharging the wastewater to ensure that their attempts to dechlorinate the system water were effective. The Discharger took none of these water quality protection steps. Accordingly, the deviation from requirements is major.

e) ***Specific Factor:*** Volume Discharged

Total Volume: Approximately 1,200 gallons

f) ***Civil Liability:*** Initial amount of Administrative Civil Liability assessed for this violation

Amount: \$3,720

Discussion: Based on the \$10 per gallon statutory requirement, the maximum liability for this discharge is \$12,000. Considering the specific factors (a) through (d) above, the maximum liability is multiplied by a factor of 0.31, resulting in the above initial amount of ACL.

Adjustments to Determination of Initial Liability for the August 5 Discharge Violation

g) ***Specific Factor:*** Culpability

Adjustment: 1.2

Discussion: The Discharger's culpability is high, and consequently, the penalty has been increased by 20% of the initial liability. See Item 1(g) above for detailed discussion on the Discharger's Culpability.

h) ***Specific Factor:*** Cleanup and Cooperation

Adjustment: 1

Discussion: It was not possible to clean up the discharge, nor to mitigate its effects once the discharge reached the creek.

j) ***Specific Factor:*** History of Violations

Adjustment: 1.1

Discussion: The penalty has been increased by 10% of the initial liability amount due to the Discharger's past discharges of chlorinated water to creeks and other waters, including discharges alleged to have caused fish kills, and the Discharger's history of

inadequate implementation of BMPs for chlorinated discharges. See Item 1(i) above for detailed discussion of the Discharger's history of violations.

j) **Total Base Liability:** The adjusted civil liability for the August 5 Discharge Violation

Amount: \$4,800

Discussion: The adjusted civil liability is calculated to be \$4,800.

3. **Violation Two: Lafayette Discharge – unplanned discharge of 23,400 gallons of chlorinated potable water:** The Discharger failed to implement adequate and effective best management practices to dechlorinate and to prevent or adequately control erosion and sediment transport into Reliez Valley Creek.

a) **Specific Factor:** Potential Harm to Beneficial Uses

Category: Below Moderate

Discussion: Due to inadequate implementation of the Discharger's own BMPs for dechlorination and erosion and sediment control, the Discharger discharged about 23,400 gallons of potentially chlorinated potable water into Reliez Valley Creek, and causing erosion and sediment transport into the Creek. The water was turbid and sediment-laden, likely causing temporary impacts to beneficial uses in the Creek.

b) **Specific Factor:** Characteristics of the Discharge

Category: Discharged material posed moderate risk

Discussion: The discharged material consisted of partially treated chlorinated water, turbidity, and sediment. Together, these materials can exhibit moderate to significant toxicity to aquatic life. The turbid and partially treated chlorinated potable water flowed approximately 3000 feet before it was discharged into the creek. In this case, the distance over which the water flowed and the placement of dechlorinating tablets in the material's flow path place most likely place it at the lower end of that toxicity range.

c) **Specific Factor:** Susceptibility to Cleanup or Abatement

Category: Less than 50% of the discharge susceptible to cleanup or abatement

Discussion: The discharge was unplanned due to the pipeline break and, once discharged to Reliez Valley Creek, was not susceptible to cleanup or abatement. After it became aware of the discharge, the Discharger implemented inadequate BMPs for dechlorination and to control turbidity and sediment.

d) ***Specific Factor:*** Deviation from Requirement

Category: Minor

Discussion: The Discharger implemented BMPs to control pollutants in the reported discharge. The Discharger, however, did not appropriately inspect the BMPs or complete additional work after it was clear they were inadequate. As the result, turbid sediment-laden water that was likely not fully dechlorinated and was discharged into Reliez Valley Creek.

e) ***Specific Factor:*** Volume Discharged

Total Volume: 23,400 gallons

f) ***Civil Liability:*** Initial amount of Administrative Civil Liability assessed for this violation

Amount: \$15,240

Discussion: Considering the specific factors (a) through (e) above, the maximum liability is multiplied by a factor of 0.06, resulting in the above initial amount of ACL.

Adjustments to Determination of Initial Liability for the Violation

g) ***Specific Factor:*** Culpability

Adjustment: 1.2

Discussion: The Discharger's culpability is moderately high, and consequently, the penalty has been increased by 20% of the initial liability because of the Discharger's failure to take corrective action when the BMPs that were implemented did not appropriately minimize impacts to receiving waters. The Discharger is aware of the need to appropriately control pollution from even unplanned discharges and has developed procedures to do so. This issue has been the subject of significant communication between the Discharger, Regional Water Board staff, and environmental groups for a number of years—including concerns about inadequate implementation of BMPs during line breaks. A brief summary of those discussions and some of the studies and document detailing how to implement effective BMPs that the Discharger has been involved in developing is provided in the Background section of the Complaint.

h) ***Specific Factor:*** Cleanup and Cooperation

Adjustment: 1

Discussion: The Discharger implemented dechlorination BMPs and installed check dams to remove a portion of sediment and turbidity from the discharge before it reached the creek. While these BMPs were inadequate, they represented effort to cooperate and minimize the discharge's effects. Once the discharged turbid water reached the creek, containment, treatment, and/or cleanup were not technically feasible.

i) **Specific Factor:** History of Violations

Adjustment: 1.1

Discussion: The penalty has been increased by 10% of the initial liability amount due to Discharger's past discharges of chlorinated water to creeks and other waters, including discharges alleged to have caused fish kills, and the Discharger's history of inadequate implementation of BMPs for chlorinated discharges. This analysis is the same as the "History of Violations" analysis provided above in Violation 1.

j) **Total Base Liability:** The adjusted administrative civil liability for this violation

Amount: \$19,800 (Initial Liability (\$15,240) x Adjustments (1.2)(1)(1.1))

COMBINED TOTAL BASE LIABILITY AND FACTORS APPLIED TO ALL VIOLATIONS

The Combined Total Base Liability Amounts for Violations One and Two is \$64,600 (\$44,800 + 19,800).

4. The following factors apply to the two violations discussed above.

a) **Specific Factor:** Ability to Pay and Continue in Business

Discussion: The Discharger is a special municipal district with an annual operating budget (both for water and wastewater systems) for its 2010 fiscal year of more than \$431 million and a five-year capital improvement budget of about \$1.1 billion through the Discharger's 2014 fiscal year.¹³ The Regional Water Board has no evidence that the Discharger would be unable to pay the proposed liability set forth in this Complaint or that the amount of the liability would cause undue financial hardship.

b) **Specific Factor:** Other factors as justice may require

Discussion: The staff time to prepare this Complaint and supporting information and respond to complaints associated with the discharges, including site inspections, is

¹³ <https://portal.ebmud.com/sites/default/files/pdfs/VOLUME%201%20FY10-11%20Document.pdf>

estimated to be 80 hours. Based on an average cost to the state of \$150 per hour, the total staff cost is estimated to be \$12,000.

c) ***Specific Factor:*** Economic Benefit

Discussion: The Discharger may have realized economic benefit by failing to test the discharged potable water for chlorine residual and discharging it to the Discharger's treatment works in Violation One (Sausal Creek) and by failing to implement adequate BMPs in Violation Two (Lafayette/Reliez Valley Creek). However, this economic benefit is below the amount of the proposed liability. Water Board staff estimates that the potential economic benefit is less than \$4,000.

d) ***Civil Liability:*** Minimum Liability Amount

Amount: \$4,400

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not to be below a Discharger's economic benefit plus ten percent. Based on the Regional Water Board Prosecution Team's estimate, the proposed liability is above this amount.

e) ***Civil Liability:*** Maximum Liability Amount

Amount: \$316,000 (\$62,000 for Violation One (Sausal Creek) and \$254,000 for Violation Two (Lafayette/Reliez Valley Creek))

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13385: (1) ten thousand dollars (\$10,000) for each day in which the violation occurs; and (2) where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars (\$10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

Final Proposed Civil Liability

The total final liability amount proposed for Violation One and Two is \$76,600 based on the considerations discussed in detail above. The total proposed liability includes the recommended liability of \$44,800 for Violation One (Sausal Creek), \$19,800 for Violation Two (Lafayette/Reliez Valley Creek) and \$12,000 in staff costs.

The final liability amount proposed falls within the maximum and minimum liability amounts.