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

REVISED COMPLAINT NO. R2-2009-0006

ADMINISTRATIVE CIVIL LIABILITY
IN THE MATTER OF
DISCHARGING WITHOUT A PERMIT
CALIFORNIA WATER SERVICE COMPANY
1452 BEL AIRE ROAD
SAN MATEO, SAN MATEO COUNTY

This Complaint is issued to the California Water Service Company (Discharger) to assess administrative civil liability pursuant to California Water Code (CWC) Section 13385. The Complaint addresses the Discharger's September 25, 2007, September 27, 2007 and November 2, 2009, unpermitted discharges of approximately 137,640 gallons of potable drinking water.

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

1. 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 $200,000 in penalties for the violations cited based on the considerations described herein. The deadline for comments on this Complaint is June 25, 2010, at 5 p.m.

2. Unless waived, the Regional Water Board will hold a hearing on this matter on August 11, 2010, in the Elihu M. Harris State Building, First Floor Auditorium, 1515 Clay Street, Oakland, California, 94612. You or your representative(s) will have an opportunity to be heard and to contest the allegations in this complaint and the imposition of civil liability by the Regional Water Board. You will be mailed an agenda approximately ten days before the hearing date. You must submit all comments and written evidence concerning this complaint to the Regional Water Board not later than 5 p.m. on July 12, 2010, so that such comments may be considered. Any written evidence submitted to the Regional Water Board after this date and time will not be accepted or responded to in writing.

3. At the hearing, the Regional Water Board will consider whether to affirm, reject, or modify the proposed administrative civil liability, or whether to refer the matter to the Attorney General for recovery of judicial civil liability. You can waive your right to a hearing to contest the allegations contained in this Complaint by submitting a signed waiver and paying the civil liability in full or by taking other actions as described in the attached waiver form.

ALLEGATIONS

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

   a. The Discharger is a drinking water purveyor in the State of California, and it operates a potable water storage tank at 1452 Bel Aire Road (the site) in the City of San Mateo, San Mateo County. The potable water stored in the tank in question contains chloramines.

   b. On September 27, 2007, Mr. Dale Gonzales, the Discharger's Environmental Affairs Manager, reported an unauthorized discharge to the Regional Water Board's office and to other regulatory agencies, including to the Governor's Office of Emergency Services (OES) (now Cal EMA). The discharge was to Polhemus Creek, a perennial stream that drains a small watershed east of Crystal Spring Reservoir and is a main tributary to San Mateo Creek.

   c. On September 27, 2007, the San Francisco Public Utility Commission (SFPUC) staff notified Regional Water Board staff by phone that an unexpected discharge upstream from their restoration project had caused excessive erosion and sediment transport at the restoration project. The SFPUC's Polhemus Creek Restoration Project, which is downstream from the site, was under construction at the time. The Regional Water Board issued a Conditional 401 Water Quality Certification in June 2006 for this project.

   d. On September 27, 2007, SFPUC's contract biologists observed twenty-one dead steelhead (*Oncorhynchus mykiss*), a federally-listed threatened species and two dead three-spine stickleback (*Gasterosteus aculeatus*) in Polhemus Creek immediately downgradient of SFPUC's restoration site.

   e. Based on the information provided by the Discharger in the spill report, the unauthorized discharge had been stopped when the spill report notification was made to OES. In response to the spill report, Regional Water Board staff gave the Discharger verbal instruction to apply appropriate control and remedial measures, assess the impacts to water quality and aquatic habitat, and submit a report documenting the full assessment of the incident within 5 business days.

   f. On September 28, 2007, Regional Water Board staff inspected Polhemus Creek and the SFPUC's restoration project and assessed the extent of the environmental damage and water quality impacts associated with the discharges. Regional Water Board staff observed three more dead fish along the banks of Polhemus Creek. The streambed of the restoration area showed signs of erosion, and the pool immediately downstream was turbid.

   g. On October 4, 2007, the Discharger submitted a spill report describing two unplanned chloramine-treated potable water discharges which occurred from the storage tank located at 1452 Bel Aire Road in San Mateo into Polhemus Creek. In this report, the Discharger stated that these discharges happened on September 25 and 27 after a primary

control system known as Supervisory Control and Data Acquisition (SCADA), designed to prevent overflows failed, causing the storage tank to overflow.

h. On February 10, 2009, at Regional Water Board staff's request, the Discharger submitted additional information on specific improvements and upgrades it made to the facility after the incidents. The Discharger confirmed that it maintains in its tank chloramine concentration as total chlorine at 1.97 mg/L and 0.46 mg/L of ammonia.

i. On February 18, 2009, Regional Water Board staff inspected the control system work station and the storage tank area. The Discharger had completed improvements to the control systems, power backup contingency plan, and other automated emergency response phone and radio lines. Regional Water Board staff estimated the distance between the discharge point and Polhemus Creek to be about 2,000 feet—less than half a mile. Flow between the discharge point and the receiving water body, Polhemus Creek, is entirely through a piped storm drain.

j. On November 3, 2009, Mr. Dale Gonzales reported that an unauthorized discharge from the storage tank at 1452 Bel Aire Road to Polhemus Creek occurred on November 2, 2009, at 10:00 p.m. and ended on November 3, 2009, at 4:00 a.m. On November 9, 2009, the Discharger followed-up with a written report, which stated that the discharge occurred as a result of operator error.

k. **Overflow Incidents:**

i) The first tank overflow occurred on September 25, 2007. As reported, the discharge lasted for 45 minutes at a rate of 200 gallons per minute (gpm). The discharged potable drinking water flowed into a nearby storm drain that drains into Polhemus Creek. The total volume discharged was approximately 9,000 gallons. The Discharger did not report this discharge until October 4, 2007, nine days later.

ii) The second overflow occurred on September 27, 2007, from approximately 12:00 AM to 7:00 AM. According to the Discharger's spill report, this discharge lasted about 7 hours at an estimated flow rate of 200 gpm. The total volume discharged was approximately 84,000 gallons.

iii) The third overflow occurred on November 2, 2009, at approximately 10:00 PM, and ended on November 3, 2009, at approximately 4:00 AM, at an estimated flow rate of 124 gpm. The total volume discharged was approximately 44,640 gallons. The Discharger had approximately ten dechlorination tablets inside the overflow pipe where discharged water contacts the tablets. The 2.5 pounds of tablets were expected to sufficiently dechlorinate up to 50,000 gallons of water containing 2 mg/L chlorine. The chlorine residual in the tank was 2.1 mg/L and 0.4 mg/L ammonia.

l. **Cause of the Discharges:**

i) **September 25, 2007:** The Discharger uses a computer system called SCADA to remotely monitor and act as the primary control system for its water facilities, including the booster pump stations that fill drinking water storage tanks. On September 25, the Discharger lost communication with the SCADA system. The Discharger received notification through its backup emergency system of the potential problem. Upon inspection, the Discharger did not identify any problems with the SCADA system. The Discharger attributed the loss of communication to a failed telephone line.

ii) **September 27, 2007:** The Discharger again lost communication with the SCADA system. The Discharger did not identify any problems with the SCADA system and concluded that the telephone line had failed again. This time, however, the Discharger also lost communication with the backup emergency system, which operates on a separate telephone line. This delayed the Discharger's response to the discharge.

iii) The September 27 discharge overwhelmed SFPUC's Creek Restoration Project's bypass dewatering system located about several hundred feet downstream of the Discharger's storm drain discharge point along Polhemus Creek. The dewatering system was installed to divert stream flows around an ongoing 315 linear-foot creek and wetland restoration project.

iv) SFPUC's contractor and field biologists estimated that the flow of Polhemus Creek for that time of the year was approximately 70 gpm. SFPUC had installed two pumps, each capable of pumping 210 gpm, to divert the creek flow and isolate the work area during construction. SFPUC had oversized the dewatering system to provide buffer capacity to handle unexpected flows. The primary dewatering pump operated 24 hours per day with a float valve that would automatically activate the backup dewatering pump if the primary pump failed or flooded. The backup dewatering pump was installed to handle unforeseen rain events during the dry season.

v) The unexpected discharge washed out the stretch of the streambed that was under restoration, causing excess erosion and turbidity downstream. The chloramines and high turbidity levels were present in toxic levels.

vi) **November 2, 2009:** An operator started one of the pumps that pumps water to the tank. The operator manually enabled the SCADA control system, but did not enable the automatic controls to become operational if the tank's high level alarm sounds.

m. **Summary:** In both of the 2007 discharge incidents, the overall total volume discharged into Polhemus Creek was approximately 93,000 gallons of potable water containing

chloramines. Given that the Discharger seeks to maintain a total chlorine concentration of amount 1.97 mg/L, it is likely that the discharge concentration was about that amount. For the 2009 discharge, the Discharger employed de-chlorination tablets, potentially de-chlorinating the potable drinking water prior to it entering Polhemus Creek.

VIOLATIONS

5. The unauthorized discharges of chloraminated potable water that occurred on September 25 and 27, 2007 and the discharge of potable water having gone through the dechlorination tablets on November 2, 2009, are violations of CWC section 13376. For these violations, administrative civil liability may be imposed pursuant to CWC section 13385.

PROPOSED CIVIL LIABILITY

6. **Maximum Liability:** Under CWC Section 13385(c), the Regional Water Board may impose administrative civil liability for the Discharger's unauthorized discharges 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.

   The violations occurred on three separate days. The volume discharged is estimated at 137,640 gallons. The maximum civil liability the Regional Water Board may impose is ten thousand dollars ($10,000) for each day in which the violation occurred, plus ten dollars ($10) per gallon for the 134,637 gallons discharged that was not cleaned up in excess of 3,000 gallons (1,000 gallons per each of the three discharges resulting in violations). The maximum civil liability for the unauthorized discharges is $1,376,400.

7. **Minimum Liability:** According to CWC section 13385(e), at a minimum, liability shall be assessed at a level that recovers the economic benefit or savings, if any, derived from the unauthorized discharge violation.

8. Under section 13385(e) of the CWC, the Regional Water Board shall consider the following factors in determining the amount of civil liability to be imposed:

   a. <u>The Nature, Circumstances, Extent, and Gravity of the Violation</u>:

      The discharge on September 27, 2007 to Polhemus likely caused or significantly contributed to a kill of at least 32 steelhead trout (*Oncorhynchus mykiss)*, a federally and state threatened species. San Mateo Creek, including its Polhemus Creek tributary, provides potential habitat for steelhead trout. Considering the high level of development

within the watershed, the steelhead population within the watershed is likely at very high risk of local extinction.[1]

The chlorinated potable water discharges on September 25 and 27, 2007, were neither authorized nor permitted discharges. A total of approximately 93,000 gallons of chloraminated potable water was discharged to Polhemus Creek, a major tributary to San Mateo Creek. Both creeks are known habitat of steelhead trout. The discharges damaged SFPUC's Polhemus Creek restoration project, which was under construction at the time. The discharges caused erosion and elevated turbidity levels in both Polhemus and San Mateo Creeks. As a result, between September 27 and 29, 2007, SFPUC contract biologists recovered 35 dead fish, 32 of which were steelhead, and other stressed and active juvenile steelhead trout. The dead fish were recovered from Polhemus Creek immediately downstream of the restoration site. The November 2, 2009 discharge did not appear to result in fish kill.

The chloramines and excess turbidity associated with the unauthorized discharges likely caused or significantly contributed to the death of a locally significant number of threatened fish, giving a high level of gravity to the 2007 violations.

b. Toxicity of Discharge and Susceptibility to Cleanup:

Discharges of chlorinated/chloraminated potable water are prohibited because of its moderate to high acute toxicity to fish and other aquatic life. A 1982 study by Alabaster and Lloyd found that rainbow trout fingerlings and yearlings died in 2 hours at chlorine concentration of 0.3 mg/L (or 300 microgram/L (µg/L)), and in 4-5 hours at concentrations of 0.250 mg/L (or 250 µg/L).[2]

The spills in September 2007 and their effects appear to be the primary cause of the observed fish kill. National Oceanic and Atmospheric Administration (NOAA) Water Quality Coordinator/Physical Scientist Joe Dillon explained that chloramines in water burns fish gills by oxidation, killing the fish or impairing their abilities.[3] In a February 10, 2009, e-mail message from Dale Gonzales, P.E. Environmental Affairs Manager for the Discharger, he informed Regional Water Board staff that the concentration of the

[1] Leidy, R.A., G.S. Becker, and B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, CA.
Spence, B.C, E.P. Bjorkstedt, J.C. Garza, J.J. Smith, D.G. Hankin, D. Fuller, W.E. Jones, R. Macedo, T.H. Williams, and E. Mora. A framework for assessing the viability of threatened and endangered salmon and steelhead in the North-Central California Coast Recovery Domain. US Department of Commerce, NOAA Fisheries, Southwest Fisheries Science Center, Santa Cruz, CA.
[2] Alabaster and Lloyd study was cited in U.S. Department of Commerce NOAA, National Marine Fisheries Service, Offense Investigation Report, *Investigative Report-ESA Polhemus Creek, San Mateo CA* (December 12, 2007)
[3] U.S. Department of Commerce NOAA, National Marine Fisheries Service, Offense Investigation Report, *Investigative Report-ESA Polhemus Creek, San Mateo CA* (December 12, 2007), Exhibit #5, Memorandum for Norm Simons, from Joe Dillon, January 7, 2008.

chloramines maintained as total chlorine was at 1.97 mg/L in the storage tank. The chloramines level in the discharges proved to be at toxic levels in light of the fish kill.

The water spilled on November 2, 2009 was exposed to dechlorination tablets. None of the discharges were amenable to cleanup.

c. Discharger's ability to pay and continue in business:

The Discharger is able to pay the proposed amount. In 2008, the Discharger had a net income of $38.4 million on $389.7 million in revenue.[4]

d. Voluntary cleanup actions taken:

The Discharger became involved in assessing the impact of the 2007 discharges after SFPUC alerted it to the spills' magnitude, the fish kill, and the impacts to SFPUC's creek and wetland restoration project. The discharged water itself was not amenable to cleanup in any of the discharges.

e. Prior history of violations:

We are not aware of any prior violations at this facility.

f. Degree of culpability:

The Discharger is fully culpable for the unauthorized discharges. In each discharge, the water left the Discharger's property and entered into Polhemus creek. The September 27, 2007 discharge and sediment caused the fish kill and impacted SFPUC's creek and wetland restoration project. For the first two of the three discharges, no BMPs were in place to reduce the impact of the chloraminated water entering into the creek.

Since the discharges, the Discharger has implemented new testing procedures for the SCADA to verify the operation of the primary and backup control systems to prevent a similar system failure. In addition, the Discharger placed dechlorination BMPs at the tank overflow basin. See Section 8.g below for details.

g. Savings resulting from the violation:

The Discharger has realized cost savings by failure to timely implement appropriate BMPs and functional control systems. Based on the Discharger's February 10, 2009, submittal of additional information, since the September 2007 incident, the Discharger has invested about $52,500 to improve and upgrade its San Mateo storage tank facility.

[4] See page 84 at http://ir.calwatergroup.com/phoenix.zhtml?c=108851&p=IROL-secToc&TOC=aHR0cDovL2NjYm4uMTBrd2l6YXJkLmNvbS94bWwvY29udGVudHMueG1sP2lwYWdlPTY3OTQ1OTImcmVwbz10ZW5r&ListAll=1.

Below are the Discharger's stated significant improvements and their associated estimated costs:

- Replaced the Remote Terminal Unit at the 1452 Bel Aire Road (aka Baywood tank) facility and radio based system to improve its communications reliability, at a cost of about $10,000;
- Built a secure room for the SCADA server to prevent anyone from accidentally disconnecting the equipment, at a cost of about $15,000;
- Replaced the SCADA server to improve the reliability of the hardware, at a cost of $20,000;
- Replaced the SCADA monitors as part of the server replacements, at a cost of $5,000; and,
- Upgraded the Uninterruptible Power Supply at the office, at a cost of $2,500.

Since February, 2009, the Discharger has also installed an altitude control valve to prevent overflow, at a cost of $40,030. If these upgrades had been in place, the spills may have been prevented or detected earlier. Such savings, while below the proposed liability, represent the minimum liability that can be imposed.

h. Other matters that justice may require:

Staff time to inspect the site, review spill investigation reports, prepare Complaint, and supporting information is estimated to be 85 hours. Based on an average cost to the State of $150 per hour, the total staff cost is $12,750. Public noticing the Complaint requires publishing a Public Notice in a newspaper of general circulation, at a cost of approximately $600. The total staff cost to prepare the Complaint is thus approximately $13,350.

10. Based on the above factors and the monetary assessment guidance set forth in the State Water Resources Control Board's Enforcement Policy, the Assistant Executive Officer of the Regional Water Board proposes that an administrative civil liability be imposed in the amount of $200,000. Of this amount, $13,350 is for recovery of staff costs and $186,000 is the proposed liability.

    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.

11. The Discharger may submit information demonstrating an inability to pay the proposed liability. Such information should substantively demonstrate that the Discharger cannot, and could not, pay the proposed liability. It may consist, for example, of two years of income tax returns or an audited financial statement.

12. Further unpermitted discharges and/or failure to comply with Basin Plan discharge prohibitions beyond the date of this Complaint may subject the Discharger to additional administrative civil liability, and/or other appropriate enforcement actions(s), including referral to the Attorney General.

13. **CEQA Exemption:** 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.

Dyan C. Whyte

May 25, 2010

Dyan C. Whyte
Assistant Executive Officer

Date

Attachment: Waiver of Hearing form

In the Matter of:	)	COMPLAINT NO. R2-2009-0006
	)	for
California Water Service Company	)	ADMINISTRATIVE
1452 Bel Aire Road	)	CIVIL LIABILITY
San Mateo, San Mateo County	)	
_____	)	

WAIVER OF HEARING

If you waive your right to a hearing, the matter will be included on the agenda of a Regional Water Board meeting but there will be no hearing on the matter, unless a) the Regional Water Board staff receives significant public comment during the comment period, or b) the Regional Water Board determines it will hold a hearing because it finds that new and significant information has been presented at the meeting that could not have been submitted during the public comment period. If you waive your right to a hearing but the Regional Water Board holds a hearing under either of the above circumstances, you will have a right to testify at the hearing notwithstanding your waiver. **Your waiver is due no later than June 25, 2010, by 5 p.m.**

❑ Waiver of the right to a hearing and agreement to make payment in full.

By checking the box, I agree to waive my right to a hearing before the Regional Water Board with regard to the violations alleged in Complaint No. R2-2009-0006 and to remit the full penalty payment of $200,000 to the State Water Pollution Cleanup and Abatement Account, c/o Regional Water Quality Control Board at 1515 Clay Street, Suite 1400, Oakland, CA 94612, within 40 days from receiving this Complaint. I understand that I am giving up my right to be heard, and to argue against the allegations made by the Assistant Executive Officer in this Complaint, and against the imposition of, or the amount of, the civil liability proposed unless the Regional Water Board holds a hearing under either of the circumstances described above. If the Regional Water Board holds such a hearing and imposes a civil liability, such amount shall be due 30 days from the date the Regional Water Board adopts the order imposing the liability.

❑ Waiver of right to a hearing within 90 days.

By checking this box, I hereby waive my right to have a hearing within 90 days after service of the Complaint, but I reserve the right to have a hearing in the future. I agree to promptly engage the Regional Water Board prosecution staff in discussions to resolve the outstanding violations. By checking this box, the Discharger requests that the Regional Water Board delay the hearing so the Discharger and Regional Water Board Prosecution Team can discuss settlement. It remains within the discretion of the Regional Water Board to agree to delay the hearing.

_____	_____
Name (print)	Signature
_____	_____
Date	Title/Organization