

ATTACHMENT A

CARPINTERIA SANITARY DISTRICT (DISCHARGER)

ACL COMPLAINT NO. R3-2015-0011

This document provides information regarding and in support of Administrative Civil Liability Complaint (ACLC) No. R3-2015-0011 against the Discharger for the unauthorized discharge of un-disinfected secondary effluent to the Pacific Ocean, a water of the United States. The unauthorized discharge occurred on October 3, 2012, at the Discharger's wastewater treatment plant (WWTP). On October 29, 2013, Water Board staff conducted an inspection to obtain more information regarding the violations at this facility. Information and data on the violation were provided by the Discharger in response to the Central Coast Water Board's December 10, 2013 CWC section 13267 Order. The Discharger provided additional data provided on or about April 21, 2014.

1.0 Discharger Information

The Discharger owns and operates a wastewater collection, treatment, and disposal system, which provides sewerage service for a population of approximately 13,000 within the City of Carpinteria and portions of Santa Barbara County. The treatment system consists of pretreatment, screening, grit removal, primary sedimentation, aerated activated sludge tanks, secondary sedimentation, chlorination, and dechlorination. Treated wastewater is discharged to the Pacific Ocean.

2.0 Application of Water Board's Enforcement Policy¹

On November 17, 2009, the State Water Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy was approved by the Office of Administrative Law and became effective on May 20, 2010. The Enforcement Policy establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors in California Water Code (CWC) section 13385(e), which requires the Central Coast Water Board to consider several factors when determining the amount of civil liability to impose, including "the nature, circumstances, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and other matters that justice may require."

The following recommendations are based on the procedures included in the Water Quality Enforcement Policy methodology.

3.0 Discharge Violation

On October 3, 2012, the Discharger's chlorination system at the WWTP failed to disinfect the secondarily-treated effluent from 4:08 a.m. to 9:40 a.m., which resulted in an unauthorized discharge of un-disinfected effluent from the WWTP of 297,896 gallons to the Pacific Ocean.

¹ Water Board's Adopted Enforcement Policy: http://www.swrcb.ca.gov/water_issues/programs/enforcement/policy.shtml

The Discharger reported that the chlorination failure at the WWTP was discovered by a plant operator conducting plant rounds in the morning of October 3, 2012. The Discharger conducted an investigation into the cause of the failure, including the failure of a particular pump, but was unable to conclusively determine the actual cause of the pump's failure. During the Prosecution Team's investigation of this incident, the Discharger conducted additional research, but was still unable to conclusively determine the exact cause of its chlorination system failure. The Discharger reported the discharge incident to the Central Coast Water Board and other agencies including the Pre-harvest Shellfish Unit of the Environmental Management Branch of the California Department of Public Health (CDPH) and the Santa Barbara County Environmental Health and Safety (EHS) Department.

Section 13385 of the CWC includes provisions for assessing administrative civil liability for discharges of wastes to surface waters in violation of the federal Clean Water Act. The October 3, 2012 discharge incident was to surface waters of the United States for which liability can be assessed in accordance with Section 13385 of the CWC. CWC §13385(c) states, in part, that the Regional Board may impose civil liability administratively for noncompliance with CWC §13376 on a daily basis at a maximum of ten thousand dollars (\$10,000) for each day in which the violation occurs in accordance with CWC §13385(c)(1); and 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 discharge, but not cleaned up, exceeds 1,000 gallons; or both, CWC §13385(c)(2).

The October 3, 2012 discharge was in violation of its NPDES permit, specifically Prohibition III.B, and Standard Provisions as described herein, for which administrative liability may be imposed.

4.0 Penalty Determination for Discharge Violation

The following step-by-step calculation is based on the Enforcement Policy's guidelines in determining monetary penalties associated with discharge violations to surface waters of the United States.

Step #1: Potential for Harm

Potential for harm is evaluated using the scores derived from the following three factors, with a total score of five.

Factor 1: Harm or Potential Harm to Beneficial Uses

The evaluation of the potential harm to beneficial uses factor considers the harm that may result from exposure to the pollutants in the illegal discharge. The most sensitive beneficial uses for this discharge are Water Contact Recreation (REC-1) and Shellfish Harvesting (SHELL), due to the potential exposure to elevated levels of pathogens (see Factor 2). Fecal contamination in recreational waters is associated with an increased risk of gastrointestinal and respiratory illness.

The outfall for this facility is located 1,000 feet offshore of Carpinteria State Beach in approximately 25 feet of water. Although the effluent is diluted by the diffuser at a 93:1 ratio, the Discharger's analysis indicates that receiving water limitations would be violated outside the initial zone of dilution. This discharge lasted for over 5 ½ hours.

"Below moderate" is defined as:

Less than moderate threat to beneficial uses (i.e., impacts are observed or reasonably expected, harm to beneficial uses is minor).

Due to the above considerations, the score for Factor 1 is two for being Below Moderate.

Factor 2: Physical, Chemical, Biological or Thermal Characteristics

While Factor 1 considers the harm to potential uses that can occur because of where the discharge occurred, Factor 2 considers the characteristics of the discharge itself. The score for Factor 2 is two, a moderate risk or threat, because the un-disinfected discharge received secondary biological treatment, but contained elevated levels of pathogens (coliform, enterococcus, etc.). No effluent sampling was conducted during the discharge event, but a representative secondary effluent total coliform sample taken by the Discharger's consultant (Aquatic Bioassay & Consulting Laboratories Inc.) showed 160,000 mpn/100 ml, which is more than 68 times above the effluent limit of 2,300 mpn/100ml.

Factor 3: Susceptibility to Cleanup or Abatement

The score for Factor 3 is one, meaning that less than 50% of the discharge was susceptible to cleanup, based on the following justifications:

1. The unauthorized discharge was not known until an operator discovered zero chlorine residual at the front end of the chlorine contact tank (right after chlorination dosage point). This resulted in direct discharge to the Pacific Ocean with none of the discharge susceptible to cleanup or abatement.
2. Discharger has no provision for automated "recirculation" or "emergency storage" system in place in cases of chlorination failure.

Step #2: Assessments for Discharge Violations

The discharge volume is calculated to be 296,896 gallons based on the effluent data submitted by the Discharger, less 1,000 gallons allowed by statute. The Discharger initially reported 281,250 gallons to the Central Coast Water Board, but did not provide any technical or supporting documents to back up the volume estimation. In response to the NOV/13267 Order dated December 10, 2013, the Discharger modified the discharge volume to 231,076 gallons based on effluent flow trend chart, calculated by its consultants. However, since this estimate relies on estimating discharge from a trend line on a chart, it is not as accurate as calculating the volume when the flow data is directly available. The final volume was calculated by Prosecution Team staff using available effluent flow data from the Discharger's Supervisory Control and Data Acquisition (SCADA) system.

Deviation from Requirement

The deviation from requirement reflects the extent to which the violation deviates from the permit's specific requirement as presented in Table 1 of the Enforcement Policy (page 14). In this case, the deviation from requirements is scored as Moderate because the intended effectiveness of the requirement to chlorinate has been partially compromised for more than five hours without alarm systems in place to notify operators.

Volume Assessment

Pursuant to CWC section 13385(a), the Discharger is subject to administrative civil liability for violating any waste discharge requirement contained in an NDPEs permit. The Central Coast Water Board may impose administrative civil liability pursuant to CWC section 13385(c) in an

amount not to exceed the sum of both of the following; (1) \$10,000 for each day in which the violation occurred and (2) \$10 for each gallon of discharge that was not susceptible to cleanup or was not cleaned up in excess of 1,000 gallons. The Water Quality Enforcement Policy requires application of the per gallon factor to the maximum per gallon amounts allowed under statute for the violations involved.

The Water Quality Enforcement Policy allows discretion to lower the \$10 per gallon maximum amount to \$2 per gallon for high volume discharges, including those involving sewage or stormwater. Here, the Prosecution Team exercised its discretion to reduce the recommended penalty to \$2 per gallon to yield an appropriate penalty for the discharge at issue, which did not involve sewage or stormwater.

Step #3: Per Day Assessments for Non-Discharge Violations

The proposed ACLC does not include any non-discharge violations.

Step #4: Adjustment Factors

The following three factors should be considered for modification of the amount of initial liability:

Culpability is scored as 1.1. The Discharger failed to take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment (Order No. R3-2011-003, Attachment D – Standard Provisions I (C) and 40 CFR §122.41(d)) and failed to develop and implement preventative and contingency plans (Attachment D-1, I (B.9)). In particular, Attachment D-1, I (B.9) requires:

Safeguards shall be provided to assure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operating procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the [e]ffect of accidental discharges shall:

- a. identify possible situations that could cause "upset", "overflow" or "bypass", or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.)
- b. evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.

At the time of the event, the Discharger's chemical disinfection system did not include a low chlorine dosage alarm system that would have immediately notified plant operators of a chlorination failure and thereby, minimize the length of time and volume of the discharge. Even though the pump was well-maintained and had no previous failures, such performance is not a guarantee of future success.

The Discharger was required by its permit to sample for 7 days after the loss of disinfection (see (Monitoring and Reporting Program, VIII.A.2). Although this failure to conduct sampling could be considered a violation of the Discharger's permit, it is not included in the proposed administrative liability. The Discharger spoke with Central Coast Water Board permitting staff and was allegedly told not to sample after the October 3, 2012 discharge. Even though this could be included as an additional violation, the Prosecution Team is not pursuing this violation or including it within the recommended liability.

Cleanup and Cooperation is scored as 0.9. After the violation, the Discharger subsequently created an alarm to notify staff in the event of a low chlorine condition. The Discharger originally reported that the October 3, 2012 discharge amount was estimated to be 281,250 gallons. In its 13267 response, based on an assessment of available data, the Discharger's consultant re-estimated the discharge amount as 231,076 [gallons]. However, using effluent data from the Discharger's Supervisory Control and Data Acquisition (SCADA) system, the Prosecution Team's calculation of the discharge volume was recalculated at 297,896 gallons. Based on its subsequent review of the relevant data on SCADA that was not previously available to the Discharger, the Discharger agrees with the discharge volume estimate of 297,896 gallons.

History of Violations is scored as 1. Although the Discharger has dechlorination violations, the Discharger does not have previous violations similar to the chlorination system failure. See Attachment B for summary of effluent limit violations that are mandatory minimum penalties, and are not required to go through the discretionary penalty methodology analysis.

Step # 5: Determination of Base Liability

The total base liability is determined by adding the amounts/scores above (see attached data spreadsheet). In this case, the liability is assessed based on both per day and per gallon penalties.

Step #6: Ability to Pay and Ability to Continue in Business

The score is considered neutral or one because the Discharger's published budget for its fiscal year that ended in 2010 (the most recent year available) indicated a net surplus of funds in its Enterprise Fund. It is not anticipated that the proposed liability would cause a financial hardship for the Discharger.

Step #7: Other Factors as Justice may Require

The following table shows an estimate of staff costs which will continue to accrue up to and through a hearing.

CARPINTERIA SANITARY DISTRICT MATTER				
Staff Position	Task	Estimated Hours	Hourly Rate (\$)	Cost (\$)
WRCE1	Site Inspection (prep, travel, onsite meeting/inspection)	20	125	2,500
WRCE2	Site Inspection (prep, travel, onsite meeting/inspection)	20	125	2,500
WRCE1	Development of Investigative Order (NOV/13267 Letter)	12	125	1,500
WRCE2	Development of Investigative Order (NOV/13267 Letter)	12	125	1,500
Sr WRCE	Review/Approve Investigative Order	5	125	625
WRCE1	Review Technical Report by Discharger	20	125	2,500
WRCE2	Review Technical Report by Discharger	20	125	2,500
WRCE1	Develop draft Attachment A and Penalty Calculator	10	125	1,250
WRCE2	Develop draft Attachment A and Penalty Calculator	10	125	1,250
WRCE1	Technical Meeting by telephone	4	125	500
WRCE2	Technical Meeting by telephone	4	125	500
Sr WRCE	Technical Meeting by telephone	3	125	375
WRCE1	Settlement meeting and discussion	8	125	1,000
WRCE2	Settlement meeting and discussion	12	125	1,500

Sr WRCE	Settlement meeting and discussion	5	125	625
Sr WRCE	Revise Attachment A	11	125	1,375
			TOTAL	22,000

Step #8: Economic Benefit

The economic benefit includes the failure to install a low chlorine dosage alarm system and the failure to conduct water quality monitoring of the receiving water. The following table shows the details of calculated economic benefits based on: (1) cost information provided by Aquatic Bioassay & Consulting Laboratories Inc. for sampling and analysis of receiving water (includes approximate cost of labor and equipment rental for seven days and (2) information provided by Discharger for installation of an alarm system.

Compliance Action	One-Time Non-depreciable Expenditure		Annual Cost		Date of			Benefit of Non-Compliance
	Amount	Date	Amount	Date	Non-Compliance	Compliance	Penalty Payment	
Avoided Sampling and Analysis of Receiving Water (outfall) ¹	\$22,400	10/3/2012	\$0	--	10/3/2012	5/28/2014	5/28/2015	\$25,234
Delayed Installation of Alarm	\$6,150	10/22/2012	\$0	--	3/25/2011	10/22/2012	5/28/2015	\$300
Totals	\$28,550		\$0					\$25,534

Source: USEPA BEN Model: Version 5.4.0, 2/23/2015 15:45

Not-for-Profit, which pays no taxes

Cost Index for Inflation: ECI Employment Cost Index

Discount/Compound Rate: 4.8%

¹ Requires 7 days offshore with boat and personnel. Cost: \$3,200 x 7

Step #9: Maximum and Minimum Liability

The Enforcement Policy states that the total liability shall be at least 10% higher than the economic benefit. Therefore the minimum liability is \$28,087.40.

The maximum liability allowed by CWC section 13385 is \$10 per gallon plus \$10,000 per day. Therefore the maximum liability is \$2,978,960.

Step #10: Final Liability Amount

The final liability amount is calculated using the penalty calculator, attached.

5.0 Proposed Administrative Civil Liability Amount

Based on the evaluation of steps above and the attached Penalty Calculation Methodology Worksheet, the proposed administrative civil liability amount for the discretionary and mandatory penalties is:

Penalty = \$81,775 for the October 3, 2012 discharge + \$15,000 for the MMPs, as represented on Attachment B
Total = \$96,775.