

EXHIBIT A

STATE WATER RESOURCES CONTROL BOARD

**WATER QUALITY
ENFORCEMENT POLICY**

Effective May 20, 2010

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Water Quality Enforcement Policy - November 17, 2009

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INTRODUCTION

The State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards) (together "Water Boards") have primary responsibility for the coordination and control of water quality in California. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation...." (Wat. Code, § 13000). Porter-Cologne grants the Water Boards the authority to implement and enforce the water quality laws, regulations, policies, and plans to protect the groundwater and surface waters of the State. Timely and consistent enforcement of these laws is critical to the success of the water quality program and to ensure that the people of the State have clean water. The goal of this Water Quality Enforcement Policy (Policy) is to protect and enhance the quality of the waters of the State by defining an enforcement process that addresses water quality problems in the most efficient, effective, and consistent manner. In adopting this Policy, the State Water Board intends to provide guidance that will enable Water Board staff to expend its limited resources in ways that openly address the greatest needs, deter harmful conduct, protect the public, and achieve maximum water quality benefits. Toward that end, it is the intent of the State Water Board that the Regional Water Boards' decisions be consistent with this Policy.

A good enforcement program relies on well-developed compliance monitoring systems designed to identify and correct violations, help establish an enforcement presence, collect evidence needed to support enforcement actions where there are identified violations, and help target and rank enforcement priorities. Compliance with regulations is critical to protecting public health and the environment, and it is the preference of the State Water Board that the most effective and timely methods be used to assure that the regulated community stays in compliance. Tools such as providing assistance, training, guidance, and incentives are commonly used by the Water Boards and work very well in many situations. There is a point, however, at which this cooperative approach should make way for a more forceful approach.

This Policy addresses the enforcement component (i.e. actions that take place in response to a violation) of the Water Boards' regulatory framework, which is an equally critical element of a successful regulatory program. Without a strong enforcement program to back up the cooperative approach, the entire regulatory framework would be in jeopardy. Enforcement is a critical ingredient in creating the deterrence needed to encourage the regulated community to anticipate, identify, and correct violations. Appropriate penalties and other consequences for violations offer some assurance of equity between those who choose to comply with requirements and those who violate them. It also improves public confidence when government is ready, willing, and able to back up its requirements with action.

In furtherance of the water quality regulatory goals of the Water Boards, this Policy:

- Establishes a process for ranking enforcement priorities based on the actual or potential impact to the beneficial uses or the regulatory program and for using progressive levels of enforcement, as necessary, to achieve compliance;
- Establishes an administrative civil liability assessment methodology to create a fair and consistent statewide approach to liability assessment;
- Recognizes the use of alternatives to the assessment of civil liabilities, such as supplemental environmental projects, compliance projects, and enhanced compliance actions, but requires standards for the approval of such alternatives to ensure they provide the expected benefits;

- Identifies circumstances in which the State Water Board will take action, even though the Regional Water Boards have primary jurisdiction;
- Addresses the eligibility requirements for small communities to qualify for carrying out compliance projects, in lieu of paying mandatory minimum penalties pursuant to California Water Code section 13385;
- Emphasizes the recording of enforcement data and the communication of enforcement information to the public and the regulated community; and
- Establishes annual enforcement reporting and planning requirements for the Water Boards.

The State's water quality requirements are not solely the purview of the Water Boards and their staffs. Other agencies, such as, the California Department of Fish and Game have the ability to enforce certain water quality provisions in state law. State law also allows members of the public to bring enforcement matters to the attention of the Water Boards and authorizes aggrieved persons to petition the State Water Board to review most actions or failures to act of the Regional Water Boards. In addition, state and federal statutes provide for public participation in the issuance of orders, policies, and water quality control plans. Finally, the federal Clean Water Act (CWA) authorizes citizens to bring suit against dischargers for certain types of CWA violations.

I. **FAIR, FIRM, AND CONSISTENT ENFORCEMENT**

It is the policy of the State Water Board that the Water Boards shall strive to be fair, firm, and consistent in taking enforcement actions throughout the State, while recognizing the unique facts of each case.

A. Standard and Enforceable Orders

The Water Board orders shall be consistent except as appropriate for the specific circumstances related to the discharge and to accommodate differences in applicable water quality control plans.

B. Determining Compliance

The Water Boards shall implement a consistent and valid approach to determine compliance with enforceable orders.

C. Suitable Enforcement

The Water Boards' enforcement actions shall be suitable for each type of violation, providing consistent treatment for violations that are similar in nature and have similar water quality impacts. Where necessary, enforcement actions shall also ensure a timely return to compliance.

D. Environmental Justice

The Water Boards shall promote enforcement of all health and environmental statutes within their jurisdictions in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority and low-income populations in the state.

Specifically, the Water Boards shall pursue enforcement that is consistent with the goals identified in Cal-EPA's Intra-Agency Environmental Justice Strategy, August 2004 (<http://www.calepa.ca.gov/EnvJustice/Documents/2004/Strategy/Final.pdf>) as follows:

- Ensure meaningful public participation in enforcement matters;
- Integrate environmental justice considerations into the enforcement of environmental laws, regulations, and policies;
- Improve data collection and availability of violation and enforcement information for communities of color and low-income populations; and,
- Ensure effective cross-media coordination and accountability in addressing environmental justice issues.

E. Facilities Serving Small Communities

The State Water Board has a comprehensive strategy for facilities serving small and/or disadvantaged communities that extends beyond enforcement and will revise that strategy as necessary to address the unique compliance challenges faced by these communities (see State Water Resources Control Board Resolution No. 2008-0048). Consistent with this strategy, reference in this Section E. to small communities is intended to denote both small and disadvantaged small communities.

Publicly owned treatment works (POTWs) and sewage collection systems that serve small communities must comply with water quality protection laws. The State Water Board recognizes that complying with environmental laws and regulations will require higher per capita expenditures in small communities than in large communities. When water quality violations occur, traditional enforcement practices used by the Water Boards may result in significant costs to these communities and their residents, thereby limiting their ability to achieve compliance without suffering disproportionate hardships.

In recognition of these factors, informal enforcement or compliance assistance will be the first steps taken to return a facility serving a small community to compliance, unless the Water Board finds that extenuating circumstances apply. Informal enforcement is covered in Appendix A. Compliance assistance activities are based on a commitment on the part of the entity to achieve compliance and shall be offered in lieu of enforcement when an opportunity exists to correct the violations. Compliance activities that serve to bring a facility into compliance include, but are not limited to:

- Education of the discharger and its employees regarding their permit, order, monitoring/reporting program, or any applicable regulatory requirements;
- Working with the discharger to seek solutions to resolve violations or eliminate the causes of violations; and,
- Assistance in identifying available funding and resources to implement measures to achieve compliance.

Further, the Water Boards recognize that timely initiation of progressive enforcement is important for a noncompliant facility serving a small community. When enforcement is taken before a large liability accumulates, there is greater likelihood the facility serving the small community will be able to address the liability and return to compliance within its financial capabilities.

II. ENFORCEMENT PRIORITIES FOR DISCRETIONARY ENFORCEMENT ACTIONS

It is the policy of the State Water Board that every violation results in the appropriate enforcement response consistent with the priority of the violation established in accordance with this Policy. The Water Boards shall rank violations and then prioritize cases for formal discretionary enforcement action to ensure the most efficient and effective use of available resources.

A. Ranking Violations

The first step in enforcement ranking is determining the relative significance of each violation. The following criteria will be used by the Water Boards to identify and classify significant violations in order to help establish priorities for enforcement efforts.

1. Class I Priority Violations

Class I priority violations are those violations that pose an immediate and substantial threat to water quality and that have the potential to cause significant detrimental impacts to human health or the environment. Violations involving recalcitrant parties who deliberately avoid compliance with water quality regulations and orders are also considered class I priority violations because they pose a serious threat to the integrity of the Water Boards' regulatory programs.

Class I priority violations include, but are not limited to, the following:

- a. Significant measured or calculated violations with lasting effects on water quality objectives or criteria in the receiving waters;
- b. Violations that result in significant lasting impacts to existing beneficial uses of waters of the State;
- c. Violations that result in significant harm to, or the destruction of, fish or wildlife;
- d. Violations that present an imminent danger to public health;
- e. Unauthorized discharges that pose a significant threat to water quality;
- f. Falsification of information submitted to the Water Boards or intentional withholding of information required by applicable laws, regulations, or enforceable orders;
- g. Violation of a prior enforcement action-- such as a cleanup and abatement order or cease and desist order--that results in an unauthorized discharge of waste or pollutants to water of the State; and

- h. Knowing and willful failure to comply with monitoring requirements as required by applicable laws, regulations, or enforceable orders because of knowledge that monitoring results will reveal violations.

2. Class II Violations

Class II violations are those violations that pose a moderate, indirect, or cumulative threat to water quality and, therefore, have the potential to cause detrimental impacts on human health and the environment. Negligent or inadvertent noncompliance with water quality regulations that has the potential for causing or allowing the continuation of an unauthorized discharge or obscuring past violations is also a class II violation.

Class II violations include, but are not limited to, the following:

- a. Unauthorized discharges that pose a moderate or cumulative threat to water quality;
- b. Violations of acute or chronic toxicity requirements where the discharge may adversely affect fish or wildlife;
- c. Violations that present a substantial threat to public health;
- d. Negligent or inadvertent failure to substantially comply with monitoring requirements as required by applicable laws, regulations, or enforceable orders, such as not taking all the samples required;
- e. Negligent or inadvertent failure to submit information as required by applicable laws, regulations, or an enforceable order where that information is necessary to confirm past compliance or to prevent or curtail an unauthorized discharge;
- f. Violations of compliance schedule dates (e.g., schedule dates for starting construction, completing construction, or attaining final compliance) by 30 days or more from the compliance date specified in an enforceable order;
- g. Failure to pay fees, penalties, or liabilities within 120 days of the due date, unless the discharger has pending a timely petition pursuant to California Water Code section 13320 for review of the fee, penalty, or liability, or a timely request for an alternative payment schedule, filed with the Regional Water Board;
- h. Violations of prior enforcement actions that do not result in an unauthorized discharge of waste or pollutants to waters of the State;
- i. Significant measured or calculated violations of water quality objectives or promulgated water quality criteria in the receiving waters; and
- j. Violations that result in significant demonstrated impacts on existing beneficial uses of waters of the State.

3. Class III Violations

Class III violations are those violations that pose only a minor threat to water quality and have little or no known potential for causing a detrimental impact on human health and the environment. Class III violations include statutorily required liability for late reporting when such late filings do not result in causing an unauthorized discharge or allowing one to continue. Class III violations should only include violations by dischargers who are first time or infrequent violators and are not part of a pattern of chronic violations.

Class III violations are all violations that are not class I priority or class II violations. Those include, but are not limited to, the following:

- a. Unauthorized discharges that pose a low threat to water quality;
- b. Negligent or inadvertent late submission of information required by applicable laws, regulations, or enforceable orders;
- c. Failure to pay fees, penalties, or liabilities within 30 days of the due date, unless the discharger has pending a timely petition pursuant to California Water Code section 13320 for review of the fee, penalty or liability; or a timely request for an alternative payment schedule, filed with the Regional Water Board;
- d. Any "minor violation" as determined pursuant to California Water Code section 13399 et seq. (see Appendix A. C.1a);
- e. Negligent or inadvertent failure to comply with monitoring requirements when conducting monitoring as required by applicable laws, regulations, or enforceable orders, such as using an incorrect testing method;
- f. Less significant (as compared to class II violations) measured or calculated violations of water quality objectives or promulgated water quality criteria in the receiving waters; and
- g. Violations that result in less significant (as compared to class II violations) demonstrated impacts to existing beneficial uses of waters of the State.

B. Enforcement Priorities for Individual Entities

The second step in enforcement ranking involves examining the enforcement records of specific entities based on the significance and severity of their violations, as well as other factors identified below. Regional Water Board senior staff and management, with support from the State Water Board Office of Enforcement, shall meet on a regular basis, no less than bi-monthly, and identify their highest priority enforcement cases. To the greatest extent possible, Regional Water Board shall target entities with class I priority violations for formal enforcement action.

In determining the importance of addressing the violations of a given entity, the following criteria should be used:

1. Class of the entity's violations;
2. History of the entity
 - a. Whether the violations have continued over an unreasonably long period after being brought to the entity's attention and are reoccurring;
 - b. Whether the entity has a history of chronic noncompliance;
 - c. Compliance history of the entity and good-faith efforts to eliminate noncompliance;
3. Evidence of, or threat of, pollution or nuisance caused by violations;
4. The magnitude or impacts of the violations;
5. Case-by-case factors that may mitigate a violation;
6. Impact or threat to high priority watersheds or water bodies (e.g., due to the vulnerability of an existing beneficial use or an existing state of impairment);
7. Potential to abate effects of the violations;
8. Strength of evidence in the record to support the enforcement action; and
9. Availability of resources for enforcement.

C. Automated Violation Priorities

It is the goal of the State Water Board to develop data algorithms to assign the relative priority of individual violations consistent with this Policy by January 1, 2012. This automated system should simplify the ranking of violations and facilitate prioritization of cases for enforcement.

D. Setting Statewide and Regional Priorities

On an annual basis, the State Water Board will propose statewide enforcement priorities. These priorities may be based on types of violations, individual regulatory programs, particular watersheds, or any other combined aspect of the regulatory framework in which an increased enforcement presence is required. These priorities will be documented in an annual enforcement report and reevaluated each year.

As part of the State Water Board's annual enforcement prioritization process, each Regional Water Board will identify and reevaluate its own regional priorities on an annual basis. This will also be included in a regional annual enforcement report.

E. Mandatory Enforcement Actions

In addition to these criteria for discretionary enforcement, the Water Boards will continue to address mandatory enforcement obligations imposed by the law (e.g. Wat. Code § 13385, subds.(h) and (i)). As detailed in Section VII, these mandatory actions should be taken within 18 months of the time that the violations qualify for the assessment of mandatory minimum penalties.

III. ENFORCEMENT ACTIONS

The Water Boards have a variety of enforcement tools to use in response to noncompliance by dischargers. With certain specified exceptions California Water Code section 13360, subdivision (a) prohibits the State Water Board or Regional Water Board from specifying the design, location, type of construction, or particular manner in which compliance may be had with a particular requirement. For every enforcement action taken, the discharger's return to compliance should be tracked in the Water Board's enforcement database. See Appendix A for additional information.

IV. STATE WATER BOARD ENFORCEMENT ACTION

The Regional Water Boards have primary responsibility for matters directly affecting the quality of waters within their region. The State Water Board has oversight authority in such matters and may, from time to time, take enforcement action in lieu of the Regional Water Board as follows:

- In response to petitions alleging inaction or ineffective enforcement action by a Regional Water Board;
- To enforce statewide or multi-regional general permits;
- To address violations by the same discharger in more than one region;
- Where the Regional Water Board's lead prosecutor has requested that the State Water Board take over the enforcement action;
- Where a Regional Water Board is unable to take an enforcement action because of quorum problems, conflicts of interest, or other administrative circumstances;
- Where a Regional Water Board has not investigated or initiated an enforcement action for a class I priority violation in a manner consistent with this Policy; and
- Actions where the Executive Director has determined that enforcement by the State Water Board is necessary and appropriate.

Where the State Water Board decides to pursue such enforcement, the Office of Enforcement will coordinate investigation of the violations and preparation of the enforcement action with the staff of the affected Regional Water Board to ensure that the State Water Board will not duplicate efforts of the Regional Water Board. Except under unusual circumstances, the Regional Water Board enforcement staff will have the opportunity to participate and assist in

any investigation and the Office of Enforcement will seek input from the Regional Water Board enforcement staff in the development of any resulting enforcement action. Such action may be brought before the State Water Board or the Regional Water Board, as may be deemed appropriate for the particular action. The decision as to where to bring the enforcement action will be discussed with the affected Regional Water Board enforcement staff. Enforcement actions requiring compliance monitoring or long-term regulatory follow-up will generally be brought before the appropriate Regional Water Board.

V. COORDINATION WITH OTHER REGULATORY AGENCIES

A. Hazardous Waste Facilities

At hazardous waste facilities where the Regional Water Board is the lead agency for corrective action oversight, the Regional Water Board shall consult with Department of Toxic Substances Control (DTSC) to ensure, among other things, that corrective action is at least equivalent to the requirements of the Federal Resource, Conservation, and Recovery Act (RCRA).

B. Oil Spills

The Water Boards will consult and cooperate with the Office of Spill Prevention and Response at the Department of Fish and Game (OSPR) for any oil spill involving waters under the jurisdiction of OSPR.

C. General

The Water Boards will work cooperatively with other local, state, regional, and federal agencies when violations, for which the agency itself is not responsible, occur on lands owned or managed by the agency. Where appropriate, the Water Boards will also coordinate enforcement actions with other agencies that have concurrent enforcement authority.

VI. MONETARY ASSESSMENTS IN ADMINISTRATIVE CIVIL LIABILITY (ACL) ACTIONS

A. Penalty Calculation Methodology

As a general matter, where, as in the California Water Code, a civil penalty structure has been devised to address environmental violations, civil penalties do not depend on proof of actual damages to the environment. Courts in reviewing similar environmental protection statutes have held that a plaintiff need not prove a loss before recovering a penalty; instead, the defendant must demonstrate that the penalty should be less than the statutory maximum. In certain cases, a strong argument can be made that consideration of the statutory factors can support the statutory maximum as an appropriate penalty for water quality violations, in the absence of any other mitigating evidence. Moreover, as discussed below, the Porter-Cologne Act requires that certain civil liabilities be set at a level that accounts for any "economic benefit or savings" violators gained through their violations. (Wat. Code, § 13385, subd. (e).) Economic benefit or savings is a factor to be considered in determining the amount of other civil liabilities. (Wat. Code, § 13327.) The Water Boards have powerful liability provisions at their disposal which the Legislature and the public expect them to fairly and consistently implement for maximum enforcement impact to address, correct, and deter water quality violations.

While it is a goal of this Policy to establish broad consistency in the Water Boards' approach to enforcement, the Policy recognizes that, with respect to liability determinations, each Regional Water Board, and each specific case, is somewhat unique. The goal of this section is to provide a consistent approach and analysis of factors to determine administrative civil liability. Where violations are standard and routine, a consistent outcome can be reasonably expected using this Policy. In more complex matters, however, the need to assess all of the applicable factors in liability determinations may yield different outcomes in cases that may have many similar facts.

Liabilities imposed by the Water Boards are an important part of the Water Boards' enforcement authority. Accordingly, any assessment of administrative civil liability, whether negotiated pursuant to a settlement agreement or imposed after an administrative adjudication, should:

- Be assessed in a fair and consistent manner;
- Fully eliminate any economic advantage obtained from noncompliance;¹
- Fully eliminate any unfair competitive advantage obtained from noncompliance;
- Bear a reasonable relationship to the gravity of the violation and the harm to beneficial uses or regulatory program resulting from the violation;
- Deter the specific person(s) identified in the ACL from committing further violations; and
- Deter similarly situated person(s) in the regulated community from committing the same or similar violations.

The liability calculation process set forth in this chapter provides the decision-maker with a methodology for arriving at a liability amount consistent with these objectives. This process is applicable to determining administratively-adjudicated assessments as well as those obtained through settlement. In reviewing a petition challenging the use of this methodology by a Regional Water Board, the State Water Board will generally defer to the decisions made by the Regional Water Boards in calculating the liability amount unless it is demonstrated that the Regional Water Board made a clear factual mistake or error of law, or that it abused its discretion.

The following provisions apply to all discretionary administrative civil liabilities (ACLs). Mandatory Minimum Penalties (MMPs) required pursuant to California Water Code section 13385, subdivisions (h) and (i), are discussed in Chapter VII.

General Approach

A brief summary of each step is provided immediately below. A more complete discussion of each step is presented later in this section.

- Step 1. *Potential for Harm for Discharge Violations* – Calculate Potential for Harm considering: (1) the potential for harm to beneficial uses; (2) the degree of toxicity of the discharge; and (3) the discharge's susceptibility to cleanup or abatement.

¹ When liability is imposed under California Water Code § 13385, Water Boards are statutorily obligated to recover, at a minimum, all economic benefit to the violator as a result of the violation.

- Step 2.** *Per Gallon and Per Day Assessments for Discharge Violations* – For discharges resulting in violations, use Table 1 and/or Table 2 to determine Per Gallon and/or Per Day Assessments. Depending on the particular language of the ACL statute being used, either or both tables may be used. Multiply these factors by per gallon and/or per day amounts as described below. Where allowed by code, both amounts should be determined and added together. This becomes the initial amount of the ACL for the discharge violations.
- Step 3.** *Per Day Assessments for non-Discharge Violations* – For non-discharge violations, use Table 3 to determine per day assessments. Multiply these factors by the per day amount as described below. Where allowed by the California Water Code, amounts for these violations should be added to amounts (if any) for discharge violations from Step 2, above. This becomes the initial amount of the ACL for the non-discharge violations.
- Step 4.** *Adjustment Factors* – Adjust the initial amounts for each violation by factors addressing the violator's conduct, multiple instances of the same violation, and multiple day violations.
- Step 5.** *Total Base Liability Amount* – Add the adjusted amounts for each violation from Step 4.

Thereafter, the Total Base Liability amount may be adjusted, based on consideration of the following:

- Step 6.** *Ability to Pay and Ability to Continue in Business* – If the ACL exceeds these amounts, it may be adjusted downward provided express findings are made to justify this.
- Step 7.** *Other Factors as Justice May Require* – Determine if there are additional factors that should be considered that would justify an increase or a reduction in the Total Base Liability amount. These factors must be documented in the ACL Complaint. One of these factors is the staff costs of investigating the violations and issuing the ACL. The staff costs should be added to the amount of the ACL.
- Step 8.** *Economic Benefit* – The economic benefit of the violations must be determined based on the best available information, and the amount of the ACL should exceed this amount. (Note that the Economic Benefit is a statutory minimum for ACLs issued pursuant to California Water Code section 13385.)
- Step 9.** *Maximum and Minimum Liability Amounts* - Determine the statutory maximum and minimum amounts of the ACL, if any. Adjust the ACL to ensure it is within these limits.
- Step 10.** *Final Liability Amount* – The final liability amount will be assessed after consideration of the above factors. The final liability amount and significant considerations regarding the liability amount must be discussed in the ACL Complaint and in any order imposing liability.

STEP 1 - Potential for Harm for Discharge Violations

Calculating this factor is the initial step for discharge violations. Begin by determining the actual or threatened impact to beneficial uses caused by the violation using a three-factor scoring

system to quantify: (1) the potential for harm to beneficial uses; (2) the degree of toxicity of the discharge; and (3) the discharge's susceptibility to cleanup or abatement for each violation or group of violations.

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 or contaminants in the illegal discharge, in light of the statutory factors of the nature, circumstances, extent and gravity of the violation or violations. The score evaluates direct or indirect harm or potential for harm from the violation. A score between 0 and 5 is assigned based on a determination of whether the harm or potential for harm is negligible (0), minor (1), below moderate (2), moderate (3), above moderate (4), or major (5).

0 = Negligible - no actual or potential harm to beneficial uses.

1 = Minor - low threat to beneficial uses (i.e., no observed impacts but potential impacts to beneficial uses with no appreciable harm).

2 = Below moderate – less than moderate threat to beneficial uses (i.e., impacts are observed or reasonably expected, harm to beneficial uses is minor).

3 = Moderate - moderate threat to beneficial uses (i.e., impacts are observed or reasonably expected and impacts to beneficial uses are moderate and likely to attenuate without appreciable acute or chronic effects).

4 = Above moderate – more than moderate threat to beneficial uses (i.e., impacts are observed or likely substantial, temporary restrictions on beneficial uses (e.g., less than 5 days), and human or ecological health concerns).

5 = Major - high threat to beneficial uses (i.e., significant impacts to aquatic life or human health, long term restrictions on beneficial uses (e.g., more than five days), high potential for chronic effects to human or ecological health).

Factor 2: The Physical, Chemical, Biological or Thermal Characteristics of the Discharge

The characteristics of this discharge factor are scored based on the physical, chemical, biological, and/or thermal nature of the discharge, waste, fill, or material involved in the violation or violations. A score between 0 and 4 is assigned based on a determination of the risk or threat of the discharged material, as outlined below. For purposes of this Policy, "potential receptors" are those identified considering human, environmental and ecosystem health exposure pathways.

0 = Discharged material poses a negligible risk or threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material are benign and will not impact potential receptors).

1 = Discharged material poses only minor risk or threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material are relatively benign or are not likely to harm potential receptors).

- 2 = Discharged material poses a moderate risk or threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material have some level of toxicity or pose a moderate level of concern regarding receptor protection).
- 3 = Discharged material poses an above-moderate risk or a direct threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material exceed known risk factors and /or there is substantial concern regarding receptor protection).
- 4 = Discharged material poses a significant risk or threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material far exceed risk factors or receptor harm is considered imminent).

Factor 3: Susceptibility to Cleanup or Abatement

A score of 0 is assigned for this factor if 50% or more of the discharge is susceptible to cleanup or abatement. A score of 1 is assigned for this factor if less than 50% of the discharge is susceptible to cleanup or abatement. This factor is evaluated regardless of whether the discharge was actually cleaned up or abated by the violator.

Final Score – “Potential for Harm”

The scores for the factors are then added to provide a Potential for Harm score for each violation or group of violations. The total score is used in the “Potential for Harm” axis for the Penalty Factor in Tables 1 and 2. The maximum score is 10 and the minimum score is 0.

STEP 2 - Assessments for Discharge Violations

For violations of NPDES permit effluent limitations, the base liability should be established by calculating the mandatory penalty required under Water Code section 13385(h) and (i). The mandatory penalty should be adjusted upward where the facts and circumstances of the violation warrant a higher liability.

This step addresses per gallon and per day assessments for discharge violations. Generally, it is intended that effluent limit violations be addressed on a per day basis only. Where deemed appropriate, such as for a large scale spill or release, both per gallon and per day assessments may be considered.

Per Gallon Assessments for Discharge Violations

Where there is a discharge, the Water Boards shall determine an initial liability amount on a per gallon basis using on the Potential for Harm score and the extent of Deviation from Requirement of the violation. These factors will be used in Table 1 below to determine a Per Gallon Factor for the discharge. Except for certain high-volume discharges discussed below, the per gallon assessment would then be the Per Gallon Factor multiplied by the number of gallons subject to penalty multiplied by the maximum per gallon penalty amount allowed under the California Water Code.

TABLE 1 - Per Gallon Factor for Discharges

Deviation from Requirement	Potential for Harm									
	1	2	3	4	5	6	7	8	9	10
Minor	0.005	0.007	0.009	0.011	0.060	0.080	0.100	0.250	0.300	0.350
Moderate	0.007	0.010	0.013	0.016	0.100	0.150	0.200	0.400	0.500	0.600
Major	0.010	0.015	0.020	0.025	0.150	0.220	0.310	0.600	0.800	1.000

The Deviation from Requirement reflects the extent to which the violation deviates from the specific requirement (effluent limitation, prohibition, monitoring requirement, construction deadline, etc.) that was violated. The categories for **Deviation from Requirement** in Table 1 are defined as follows:

Minor – The intended effectiveness of the requirement remains generally intact (e.g., while the requirement was not met, there is general intent by the discharger to follow the requirement).

Moderate – The intended effectiveness of the requirement has been partially compromised (e.g., the requirement was not met, and the effectiveness of the requirement is only partially achieved).

Major – The requirement has been rendered ineffective (e.g., discharger disregards the requirement, and/or the requirement is rendered ineffective in its essential functions).

For requirements with more than one part, the Water Boards shall consider the extent of the violation in terms of its adverse impact on the effectiveness of the most significant requirement.

High Volume Discharges

The Water Boards shall apply the above per gallon factor to the maximum per gallon amounts allowed under statute for the violations involved. Since the volume of sewage spills and releases of stormwater from construction sites and municipalities can be very large for sewage spills and releases of municipal stormwater or stormwater from construction sites, a maximum amount of \$2.00 per gallon should be used with the above factor to determine the per gallon amount for sewage spills and stormwater. Similarly, for releases of recycled water that has been treated for reuse, a maximum amount of \$1.00 per gallon should be used with the above factor. Where reducing these maximum amounts results in an inappropriately small penalty, such as dry weather discharges or small volume discharges that impact beneficial uses, a higher amount, up to the maximum per gallon amount, may be used.

Per Day Assessments for Discharge Violations

Where there is a discharge, the Water Boards shall determine an initial liability factor per day based on the Potential for Harm score and the extent of Deviation from Requirement of the violation. These factors will be used in Table 2, below, to determine a Per Day Factor for the violation. The per day assessment would then be the Per Day Factor multiplied by the maximum per day amount allowed under the California Water Code. Generally, it is intended that effluent limit violations be addressed on a per day basis. Where deemed appropriate, such

as for a large scale spill or release, it is intended that Table 2 be used in conjunction with Table 1, so that both per gallon and per day amounts be considered under Water Code section 13385. Where there is a violation of the permit not related to a discharge incident, Step 3/Table 3 below should be used instead.

TABLE 2 - Per Day Factor for Discharges

Deviation from Requirement	Potential for Harm									
	1	2	3	4	5	6	7	8	9	10
Minor	0.005	0.007	0.009	0.011	0.060	0.080	0.100	0.250	0.300	0.350
Moderate	0.007	0.010	0.013	0.016	0.100	0.150	0.200	0.400	0.500	0.600
Major	0.010	0.015	0.020	0.025	0.150	0.220	0.310	0.600	0.800	1.000

The categories for **Deviation from Requirement** in Table 2 are defined as follows:

Minor – The intended effectiveness of the requirement remains generally intact (e.g., while the requirement was not met, there is general intent by the discharger to follow the requirement).

Moderate – The intended effectiveness of the requirement has been partially compromised (e.g., the requirement was not met, and the effectiveness of the requirement is only partially achieved).

Major – The requirement has been rendered ineffective (e.g., discharger disregards the requirement, and/or the requirement is rendered ineffective in its essential functions).

For requirements with more than one part, the Water Boards shall consider the extent of the violation in terms of the adverse impact on the effectiveness of the most significant requirement.

The Water Boards shall apply the above per day factor to the maximum per day amounts allowed under statute for the violations involved. Where allowed by code, both the per gallon and the per day amounts should be determined and added together. This becomes the initial amount of the ACL for the discharge violations.

STEP 3 - Per Day Assessments for Non-Discharge Violations

The Water Boards shall calculate an initial liability factor for each non-discharge violation, considering Potential for Harm and the extent of deviation from applicable requirements. These violations include, but are not limited to, the failure to conduct routine monitoring and reporting, the failure to provide required information, and the failure to prepare required plans. While these violations may not directly or immediately impact beneficial uses, they harm or undermine the regulatory program. The Water Boards shall use the matrix set forth below to determine the initial liability factor for each violation. The per day assessment would then be the Per Day Factor multiplied by the maximum per day amount allowed under the California Water Code. For multiple day violations, please refer to the Adjustment Factors in Step 4, below.

Table 3 shall be used to determine the initial penalty factor for a violation. The Water Boards should select a penalty factor from the range provided in the matrix cell that corresponds to the appropriate Potential for Harm and the Deviation from Requirement categories. The numbers in parenthesis in each cell of the matrix are the midpoints of the range.

TABLE 3 - Per Day Factor

Deviation from Requirement	Potential for Harm		
	Minor	Moderate	Major
Minor	0.1 (0.15)	0.2 (0.25)	0.3 (0.35)
	0.2	0.3	0.4
Moderate	0.2 (0.25)	0.3 (0.35)	0.4 (0.55)
	0.3	0.4	0.7
	0.3 (0.35)	0.4 (0.55)	0.7 (0.85)
Major	0.4	0.7	1

The categories for **Potential for Harm** in Table 3 are:

Minor – The characteristics of the violation present a minor threat to beneficial uses, and/or the circumstances of the violation indicate a minor potential for harm.

Moderate – The characteristics of the violation present a substantial threat to beneficial uses, and/or the circumstances of the violation indicate a substantial potential for harm. Most incidents would be considered to present a moderate potential for harm.

Major – The characteristics of the violation present a particularly egregious threat to beneficial uses, and/or the circumstances of the violation indicate a very high potential for harm. Additionally, non-discharge violations involving particularly sensitive habitats should be considered major.

The categories for **Deviation from Requirement** in Table 3 are:

Minor – The intended effectiveness of the requirement remains generally intact (e.g., while the requirement was not met, there is general intent by the discharger to follow the requirement).

Moderate – The intended effectiveness of the requirement has been partially compromised (e.g., the requirement was not met, and the effectiveness of the requirement is only partially achieved).

Major – The requirement has been rendered ineffective (e.g., discharger disregards the requirement, and/or the requirement is rendered ineffective in its essential functions).

For requirements with more than one part, the Water Boards shall consider the extent of the violation in terms of the adverse impact on the effectiveness of the most significant requirement.

For any given requirement, the Deviation from Requirements may vary. For example, if a facility does not have a required response plan or has not submitted a required monitoring report, the deviation would be major. If a facility has a prepared a required plan or submitted the required monitoring report, but significant elements are omitted or missing, the deviation would be moderate. If a facility has a required plan or submitted the required monitoring report with only minor elements missing, the deviation would be minor.

STEP 4 – Adjustment Factors

Violator's Conduct Factors

There are three additional factors that should be considered for modification of the amount of the initial liability: the violator's culpability, the violator's efforts to cleanup or cooperate with regulatory authorities after the violation, and the violator's compliance history. Not all factors will apply in every liability assessment.

TABLE 4 – Violator's Conduct Factors

Factor	Adjustment
Culpability	Discharger's degree of culpability regarding the violation. Higher liabilities should result from intentional or negligent violations than for accidental, non-negligent violations. A first step is to identify any performance standards (or, in their absence, prevailing industry practices) in the context of the violation. The test is what a reasonable and prudent person would have done or not done under similar circumstances. Adjustment should result in a multiplier between 0.5 to 1.5 , with the lower multiplier for accidental incidents, and higher multiplier for intentional or negligent behavior.
Cleanup and Cooperation	Extent to which the discharger voluntarily cooperated in returning to compliance and correcting environmental damage, including any voluntary cleanup efforts undertaken. Adjustment should result in a multiplier between 0.75 to 1.5 , with the lower multiplier where there is a high degree of cleanup and cooperation, and higher multiplier where this is absent.
History of Violations	Prior history of violations. Where there is a history of repeat violations, a minimum multiplier of 1.1 should be used to reflect this.

After each of the above factors is considered for the violations involved, the applicable factor should be multiplied by the proposed amount for each violation to determine the revised amount for that violation.

Multiple Violations Resulting From the Same Incident

By statute, certain situations that involve multiple violations are treated as a single violation per day, such as a single operational upset that leads to simultaneous violations of more than one pollutant parameter. (Water Code § 13385, sub. (f)(1).) For situations not addressed by statute, a single base liability amount can also be assessed for multiple violations at the discretion of the Water Boards, under the following circumstances:

- a. The facility has violated the same requirement at one or more locations within the facility;
- b. A single operational upset where violations occur on multiple days;
- c. The violation continues for more than one day;

- d. When violations are not independent of one another or are not substantially distinguishable. For such violations, the Water Boards may consider the extent of the violation in terms of the most egregious violation;
- e. A single act may violate multiple requirements, and therefore constitute multiple violations. For example, a construction dewatering discharge to a dewatering basin located on a gravel bar next to stream may violate a requirement that mandates the use of best management practices (BMPs) for sediment and turbidity control, a requirement prohibiting the discharge of soil silt or other organic matter to waters of the State, and a requirement that temporary sedimentation basins be located at least 100 feet from a stream channel. Such an act would constitute three distinct violations that may be addressed with a single base liability amount.

If the violations do not fit the above categories, each instance of the same violation shall be calculated as a separate violation.

Except where statutorily required, multiple violations shall not be grouped and considered as a single base liability amount when those multiple violations each result in a distinguishable economic benefit to the violator.

Multiple Day Violations

For violations that are assessed a civil liability on a per day basis, the initial liability amount should be assessed for each day up to thirty (30) days. For violations that last more than thirty (30) days, the daily assessment can be less than the calculated daily assessment, provided that it is no less than the per day economic benefit, if any, resulting from the violation. For these cases, the Water Board must make express findings that the violation:

- a. Is not causing daily detrimental impacts to the environment or the regulatory program;
- b. Results in no economic benefit from the illegal conduct that can be measured on a daily basis; or,
- c. Occurred without the knowledge or control of the violator, who therefore did not take action to mitigate or eliminate the violation.

If one of the above findings is made, an alternate approach to penalty calculation for multiple day violations may be used. In these cases, the liability shall not be less than an amount that is calculated based on an assessment of the initial Total Base Liability Amount for the first day of the violation, plus an assessment for each five day period of violation until the 30th day, plus an assessment for each thirty (30) days of violation. For example, a violation lasting sixty-two (62) days would accrue a total of 8 day's worth of violations, based on a per day assessment for day 1, 5, 10, 15, 20, 25, 30, and 60. Similarly, a violation lasting ninety-nine (99) days would accrue a total of 9 day's worth of violations, based on a per day assessment for day 1, 5, 10, 15, 20, 25, 30, 60, and 90.

STEP 5 – Determination of Total Base Liability Amount

The Total Base Liability Amount will be determined by adding the amounts above for each violation, though this may be adjusted for multiple day violations as noted above. Depending on the statute controlling the liability assessment for a violation, the liability can be assessed as either a per day penalty, a per gallon penalty, or both.

STEP 6 – Ability to Pay and Ability to Continue in Business

If the Water Boards have sufficient financial information necessary to assess the violator's ability to pay the Total Base Liability Amount or to assess the effect of the Total Base Liability Amount on the violator's ability to continue in business, the Total Base Liability Amount may be adjusted to address the ability to pay or to continue in business.

The ability of a discharger to pay an ACL is determined by its revenues and assets. In most cases, it is in the public interest for the discharger to continue in business and bring its operations into compliance. If there is strong evidence that an ACL would result in widespread hardship to the service population or undue hardship to the discharger, the amount of the assessment may be reduced on the grounds of ability to pay. For a violation addressed pursuant to California Water Code section 13385, the adjustment for ability to pay and ability to continue in business can not reduce the liability to less than the economic benefit amount.

If staff anticipates that the discharger's ability to pay or ability to continue in business will be a contested issue in the proceeding, staff should conduct a simple preliminary asset search prior to issuing the ACL complaint. Staff should submit a summary of the results (typically as a finding in the Complaint or as part of staff's initial transmittal of evidence to the discharger), in order to put some evidence about these factors into the record for the proceeding and to give the discharger an opportunity to submit additional financial evidence if it chooses. If staff does not put any financial evidence into the record initially and the discharger later contests the issue, staff may then either choose to rebut any financial evidence submitted by the discharger, or submit some financial evidence and provide an opportunity for the discharger to submit its own rebuttal evidence. In some cases, this may necessitate a continuance of the proceeding to provide the discharger with a reasonable opportunity to rebut the staff's evidence. As a general practice, in order to maintain the transparency and legitimacy of the Water Boards' enforcement programs, any financial evidence that the discharger chooses to submit in an enforcement proceeding will generally be treated as a public record.

STEP 7 – Other Factors As Justice May Require

If the Water Board believes that the amount determined using the above factors is inappropriate, the amount may be adjusted under the provision for "other factors as justice may require," but only if express findings are made to justify this. Examples of circumstances warranting an adjustment under this step are:

- a. The discharger has provided, or Water Board staff has identified, other pertinent information not previously considered that indicates a higher or lower amount is justified.
- b. A consideration of issues of environmental justice indicates that the amount would have a disproportionate impact on a particular disadvantaged group.
- c. The calculated amount is entirely disproportionate to assessments for similar conduct made in the recent past using the same Enforcement Policy.

Costs of Investigation and Enforcement Adjustment

The costs of investigation and enforcement are "other factors as justice may require", and should be added to the liability amount. These costs may include the cost of investigating the violation, preparing the enforcement action, participating in settlement negotiations, and putting on a hearing, including any expert witness expenses. Such costs are the total costs incurred by

the Water Boards enforcement or prosecution staff, including legal costs that are reasonably attributable to the enforcement action. Costs include the total financial impact on the staff of the Water Board, not just wages, and should include benefits and other indirect overhead costs.

STEP 8 – Economic Benefit

The Economic Benefit Amount shall be estimated for every violation. Economic benefit is any savings or monetary gain derived from the act or omission that constitutes the violation. In cases where the violation occurred because the discharger postponed improvements to a treatment system, failed to implement adequate control measures (such as BMPs), or did not take other measures needed to prevent the violations, the economic benefit may be substantial. Economic benefit should be calculated as follows:

- a. Determine those actions required to comply with a permit or order of the Water Boards, an enforcement order, or an approved facility plan, or that were necessary in the exercise of reasonable care, to prevent a violation of the Water Code. Needed actions may have been such things as capital improvements to the discharger's treatment system, implementation of adequate BMPs, or the introduction of procedures to improve management of the treatment system.
- b. Determine when and/or how often these actions should have been taken as specified in the order or approved facility plan, or as necessary to exercise reasonable care, in order to prevent the violation.
- c. Estimate the type and cost of these actions. There are two types of costs that should be considered; delayed costs and avoided costs. Delayed costs include expenditures that should have been made sooner (e.g., for capital improvements such as plant upgrades and collection system improvements, training, development of procedures and practices) but that the discharger is still obligated to perform. Avoided costs include expenditures for equipment or services that the discharger should have incurred to avoid the incident of noncompliance, but that are no longer required. Avoided costs also include ongoing costs such as needed additional staffing from the time determined under step "b" to the present, treatment or disposal costs for waste that cannot be cleaned up, and the cost of effective erosion control measures that were not implemented as required.
- d. Calculate the present value of the economic benefit. The economic benefit is equal to the present value of the avoided costs plus the "interest" on delayed costs. This calculation reflects the fact that the discharger has had the use of the money that should have been used to avoid the instance of noncompliance. This calculation should be done using the USEPA's BEN ²computer program (the most recent

² USEPA developed the BEN model to calculate the economic benefit a violator derives from delaying and/or avoiding compliance with environmental statutes. Funds not spent on environmental compliance are available for other profit-making activities or, alternatively, a defendant avoids the costs associated with obtaining additional funds for environmental compliance. BEN calculates the economic benefits gained from delaying and avoiding required environmental expenditures such as capital investments, one-time non-depreciable expenditures, and annual operation and maintenance costs.

BEN uses standard financial cash flow and net present value analysis techniques based on generally accepted financial principles. First, BEN calculates the costs of complying on time and of complying late adjusted for inflation and tax deductibility. To compare the on time and delayed compliance costs in a common measure, BEN calculates the present value of both streams of costs, or "cash flows," as of the date of initial noncompliance. BEN derives these values by discounting the annual cash flows at an
(Continued)

version is accessible at <http://www.waterboards.ca.gov/plnspols/docs/wqplans/benmanual.pdf>) unless the Water Board determines, or the discharger demonstrates to the satisfaction of the Water Board, that, based on case-specific factors, an alternate method is more appropriate for a particular situation. However, in more complex cases, such as where the economic benefit may include revenues from continuing production when equipment used to treat discharges should have been shut down for repair or replacement, the total economic benefit should be determined by experts available from the Office of Research Planning and Performance or outside experts retained by the enforcement staff.

- e. Determine whether the discharger has gained any other economic benefits. These may include income from continuing production when equipment used to treat discharges should have been shut down for repair or replacement.

The Water Boards should not adjust the economic benefit for expenditures by the discharger to abate the effects of the unauthorized conduct or discharge, or the costs to come into or return to compliance. In fact, the costs of abatement may be a factor that demonstrates the economic extent of the harm from the violation and, therefore, may be a factor in upwardly adjusting any monetary liability as a benefit from noncompliance. The discharger's conduct relating to abatement is appropriately considered under "cleanup and cooperation" liability factor.

The Economic Benefit Amount should be compared to the adjusted Total Base Liability Amount. The adjusted Total Base Liability Amount shall be at least 10 percent higher than the Economic Benefit Amount so that liabilities are not construed as the cost of doing business and that the assessed liability provides a meaningful deterrent to future violations.

STEP 9 – Maximum and Minimum Liability Amounts

For all violations, the statute sets a maximum liability amount that may be assessed for each violation. For some violations, the statute also requires the assessment of a liability at no less than a specified amount. The maximum and minimum amounts for each violation must be determined for comparison to the amounts being proposed, and shall be described in any ACL complaint and in any order imposing liability. Where the amount proposed for a particular violation exceeds to statutory maximum, the amount must be reduced to that maximum. Similarly, the minimum statutory amount may require raising the amount being proposed unless there is a specific provision that allows assessment below the minimum. In such cases, the reasons for assigning a liability amount below this minimum must be documented in the resolution adopting the ACL.

STEP 10 – Final Liability Amount

The final liability amount consists of the added amounts for each violation, with any allowed adjustments, provided the amounts are within the statutory minimum and maximum amounts.

The administrative record must reflect how the Water Board arrived at the final liability amount. In particular, where adjustments are made to the initial amount proposed in the ACL complaint, the record should clearly reflect the Water Board's considerations, as the staff report or complaint may not reflect those considerations, or for any adjustments that are made at hearing

average of the cost of capital throughout this time period. BEN can then subtract the delayed-case present value from the on-time-case present value to determine the initial economic benefit as of the noncompliance date. Finally, BEN compounds this initial economic benefit forward to the penalty payment date at the same cost of capital to determine the final economic benefit of noncompliance.

that are different from those recommended in the ACL complaint or that further support the final liability amount in the administrative civil liability order.

B. Settlement Considerations

The liabilities resulting from the above methodology are for adoption by the Water Boards after formal administrative proceedings. The calculated liabilities may be adjusted as a result of settlement negotiations with a violator. It is not the goal of the Enforcement Policy to address the full range of considerations that should be entertained as part of a settlement. It is appropriate to adjust the administrative civil liabilities calculated pursuant to the methodology in consideration of hearing and/or litigation risks including: equitable factors, mitigating circumstances, evidentiary issues, or other weaknesses in the enforcement action that the prosecution reasonably believes may adversely affect the team's ability to obtain the calculated liability from the administrative hearing body. Ordinarily, these factors will not be fully known until after the issuance of an administrative civil liability complaint or through pre-filing settlement negotiations with an alleged violator. These factors shall be generally identified in any settlement of an administrative civil liability that seeks approval by a Water Board or its designated representative.

Factors that should not affect the amount of the calculated civil liability sought from a violator in settlement include, but are not limited to, the following:

1. A general desire to avoid hearing or minimize enforcement costs;
2. A belief that members of a Water Board will not support a proposed liability before that Water Board has considered the specific merits of the enforcement case or a similar case;
3. A desire to avoid controversial matters;
4. The fact that the initiation of the enforcement action is not as timely as it might have been under ideal circumstances (timeliness of the action as it affects the ability to present evidence or other timeliness considerations are properly considered); or
5. The fact that a water body affected by the violation is already polluted or impaired.

Except as specifically addressed in this Policy, nothing in this Policy is intended to limit the use of Government Code 11415.60

C. Other Administrative Civil Liability Settlement Components

In addition to a reduction of administrative civil liabilities, a settlement can result in the permanent suspension of a portion of the liability in exchange for the performance of a Supplemental Environmental Project (see the State Water Board's Water Quality Control Policy on Supplemental Environmental Projects) or an Enhanced Compliance Action (see Section IX).

As far as the scope of the settlement is involved, the settlement resolves only the claims that are made or could have been made based on the specific facts alleged in the ACL complaint. A settlement shall never include the release of any unknown claims or a waiver of rights under Civil Code section 1542.

VII. MANDATORY MINIMUM PENALTIES FOR NPDES VIOLATIONS

Mandatory penalty provisions are required by California Water Code section 13385, subdivisions (h) and (i) for specified violations of NPDES permits. For violations that are subject to mandatory minimum penalties, the Water Boards must assess an ACL for the mandatory minimum penalty or for a greater amount. California Water Code section 13385(h) requires that a mandatory minimum penalty of \$3,000 be assessed by the Regional Water Boards for each serious violation. A serious violation is any waste discharge that exceeds the effluent limitation for a Group I pollutant by 40 percent or more, or a Group II pollutant by 20 percent or more (see Appendices C and D), or a failure to file certain discharge monitoring reports for a complete period of 30 days (Wat. Code §§ 13385, subd. (h)(2), 13385.1.). Section VII.D. of this Policy addresses special circumstances related to discharge monitoring reports. Section VII.E. of this Policy addresses situations where the effluent limitation for a pollutant is less than or equal to the quantitation limit.

California Water Code section 13385(i) requires that a mandatory minimum penalty of \$3,000 be assessed by the Regional Water Boards for each non-serious violation, not counting the first three violations. A non-serious violation occurs if the discharger does any one of the following four or more times in any period of 180 days:

- (a) violates a WDR effluent limitation;
- (b) fails to file a report of waste discharge pursuant to California Water Code section 13260;
- (c) files an incomplete report of waste discharge pursuant to California Water Code section 13260; or
- (d) violates a whole effluent toxicity effluent limitation where the WDRs do not contain pollutant-specific effluent limitations for any toxic pollutants.

A. Timeframe for Issuance of Mandatory Minimum Penalties (MMPs)

The intent of these provisions of the California Water Code is to assist in bringing the State's permitted facilities into compliance with WDRs. The Water Boards should issue MMPs within eighteen months of the time that the violations qualify as mandatory minimum penalty violations. The Water Boards shall expedite MMP issuance if (a) the discharger qualifies as a small community with financial hardship, or (b) the total proposed mandatory penalty amount is \$30,000 or more. Where the NPDES Permit is being revoked or rescinded because the discharger will no longer be discharging under that permit, the Water Boards should ensure that all outstanding MMPs for that discharger are issued prior to termination of its permit to discharge.

B. MMPs for Small Communities

Except as provided below, the Water Boards do not have discretion in assessing MMPs and must initiate enforcement against all entities that accrue a violation. However, California Water Code section 13385, subdivision (k), provides an alternative to assessing MMPs against a POTW that serves a small community. Under this alternative, the Regional Water Boards may allow the POTW to spend an amount equivalent to the MMP toward a compliance project that is designed to correct the violation.

A POTW serving a small community is a POTW serving a community that has a financial hardship and that:

1. Has a population of 10,000 or fewer people or
2. Lies completely within one or more rural counties.³

A POTW serving incorporated areas completely within one or more rural counties is considered a POTW serving a small community.

"Financial hardship" means that the community served by the POTW meets one of the following criteria:

- Median household income⁴ for the community is less than 80 percent of the California median household income;
- The community has an unemployment rate⁵ of 10 percent or greater; or
- Twenty percent of the population is below the poverty level.⁶

"Median household income," "unemployment rate," and "poverty level" of the population served by the POTW are based on the most recent U.S. Census block group⁷ data or a local survey approved by the Regional Water Board in consultation with the State Water Board.

"Rural county" means a county classified by the Economic Research Service, United States Department of Agriculture (ERS, USDA) with a rural-urban continuum code of four through nine. The table below identifies qualified rural counties at the time this Policy was adopted. The list of qualified rural counties may change depending on reclassification by ERS, USDA. Consult the classification by ERS, USDA in effect at the time the enforcement action is taken.

³ The determination of the size of population served by the POTW and "rural county" status shall be made as of the time the penalty is assessed, not as of the time the underlying violations occurred.

⁴ **Median household income**

The median income divides the income distribution into two equal groups, one having incomes above the median and the other having incomes below the median.

⁵ **Unemployed**

All civilians, 16 years and older, are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week, (2) were actively looking for work during the last 4 weeks, and (3) were available to accept a job. Also included as unemployed are civilians who (1) did not work at all during the reference week, (2) were waiting to be called back to a job from which they had been laid off, and (3) were available for work except for temporary illness.

⁶ **Poverty**

Following the Office of Management and Budget's Directive 14, the Census Bureau uses a set of income thresholds that vary by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level."

⁷ **Block group**

A subdivision of a census tract (or, prior to 2000, a block numbering area). A block group is the smallest geographic unit for which the Census Bureau tabulates sample data. A block group consists of all the blocks within a census tract beginning with the same number. Example: block group 3 consists of all blocks within a 2000 census tract numbering from 3000 to 3999. In 1990, block group 3 consisted of all blocks numbered from 301 to 399Z.

Qualified Rural Counties		
Alpine	Inyo	Nevada
Amador	Lake	Plumas
Calaveras	Lassen	Sierra
Colusa	Mariposa	Siskiyou
Del Norte	Mendocino	Tehama
Glenn	Modoc	Trinity
Humboldt	Mono	Tuolumne
<i>Based on 2003 USDA Rural-Urban Continuum Codes for California</i>		

For purposes of California Water Code section 13385, subdivision (k)(2), the Regional Water Boards are hereby delegated the authority to determine whether a POTW, that depends primarily on residential fees (e.g., connection fees, monthly service fees) to fund its wastewater treatment facility (operations, maintenance, and capital improvements), is serving a small community, in accordance with the requirements set forth in this Policy.

The State Water Board will continue to make the determination of whether a POTW, that does not depend primarily on residential fees to fund its wastewater treatment facility, is serving a small community for purposes of California Water Code section 13385 (k)(2).

If a POTW believes that the U.S. Census data do not accurately represent the population served by the POTW or that additional factors such as low population density in its service area should be considered, the POTW may present an alternative justification to the State or Regional Water Board for designation as a "POTW serving a small community." The justification must include a map of service area boundaries, a list of properties, the number of households, the number of people actually served by the POTW, and any additional information requested by the State or Regional Water Board. The Regional Water Board shall consult with the State Water Board when making a determination based upon these additional, site-specific considerations.

C. Single Operational Upset

In accordance with California Water Code section 13385, subdivision (f)(2), for the purposes of MMPs only, a single operational upset that leads to simultaneous violations of one or more pollutant parameters over multiple days shall be treated as a single violation. The Regional Water Board shall apply the following US EPA Guidance in determining if a single operational upset occurred: "Issuance of Guidance Interpreting Single Operational Upset" Memorandum from the Associate Enforcement Counsel, Water Division, U.S.EPA, September 27, 1989 (excerpted below).

US EPA defines "single operational upset" as "an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one CWA effluent discharge pollutant parameter. Single operational upset does not include... noncompliance to the extent caused by improperly designed or inadequate treatment facilities". The US EPA Guidance further defines an "exceptional" incident as a "non-routine malfunctioning of an otherwise generally compliant facility." Single operational upsets include such things as an upset caused by a sudden violent storm, some other exceptional event, or a bursting tank. A single upset may result in violations of multiple pollutant parameters. The discharger has the burden of demonstrating that the violations were caused by a single operational upset. A finding that a single operational upset has occurred is not a defense to liability, but may affect the number of violations.

D. Defining a “Discharge Monitoring Report” in Special Circumstances Under California Water Code 13385.1

Section 13385.1(a)(1) states “for the purposes of subdivision (h) of section 13385, a 'serious violation' also means a failure to file a discharge monitoring report required pursuant to section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations.”

The legislative history of section 13385.1 indicates that the Legislature enacted the statute primarily to ensure better reporting by dischargers who might otherwise avoid penalties for violations of their NPDES permits by failing to submit monitoring reports that could disclose permit violations.

Because penalties under section 13385.1 are assessed for each complete period of thirty days following the deadline for submitting a report, penalties may potentially accrue for an indefinite time period. Dischargers who fail to conduct their required monitoring cannot go back and recreate and submit the data for a prior monitoring period. In such a case, an MMP for a missing report will continue to be assessed and reassessed for each 30 day period following the deadline for submission until an Administrative Civil Liability Complaint for MMPs is issued. This Policy is designed to assist dischargers by stopping the accrual of penalties for late or missing reports under the special circumstances described below. Nevertheless, under these circumstances, the discharger has the burden of submitting the required documentation pursuant to this Policy.

The following subsections provide additional guidance on the definition of a “discharge monitoring report,” for the purposes of subdivision (a) of section 13385.1 only, in situations where: (1) there was a discharge to waters of the United States, but the discharger failed to conduct any monitoring during that monitoring period, or (2) there was no discharge to waters of the United States during the relevant monitoring period.

1. Defining a “Discharge Monitoring Report” Where There Is a Discharge to Waters of the United States and the Discharger Fails to Conduct Any Monitoring During the Monitoring Period

For purposes of section 13385.1, in circumstances where a discharge to waters of the United States did occur, but where the discharger failed to conduct any monitoring during the relevant monitoring period, a “discharge monitoring report” shall include a written statement to the Regional Water Board, signed under penalty of perjury in accordance with 40 CFR 122.41(k) and 40 CFR 122.22(a)(1), stating:

- a. That no monitoring was conducted during the relevant monitoring period;
- b. The reason(s) the required monitoring was not conducted; and
- c. If the written statement is submitted after the deadline for submitting the discharge monitoring report, the reason(s) the required discharge monitoring report was not submitted to the Regional Water Board by the requisite deadline.

Upon the request of the Regional Water Board, the discharger may be required to support the written statement with additional explanation or evidence. Requiring a discharger to state under penalty of perjury that it did not conduct monitoring for the required period ensures that the discharger is not conducting monitoring and withholding data indicating there are effluent

limitation violations. This approach may not be used if the discharger did conduct monitoring during the monitoring period that it is required to report to the Regional Water Board because the results of that monitoring, even if incomplete, must be submitted to the Regional Water Board. This approach is consistent with the original legislative purpose of section 13385.1.

The written statement shall be treated as a "discharge monitoring report" for purposes of section 13385.1(a). MMPs for late or missing discharge monitoring reports assessed for each 30 day period will cease accruing upon the date the written statement is received by the Regional Water Board. While the submission of the written statement provides a cut-off date for MMPs assessed under 13385.1, the Regional Water Board may impose additional discretionary administrative civil liabilities pursuant to section 13385(a)(3).

2. Defining a "Discharge Monitoring Report" Where There Is No Discharge to Waters of the United States

Some waste discharge requirements or associated monitoring and reporting programs for episodic or periodic discharges require the submission of either a discharge monitoring report, if there were discharges during the relevant monitoring period, or a report documenting that no discharge occurred, if there were no discharges.

A report whose submittal is required to document that no discharge to waters of the United States occurred during the relevant monitoring period is not a "discharge monitoring report" for purposes of section 13385.1(a). Under these circumstances, that report would not ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations, and therefore, the late submittal of such a report would be subject to discretionary civil liabilities, but would not be subject to MMPs.

As a matter of practice, however, if such a report has not been received, the Regional Water Board may presume that there were discharges during the relevant monitoring period and should consider imposing MMPs for the failure to timely submit a discharge monitoring report. The Regional Water Board shall not take final action to impose the MMP if the discharger submits a written statement to the Regional Water Board, signed under penalty of perjury in accordance with 40 CFR 122.41(k) and 40 CFR 122.22(a)(1), stating:

- a. That there were no discharges to waters of the United States during the relevant monitoring period; and
- b. The reason(s) the required report was not submitted to the Regional Water Board by the deadline.

Upon the request of the Regional Water Board, the discharger may be required to support the written statement with additional explanation or evidence. Requiring a discharger to state under penalty of perjury that it did not discharge during the relevant monitoring period ensures that a discharger is not discharging and conducting monitoring and then withholding data indicating there are effluent limitation violations.

If such a statement is submitted, discretionary administrative civil liabilities, which the Regional Water Boards may assess under section 13385(a)(3), will cease upon the date the written statement is received by the Regional Water Board.

E. Defining a “Serious Violation” in Situations Where the Effluent Limitation Is Less Than or Equal to the Quantitation Limit

1. For discharges of pollutants subject to the State Water Board’s “Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California,” or the “California Ocean Plan”, where the effluent limitation for a pollutant is lower than the applicable Minimum Level, any discharge that: (1) equals or exceeds the Minimum Level; and (2) exceeds the effluent limitation by 40 percent or more for a Group 1 pollutant or by 20 percent or more for a Group 2 pollutant, is a serious violation for the purposes of California Water Code section 13385(h)(2).

2. For discharges of pollutants that are not subject to the State Water Board’s “Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California,” or the California Ocean Plan (e.g., pollutants that are not addressed by the applicable plan) where the effluent limitation for a pollutant is lower than the quantitation limit specified or authorized in the applicable waste discharge requirements or monitoring requirements, any discharge that: (1) equals or exceeds the quantitation limit; and (2) exceeds the effluent limitation by 40 percent or more for a Group 1 pollutant or by 20 percent or more for a Group 2 pollutant, is a serious violation for the purposes of California Water Code section 13385(h)(2).

VIII. COMPLIANCE PROJECTS (CPs)

A Compliance Project (CP) is a project designed to address problems related to the violation and bring the discharger back into compliance in a timely manner. CPs shall only be considered where they are expressly authorized by statute. At the time of the development of this Policy, CPs are expressly authorized by statute only in connection with MMPs for small communities with a financial hardship. (Wat. Code, § 13385, subd. (k).) Unless expressly authorized by future legislation, CPs may not be considered in connection with other ACLs. Absent such statutory authorization, if the underlying problem that caused the violations addressed in the ACL has not been corrected, the appropriate manner for compelling compliance is through an enforcement order with injunctive terms such as a Cleanup and Abatement Order (CAO), Cease and Desist Order (CDO), or Time Schedule Order (TSO).

It is the policy of the State Water Board that the following conditions shall apply to CPs authorized under California Water Code section 13385, subdivision (k):

1. The amount of the penalty that is suspended shall not exceed the cost necessary to complete the CP;
2. The discharger must spend an amount of money on the CP that is equal to or greater than the amount of the penalty that is suspended. Grant funds may be used only for the portion of the cost of the CP that exceeds the amount of the penalty to be suspended;
3. Where implementation of the CP began prior to the assessment of an MMP, all or a portion of the penalty may be suspended under these conditions:
 - a. The cost of the CP yet to be expended is equal to or greater than the penalty that is suspended;
 - b. The problem causing the underlying violations will be corrected by the project;

- c. The underlying violations occurred during, or prior to the initiation of, project implementation;
 - d. The completion date of the project is specified by an enforcement order (a CDO, CAO, TSO, or ACL Order) adopted at or before the time the penalty is assessed; and
 - e. The deadline for completion of the project is within 5 years of the date of the assessment of the MMP.
4. CPs may include, but are not limited to:
 - a. Constructing new facilities;
 - b. Upgrading or repairing existing facilities;
 - c. Conducting water quality investigations or monitoring;
 - d. Operating a cleanup system;
 - e. Adding staff;
 - f. Providing training;
 - g. Conducting studies; and
 - h. Developing operation, maintenance, or monitoring procedures.
5. CPs shall be designed to bring the discharger back into compliance in a five-year period and to prevent future noncompliance.
6. A CP is a project that the discharger is otherwise obligated to perform, independent of the ACL.
7. CPs must have clearly identified project goals, costs, milestones, and completion dates and these must be specified in an enforceable order (ACL Order, CDO, CAO, or TSO).
8. CPs that will last longer than one year must have quarterly reporting requirements.
9. Upon completion of a CP, the discharger must submit a final report declaring such completion and detailing fund expenditures and goals achieved.
10. If the discharger completes the CP to the satisfaction of the Water Board by the specified date, the suspended penalty amount is dismissed.
11. If the CP is not completed to the satisfaction of the Water Board on the specified date the amount suspended becomes due and payable to the State Water Pollution Cleanup and Abatement Account (CAA) or other fund or account as authorized by statute.
12. The ACL complaint or order must clearly state that payment of the previously suspended amount does not relieve the discharger of its independent obligation to take necessary actions to achieve compliance.

IX. ENHANCED COMPLIANCE ACTIONS (ECAs)

Enhanced Compliance Actions (ECAs) are projects that enable a discharger to make capital or operational improvements beyond those required by law, and are separate from projects designed to merely bring a discharger into compliance. The Water Boards may approve a settlement with a discharger that includes suspension of a portion of the monetary liability of a discretionary ACL for completion of an ECA. Except as specifically provided below, any such settlement is subject to the rules that apply to Supplemental Environmental Projects.

For these ECAs the Water Boards shall require the following:

1. ECAs must have clearly identified project goals, costs, milestones, and completion dates and these must be specified in the ACL order.
2. ECAs that will last longer than one year must have at least quarterly reporting requirements.
3. Upon completion of an ECA, the discharger must submit a final report declaring such completion and detailing fund expenditures and goals achieved.
4. If the discharger completes the ECA to the satisfaction of the Water Board by the specified date, the suspended amount is dismissed.
5. If the ECA is not completed to the satisfaction of the Water Board on the specified date the amount suspended becomes due and payable to the CAA or other fund or account as authorized by statute.
6. The ACL complaint or order must clearly state that payment of the previously suspended amount does not relieve the discharger of its independent obligation to take necessary actions to achieve compliance.

If an ECA is utilized as part of a settlement of an enforcement action against a discharger, the monetary liability that is not suspended shall be no less than the amount of the economic benefit that the discharger received from its unauthorized activity, plus an additional amount that is generally consistent with the factors for monetary liability assessment to deter future violations.

X. DISCHARGER VIOLATION REPORTING

For permitted discharges, all violations must be reported in self-monitoring reports in a form acceptable to the Regional Water Board. Voluntary disclosure of violations that are not otherwise required to be reported to the Water Boards shall be considered by the Water Boards when determining the appropriate enforcement response.

Falsification or misrepresentation of such voluntary disclosures shall be brought to the attention of the appropriate Regional Water Board for possible enforcement action.

XI. VIOLATION AND ENFORCEMENT DATA

The Water Boards will ensure that all violations and enforcement actions are documented in the appropriate Water Board data management system. Sufficient information will be collected and maintained regarding regulated facilities and sites to allow preparation of internal and external reporting of violation and enforcement information, and development and reporting of performance measures regarding the Water Boards' enforcement activities. To ensure timely collection of this information, all violations will be entered within 10 days of discovery of the violation, and all enforcement actions will be entered within 20 days of the date of the enforcement action.

XII. ENFORCEMENT REPORTING

In order to inform the public of State and Regional Water Boards' performance with regard to enforcement activities, there are a number of legislatively mandated and elective reports the Water Boards are committed to producing on a regular basis. See Appendix B for additional information on these reports.

XIII. POLICY REVIEW AND REVISION

It is the intent of the State Water Board that this Policy be reviewed and revised, as appropriate, at least every five years. Nothing in this Policy is intended to preclude revisions, as appropriate, on an earlier basis.

APPENDIX A: ENFORCEMENT ACTIONS

A. Standard Language

In order to provide a consistent approach to enforcement throughout the State, enforcement orders shall be standardized to the extent appropriate. The State Water Board will create model enforcement orders containing standardized provisions for use by the Regional Water Boards. Regional Water Boards shall use the models, modifying terms and conditions only as appropriate to fit the specific circumstances related to a discharge and to be consistent with Regional Water Board plans and policies.

B. Informal Enforcement Actions

An informal enforcement action is any enforcement action taken by Water Board staff that is not defined in statute or regulation. Informal enforcement action can include any form of communication (oral, written, or electronic) between Water Board staff and a discharger concerning an actual, threatened, or potential violation. Informal enforcement actions cannot be petitioned to the State Water Board.

The purpose of an informal enforcement action is to quickly bring an actual, threatened, or potential violation to the discharger's attention and to give the discharger an opportunity to return to compliance as soon as possible. The Water Board may take formal enforcement action in place of, or in addition to, informal enforcement actions. Continued noncompliance, particularly after informal actions have been unsuccessful, will result in the classification of the next violation as either class I priority or a class II violation.

1. Oral and Written Contacts

For many violations, the first step is an oral contact. This involves contacting the discharger by phone or in person and informing the discharger of the specific violations, discussing how and why the violations have occurred or may occur, and discussing how and when the discharger will correct the violation and achieve compliance. Staff must document such conversations in the facility case file and in the enforcement database.

A letter or email is often appropriate as a follow-up to, or in lieu of, an oral contact. Letters or emails, signed by staff or by the appropriate senior staff, should inform the discharger of the specific violations and, if known to staff, discuss how and why the violations have occurred or may occur. This letter or email should ask how and when the discharger will correct the violation and achieve compliance. The letter or email should require a prompt response and a certification from the discharger that the violation(s) has been corrected. In many cases, an email response may not be sufficient and a formal written response will be required. Correction of the violation by the discharger shall be recorded in the enforcement database.

Oral enforcement actions and enforcement letters or emails shall not include language excusing the violation or modifying a compliance date in waste discharge requirements (WDRs) or other orders issued by the Water Boards.

2. Notices of Violation (NOV)

The NOV letter is the most significant level of informal enforcement action and should be used only where a violation has actually occurred. An NOV must be signed by the appropriate staff and mailed to the discharger(s) by certified mail. In cases where the discharger has requested that its consultant be notified of Regional Water Board actions, the consultant should also receive a copy of the NOV. The NOV letter shall include a description of specific violation, a summary of potential enforcement options available to address noncompliance (including potential ACL assessments), and a request for a certified, written response by a specified date that either confirms the correction of the violation or identifies a date by which the violation will be corrected. The NOV can be combined with a request for technical information pursuant to California Water Code section 13267. The summary of potential enforcement options must include appropriate citations to the California Water Code and must specify that the Regional Water Board reserves the right to take any enforcement action authorized by law. When combining NOV's and CWC section 13267 requests, it should be noted that only requests made pursuant to section 13267 are petitionable to the State Water Board.

C. Formal Enforcement Actions

Formal enforcement actions are statutorily based actions to address a violation or threatened violation of water quality laws, regulations, policies, plans, or orders. The actions listed below present options available for enforcement.

1. Notices to Comply

Water Code section 13399 *et seq.* deals with statutorily defined "minor" violations. When dealing with such a "minor" violation, a Notice to Comply is generally the only means by which the State Water Board or Regional Water Board can commence an enforcement action. Because these "minor" violations are statutorily defined, they do not directly correlate with the classification system defined in Section II of this Policy. Typically, however, "minor" violations may be considered equivalent to Class III violations.

A violation is determined to be "minor" by the State Water Board or the Regional Water Board after considering factors defined in California Water Code section 13399, subdivisions (e) and (f), and the danger the violation poses to, or the potential that the violation presents for endangering human health, safety, welfare, or the environment.

- a. Under most circumstances the violations listed below are considered to be "minor" violations:
 - (1) Inadvertent omissions or deficiencies in recordkeeping that do not prevent a Water Board from determining whether compliance is taking place.
 - (2) Records (including WDRs) not being physically available at the time of the inspection, provided the records do exist and can be produced in a reasonable time.
 - (3) Inadvertent violations of insignificant administrative provisions that do not involve a discharge of waste or a threat thereof.
 - (4) Violations that result in an insignificant discharge of waste or a threat thereof; provided, however, that there is no significant threat to human health, safety, welfare, or the environment.

- b. A violation is not considered "minor" if it is a class I priority violation as described in Section II of this Policy or includes any of the following:
- (1) Any knowing, willful, or intentional violation of Division 7 (commencing with Section 13000) of the California Water Code.
 - (2) Any violation that enables the violator to benefit economically from noncompliance, either by realizing reduced costs or by gaining an unfair competitive advantage.
 - (3) Chronic violations or violations committed by a recalcitrant violator.
 - (4) Violations that cannot be corrected within 30 days.

2. Notices of Stormwater Noncompliance

The Stormwater Enforcement Act of 1998 (Wat. Code, § 13399.25 et seq.) requires that each Regional Water Board provide a notice of noncompliance to any stormwater dischargers who have failed to file a notice of intent to obtain coverage, a notice of non-applicability, a construction certification, or annual reports. If, after two notices, the discharger fails to file the applicable document, the Regional Water Board shall issue a complaint for administrative civil liability against the discharger. Alternatively, the Water Boards may enforce most of these violations under Water Code section 13385.

3. Technical Reports and Investigations

California Water Code sections 13267, subdivision (b), and 13383 allow the Water Boards to conduct investigations and to require technical or monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste in accordance with the conditions in the section. When requiring reports pursuant to Water Code section 13267, subdivision (b), the Water Board must ensure that the burden, including costs of the reports bears a reasonable relationship to the need for the reports and the benefits to be obtained from them. Further, the Water Board shall provide a written explanation with regard to the need for the reports and identify the evidence that supports requiring them.

Failure to comply with requirements made pursuant to California Water Code section 13267, subdivision (b), may result in administrative civil liability pursuant to California Water Code section 13268. Failure to comply with orders made pursuant to California Water Code section 13383 may result in administrative civil liability pursuant to California Water Code section 13385. Sections 13267, subdivision (b) and 13383 requirements are enforceable when signed by the Executive Officer or Executive Director of the Water Boards or their delegates.

4. Cleanup and Abatement Orders (CAOs)

Cleanup and Abatement Orders (CAOs) are adopted pursuant to California Water Code section 13304. CAOs may be issued to any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a Regional Water Board or the State Water Board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the State and creates, or threatens to create, a condition of pollution or nuisance (discharger). The CAO requires the discharger to clean up the waste or abate the effects of the waste, or both, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts.

Regional Water Boards shall comply with State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304," in issuing CAOs. CAOs shall require dischargers to clean up the pollution to background levels or the best water quality that is reasonable if background levels of water quality cannot be restored in accordance with Resolution No. 92-49. At a minimum, cleanup levels must be sufficiently stringent to fully support beneficial uses, unless the Regional Water Board allows a containment zone. In the interim, and if restoration of background water quality cannot be achieved, the CAO shall require the discharger(s) to abate the effects of the discharge.

Violations of CAOs should trigger further enforcement in the form of an ACL, a TSO under California Water Code section 13308, or a referral to the Attorney General for injunctive relief or monetary remedies.

5. Section 13300 Time Schedule Orders (TSOs)

Pursuant to California Water Code section 13300, a Regional Water Board can require the discharger to submit a time schedule that sets forth the actions the discharger will take to address actual or threatened discharges of waste in violation of requirements. Typically, those schedules, after any appropriate adjustments by the Regional Water Board, are then memorialized in an order. TSOs that require submission of technical and monitoring reports should state that the reports are required pursuant to California Water Code section 13267.

6. Section 13308 Time Schedule Orders (13308 TSOs)

California Water Code section 13308 authorizes the Regional Water Board to issue a Section 13308 Time Schedule Order (13308 TSO) that prescribes, in advance, a civil penalty if compliance is not achieved in accordance with the time schedule. The Regional Water Board may issue a 13308 TSO if there is a threatened or continuing violation of a cleanup and abatement order, cease and desist order, or any requirement issued under California Water Code sections 13267 or 13383. The penalty must be set based on an amount reasonably necessary to achieve compliance and may not contain any amount intended to punish or redress previous violations. The 13308 TSO provides the Regional Water Boards with their primary mechanism for motivating compliance, and if necessary, assessing monetary penalties against federal facilities. Orders under this section are an important tool for regulating federal facilities.

If the discharger fails to comply with the 13308 TSO, the discharger is subject to a complaint for Administrative Civil Liability. The State Water Board may issue a 13308 TSO if the violation or threatened violation involves requirements prescribed by a State Water Board Order.

7. Cease and Desist Orders (CDOs)

Cease and Desist Orders (CDOs) are adopted pursuant to California Water Code sections 13301 and 13303. CDOs may be issued to dischargers violating or threatening to violate WDRs or prohibitions prescribed by the Regional Water Board or the State Water Board.

Section 4477 of the California Government Code prohibits all state agencies from entering into contracts of \$5,000 or more for the purchase of supplies, equipment, or services from any nongovernmental entity who is the subject of a CDO that is no longer under review and that was issued for violation of WDRs or which has been finally determined to be in violation of federal laws relating to air or water pollution. If the CDO contains a time schedule for compliance and

the entity is adhering to the time schedule, the entity is not subject to disqualification under this section. A list of such entities is maintained by the State Water Board.

CDOs shall contain language describing likely enforcement options available in the event of noncompliance and shall specify that the Regional Water Board reserves its right to take any further enforcement action authorized by law. Such language shall include appropriate California Water Code citations. Violations of CDOs should trigger further enforcement in the form of an ACL, 13308 TSO, or referral to the Attorney General for injunctive relief or monetary remedies.

8. Modification or Rescission of Waste Discharge Requirements (WDRs)

In accordance with the provisions of the California Water Code, a Regional Water Board may modify or rescind WDRs in response to violations. Depending on the circumstances of the case, rescission of WDRs may be appropriate for failure to pay fees, penalties, or liabilities; a discharge that adversely affects beneficial uses of the waters of the State; and violation of the State Water Board General WDRs for discharge of bio-solids due to violation of the Background Cumulative Adjusted Loading Rate. Rescission of WDRs generally is not an appropriate enforcement response where the discharger is unable to prevent the discharge, as in the case of a POTW.

9. Administrative Civil Liabilities (ACLs)

Administrative Civil Liabilities (ACLs) are liabilities imposed by a Regional Water Board or the State Water Board. The California Water Code authorizes the imposition of an ACL for certain violations of law. The factors used to assess the appropriate penalties are addressed in Section VI.

In addition to those specific factors that must be considered in any ACL action, there is another factor that ought to be considered. When the underlying problem that caused the violation(s) has not been corrected, the Water Board should evaluate whether the liability proposed in the ACL complaint is sufficient to encourage necessary work by the discharger to address problems related to the violation. If not, the Water Board should consider other options. An ACL action may be combined with another enforcement mechanism such as a CAO, a CDO, or other order with a time schedule for obtaining compliance. The appropriate orders to bring a discharger into compliance via an enforcement action will vary with the circumstances faced by the Water Boards.

It is the policy of the State Water Board that a 30 day public comment period shall be posted on the Board's website prior to the settlement or imposition of any ACL, including mandatory minimum penalties, and prior to settlement of any judicial civil liabilities. In addition, for civil liabilities that are expected to generate significant public interest, the Board may consider mailing or e-mailing the notice to known interested parties, or publishing the notice in a local newspaper. The notice should include a brief description of the alleged violations, the proposed civil liability, the deadline for comments, the date of any scheduled hearing, a process for obtaining additional information, and a statement that the amount of the civil liability may be revised. Only one notice need be posted for each civil liability.

Upon receipt of an ACL Complaint, the discharger(s) may waive its right to a public hearing and pay the liability; negotiate a settlement; or appear at a Board hearing to dispute the Complaint. If the discharger waives its right to a public hearing and pays the liability, a third party may still comment on the Complaint at any time during the public comment period. Following review of the comments, the Executive Officer or his or her delegate may withdraw the ACL Complaint. An ACL Complaint may be redrafted and reissued as appropriate.

D. Petitions of Enforcement Actions

Persons affected by most formal enforcement actions or failures to act by Regional Water Boards may file petitions with the State Water Board for review of such actions or failures to act. The petition must be received by the State Water Board within 30 days of the Regional Water Board action. A petition on the Regional Water Board's failure to act must be filed within 30 days of either the date the Regional Water Board refuses to act or a date that is 60 days after a request to take action has been made to the Regional Water Board. Actions taken by the Executive Officer of the Regional Water Board, if pursuant to authority delegated by the Regional Water Board (e.g., CAOs, ACL orders), are considered final actions by the Regional Water Board and are also subject to the 30-day time limit. In addition, significant enforcement actions by a Regional Water Board Executive Officer may, in some circumstances, be reviewed by the Regional Water Board at the request of the discharger, though such review does not extend the time to petition the State Water Board. The State Water Board may, at any time and on its own motion, review most actions or failures to act by a Regional Water Board. When a petition is filed with the State Water Board challenging an ACL assessment, the assessment is not due or owing during the State Water Board review of the petition. In all other cases, the filing of a petition does not stay the obligation to comply with the Regional Water Board order.

APPENDIX B: ENFORCEMENT REPORTING

In order to inform the public of State and Regional Water Boards performance with regard to enforcement activities, there are a number of legislatively mandated and elective reports the Water Boards are committed to producing on a regular basis.

A. Legislatively Mandated Enforcement Reporting

The following list summarizes legislatively mandated enforcement reporting requirements and State Water Board interpretations thereof:

- Section 13225, subdivision (e) - requires each Regional Water Board to report rates of compliance for regulated facilities. In accordance with the "Implementation Plan Regarding Information Reporting Requirements for Regional Board Enforcement Outputs" (January, 2008) compliance rates will be reported in the Annual Enforcement Report.
- Section 13225, subdivision (k) - requires each Regional Water Board, in consultation with the State Water Board, to identify and post on the Internet a summary list of all enforcement actions undertaken in that regional and the disposition of each action, including any civil penalty assessed. This list must be updated at least quarterly.
- Section 13225, subdivision (k) and Section 13225, subdivision (e) – In accordance with the "Implementation Plan Regarding Information Reporting Requirements for Regional Board Enforcement Outputs" (January, 2008) each Regional Water Board must post the information required by these sections on its website as a single table and update it quarterly.
- Section 13323, subdivision (e) requires information related to hearing waivers and the imposition of administrative civil liability, as proposed and as finally imposed, to be posted on the Internet.
- Section 13385, subdivision (o) – requires the State Water Board to continuously report and update information on its website, but at a minimum, annually on or before January 1, regarding its enforcement activities. The required information includes all of the following:
 - A compilation of the number of violations of waste discharge requirements in the previous calendar year, including stormwater enforcement violations;
 - A record of the formal and informal compliance and enforcement actions taken for each violation, including stormwater enforcement actions; and
 - An analysis of the effectiveness of current enforcement policies, including mandatory minimum penalties.
- Government Code Section 65962.5, subdivision (c) – requires that the State Water Board annually compile and submit to Cal/EPA a list of:
 - All underground storage tanks for which an unauthorized release report is filed pursuant to Health and Safety Code Section 25295.
 - All solid waste disposal facilities from which there is a migration of hazardous waste and for which a Regional Water Board has notified the Department of

Toxic Substances Control pursuant to subdivision (e) of California Water Code section 13273.

- All CDOs issued after January 1, 1986, pursuant to California Water Code Section 13301, and all CAOs issued after January 1, 1986, pursuant to California Water Code section 13304, which concern the discharge of wastes that are hazardous materials.

B. Elective Enforcement Reporting

To present a more comprehensive view of the Water Boards' enforcement activities and to identify enforcement goals and priorities, the Water Boards will prepare an annual integrated water quality enforcement report that will, at a minimum, address the following subjects:

- Budgetary and staff resources available for water quality enforcement at the Water Boards, as compared with the total resources for the regulatory programs and activities that they support, and the types of enforcement actions taken with those enforcement resources during the reporting period.
- All enforcement information required by statute to be reported to the public every year.
- The effectiveness of the Water Boards' compliance and enforcement functions using metrics such as those identified in the Annual Enforcement Report (to the extent that the information is available in the Water Boards' data base system), below.

Recommended Performance Measures For Water Boards' Enforcement Programs

Measure Name	Measure Description
Self-Monitoring Report Evaluation	Number of self-monitoring reports due, received, and reviewed and percentage of reports reviewed
Inspection Monitoring	Number of inspections and the percentage of facilities inspected
Compliance Rates	Percentage of facilities in compliance, based upon the number of facilities evaluated
Enforcement Response	Percentage of facilities in violation that received an enforcement action requiring compliance
Enforcement Activities	Number and type of enforcement actions
Penalties Assessed and Collected	The amount of penalties assessed and collected, SEPs approved, and injunctive relief
MMP Violations Addressed	Number of facilities with MMP violations receiving a penalty at or above the minimum penalty assessed
Recidivism	Number and percentage of facilities returning to non-compliance for the same violation(s) addressed through an enforcement action
Environmental Benefits <i>(as a result of an enforcement action)</i>	Estimated pounds of pollutants reduced/removed through cleanup (soil or water), and wetlands/stream/beach/creek/river miles protected/restored (acres, miles, etc.)

From FY 2007-2008 Annual Enforcement Report

http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/annual_enf_rpt_032609.pdf

- Proposed enforcement priorities for the State Water Boards for the next reporting period and staff's basis for these proposals.
- The extent of progress on enforcement priorities identified in prior Annual Enforcement Reports.
- Recommendations for improvements to the Water Boards' enforcement capabilities, including additional performance metrics, and an evaluation of efforts to address prior staff recommendations for enforcement improvements.

APPENDIX C: GROUP 1 POLLUTANTS

This list of pollutants is based on Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations.

Oxygen Demand

Biochemical Oxygen Demand (BOD)
 Chemical Oxygen Demand (COD)
 Total Oxygen Demands
 Total Organic Carbon
 Other*

Solids

Total Dissolved Solids (TDS)
 Total Suspended Solids (TSS)
 Other*

Nutrients

Inorganic Phosphorous Compounds
 Inorganic Nitrogen Compounds
 Other*

Detergents and Oils

Methylene Blue Active Substances
 Nitrilotriacetic Acid
 Oil and Grease
 Other Detergents or Algicides*

Minerals

Calcium
 Chloride
 Fluoride
 Magnesium
 Sodium
 Potassium
 Sulfur
 Sulfate
 Total Alkalinity
 Total Hardness
 Other Minerals*

Metals

Aluminum
 Cobalt
 Iron
 Vanadium

* The following list of pollutants is hereby included as Group 1 pollutants (pursuant to Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations) under the classifications of "other."

5-DAY SUM OF WLA VALUES
 5-DAY SUM OF BOD5 DISCHARGED
 7-DAY SUM OF WLA VALUES
 7-DAY SUM OF BOD5 DISCHARGED
 ACIDITY
 ACIDITY, CO2 PHENOL (AS CaCO3)
 ACIDITY-MINRL METHYL ORANGE (AS CaCO3)
 ACIDITY, TOTAL (AS CaCO3)
 ALGICIDES, GENERAL
 ALKALINITY, BICARBONATE (AS CaCO3)
 ALKALINITY, CARBONATE (AS CaCO3)
 ALKALINITY, PHENOL-PHTHALINE METHOD
 ALKALINITY, TOTAL (AS CaCO3)
 ALUMINUM
 ALUMINUM, ACID SOLUABLE
 ALUMINUM CHLORIDE, DISSOLVED, WATER
 ALUMINUM, DISSOLVED (AS AL)

ALUMINUM, IONIC
 ALUMINUM, POTENTIALLY DISSOLVD
 ALUMINUM SULFATE
 ALUMINUM, TOTAL RECOVERABLE
 ALUMINUM, TOTAL
 ALUMINUM, TOTAL (AS AL)
 AMMONIA & AMMONIUM-TOTAL
 AMMONIA (AS N) + UNIONIZED AMMONIA
 AMMONIA, UNIONIZED
 AVG. OF 7-DAY SUM OF BOD5 VALUES
 BARIUM, SLUDGE, TOT, DRY WEIGHT (AS BA)
 BICARBONATE ION-(AS HCO3)
 BIOCHEMICAL OXYGEN DEMAND-5
 BIOCIDES
 BOD % OVER INFLUENT
 BOD (ULT. 1ST STAGE)
 BOD (ULT. 2ND STAGE)

BOD (ULT. ALL STAGES)
 BOD, 5-DAY (20 DEG. C)
 BOD, 5-DAY 20 DEG C PER CFS OF
 STREAMFLW
 BOD, 5-DAY DISSOLVED
 BOD, 5-DAY PERCENT REMOVAL
 BOD, 5-DAY (20 DEG. C) PER PRODUCTION
 BOD, 11-DAY (20 DEG. C)
 BOD, 20-DAY (20 DEG. C)
 BOD, 20-DAY, PERCENT REMOVAL
 BOD 35-DAY (20 DEG. C)
 BOD, CARB-5 DAY, 20 DEG C, PERCENT
 REMVL
 BOD, CARBONACEOUS 5 DAY, 5C
 BOD, CARBONACEOUS (5-DAY, 20 DEG C)
 BOD, CARBONACEOUS 05 DAY, 20C
 BOD, CARBONACEOUS 20 DAY, 20C
 BOD CARBONACEOUS, 25-DAY (20 DEG. C)
 BOD, CARBONACEOUS, 28-DAY (20 DEG. C)
 BOD, CARBONACEOUS, PERCENT
 REMOVAL
 BOD, FILTERED, 5 DAY, 20 DEG C
 BOD, MASS, TIMES FLOW PROP.
 MULTIPLIER
 BOD, NITROG INHIB 5-DAY (20 DEG. C)
 BOD, PERCENT REMOVAL (TOTAL)
 BOD-5 LB/CU FT PROCESS
 BORIC ACID
 BORON, DISSOLVED (AS B)
 BORON, SLUDGE, TOTAL DRY WEIGHT (AS
 B)
 BORON, TOTAL
 BORON, TOTAL (AS B)
 BORON, TOTAL RECOVERABLE
 BROMIDE (AS BR)
 BROMINE REPORTED AS THE ELEMENT
 CALCIUM IN BOTTOM DEPOSITS
 CALCIUM, DISSOLVED (AS CA)
 CALCIUM, PCT EXCHANGE
 CALCIUM, PCT IN WATER, (PCT)
 CALCIUM, TOTAL RECOVERABLE
 CARBON DIOXIDE (AS CO2)
 CARBON, TOTAL (AS C)
 CARBON, TOTAL INORGANIC (AS C)
 CARBON, TOT ORGANIC (TOC)
 CARBON, TOT ORGANIC (TOC) PER 1000
 GALS.
 CARBONACEOUS BOD, 5 DAY, 20 DEG C
 FILTRD
 CARBONACEOUS OXYGEN DEMAND, %
 REMOVAL
 CARBONATE ION- (AS CO3)
 CBOD5 / NH3-N
 CHEM. OXYGEN DEMAND (COD) %
 REMOVAL

CHEM. OXYGEN DEMAND PER
 PRODUCTION
 CHEMICAL OXYGEN DEMAND (COD)
 CHEMICAL OXYGEN DEMAND, SOLUBLE
 CHLORIDE
 CHLORIDE (AS CL)
 CHLORIDE, DISSOLVED (AS CL)
 CHLORIDE, DISSOLVED IN WATER
 CHLORIDE, PERCENT REMOVAL
 CHLORIDE, PER CFS OF STREAMFLOW
 CHLORIDE, SLUDGE, TOTAL DRY WEIGHT
 CHLORIDES & SULFATES
 CHLORINE DEMAND, 1 HR
 CHLORITE
 COBALT, DISSOLVED (AS CO)
 COBALT, TOTAL (AS CO)
 COBALT, TOTAL RECOVERABLE (AS CO)
 COPPER, SLUDGE, TOT, DRY WEIGHT (AS
 CU)
 DIGESTER SOLIDS CONTENT, PERCENT
 DITHIOCARBAMATE, RPTD AS
 DITHIOCARBONATE
 DRILLED SOLIDS IN DRILLING FLUIDS
 ENDRIN KETONE, IN WATER
 FERROCHROME LIGNO-SULFONATED
 FRWTR MUD
 FERROCYANIDE
 FERROUS SULFATE
 FIRST STAGE OXYGEN DEMAND, %
 REMOVAL
 FLUORIDE-FREE
 FLUORIDE, DISSOLVED (AS F)
 FLUORIDE, TOTAL (AS F)
 FLUOROBORATES
 FREE ACID, TOTAL
 HARDNESS, TOTAL (AS CACO3)
 HYDROCHLORIC ACID
 HYDROGEN PEROXIDE
 HYDROGEN PEROXIDE (T) DILUTION RATIO
 HYDROGEN SULFIDE
 HYDROGEN SULFIDE UNIONIZED
 IODIDE (AS I)
 IRON
 IRON AND MANGANESE-SOLUBLE
 IRON AND MANGANESE-TOTAL
 IRON, DISSOLVED (AS FE)
 IRON, DISSOLVED FROM DRY DEPOSITION
 IRON, FERROUS
 IRON, POTENTIALLY DISSOLVED
 IRON, SLUDGE, TOTAL, DRY WEIGHT (AS
 FE)
 IRON, SUSPENDED
 IRON, TOTAL (AS FE)
 IRON, TOTAL PER BATCH
 IRON, TOTAL PERCENT REMOVAL
 IRON, TOTAL PER PRODUCTION

LIGHTLY TREATED LIG-NOSULFONATED MUD
 LITHIUM, DISSOLVED (AS LI)
 LITHIUM, TOTAL (AS LI)
 MACROINVERTEBRATE ASSESSMENT
 MAGNESIUM, DISSOLVED (AS MG)
 MAGNESIUM, IN BOTTOM DEPOSITS
 MAGNESIUM, PCT EXCHANGE
 MAGNESIUM, TOTAL RECOVERABLE
 MANGANESE IN BOTTOM DEPOSITS (DRY WGT)
 MANGANESE, POTENTIALLY DISSOLVED
 MANGANESE, DISSOLVED (AS MN)
 MANGANESE, SUSPENDED
 MANGANESE, TOTAL
 MANGANESE, TOTAL (AS MN)
 MANGANESE, TOTAL RECOVERABLE
 METHYLENE BLUE ACTIVE SUBSTANCES MICROSCOPIC ANALYSIS
 MOLYBDENUM, DRY WEIGHT
 MONOBORO CHLORATE
 NICKEL, DRY WEIGHT
 NITRILOTRIACETIC ACID (NTA)
 NITRITE NITROGEN, DISSOLVED (AS N)
 NITRITE PLUS NITRATE DISSOLVED 1 DET.
 NITRITE PLUS NITRATE IN BOTTOM DEPOSITS
 NITRITE PLUS NITRATE TOTAL 1 DET. (AS N)
 NITROGEN (AS NO3) SLUDGE SOLID
 NITROGEN OXIDES (AS N)
 NITROGEN SLUDGE SOLID
 NITROGEN SLUDGE TOTAL
 NITROGEN, AMMONIA DISSOLVED
 NITROGEN, AMMONIA IN BOTTOM DEPOSITS
 NITROGEN, AMMONIA, PERCENT REMOVAL
 NITROGEN, AMMONIA PER CFS OF STREAMFLW
 NITROGEN, AMMONIA TOTAL (AS N)
 NITROGEN, AMMONIA TOTAL (AS NH4)
 NITROGEN, AMMONIA, SLUDGE, TOT DRY WGT
 NITROGEN, AMMONIA, TOT UNIONIZED (AS N)
 NITROGEN, DISSOLVED
 NITROGEN, KJELDAHL DISSOLVED (AS N)
 NITROGEN, KJELDAHL TOTAL
 NITROGEN, KJELDAHL TOTAL (AS N)
 NITROGEN, NITRATE DISSOLVED
 NITROGEN, NITRATE TOTAL
 NITROGEN, NITRATE TOTAL (AS N)
 NITROGEN, NITRATE TOTAL (AS NO3)
 NITROGEN, NITRITE TOTAL (AS N)
 NITROGEN, NITRITE TOTAL (AS NO2)
 NITROGEN, ORGANIC TOTAL (AS N)
 NITROGEN, SLUDGE, TOT, DRY WT. (AS N)
 NITROGEN, TOTAL AS NO3 + NH3
 NITROGEN, TOTAL KJELDAHL, % REMOVAL
 NITROGEN, INORGANIC TOTAL
 NITROGEN, OXIDIZED
 NITROGEN-NITRATE IN WATER, (PCT)
 NITROGEN-NITRITE IN WATER, (PCT)
 NITROGENOUS OXYGEN DEMAND, % REMOVAL
 NITROGENOUS OXYGEN DEMAND (20-DAY, 20C)
 NON-IONIC DISPERSANT (NALSPERSE 7348)
 NON-NITROGENOUS BOD
 OIL & GREASE
 OIL & GREASE AROMATIC
 OIL & GREASE, HEXANE EXTR METHOD
 OIL & GREASE (FREON EXTR.-IR METH)
 TOT, RC
 OIL & GREASE, NON POLAR MATERIAL
 OIL & GREASE % REMOVAL
 OIL & GREASE PER CFS OF STREAMFLW
 OIL & GREASE, PER 1000 GALLONS
 OIL & GREASE PER PRODUCTION
 OIL & GREASE (POLAR)
 OIL & GREASE (SOXHLET EXTR.) TOT.
 OIL & GREASE VISUAL
 OXYGEN DEMAND, CHEM. (COD), DISSOLVED
 OXYGEN DEMAND, CHEM. (HIGH LEVEL) (COD)
 OXYGEN DEMAND, CHEM. (LOW LEVEL) (COD)
 OXYGEN DEMAND, DISSOLVED
 OXYGEN DEMAND FIRST STAGE
 OXYGEN DEMAND, NITROGENOUS, ULTIMAT
 OXYGEN DEMAND, SUM PRODUCT
 OXYGEN DEMAND, TOTAL
 OXYGEN DEMAND, TOTAL (TOD)
 OXYGEN DEMAND, ULT. CARBONACEOUS (UCOD)
 OXYGEN DEMAND, ULT., PERCENT REMOVAL
 OXYGEN DEMAND, ULTIMATE
 OZONE
 OZONE-RESIDUAL
 PENTACHLOROPHENOL, REMOVAL EFFICIENCY
 PHOSPHATE TOTAL SOLUBLE
 PHOSPHATE, DISSOLVED COLOR METHOD (AS P)
 PHOSPHATE,
 DISSOLVED/ORTHOPHOSPHATE(AS P)
 PHOSPHATE, ORTHO (AS P)
 PHOSPHATE, ORTHO (AS PO4)
 PHOSPHATE, POLY (AS PO4)
 PHOSPHATE, TOTAL (AS PO4)

PHOSPHATE, TOTAL COLOR. METHOD (AS P)	SOLIDS, SETTLEABLE
PHOSPHORUS, DISSOLVED	SOLIDS, SETTLEABLE, NET VALUE
PHOSPHORUS, DISSOLVED REACTIVE (DRP AS P)	SOLIDS, SLUDGE, TOT, DRY WEIGHT
PHOSPHOROUS, IN TOTAL	SOLIDS, SUSPENDED PERCENT REMOVAL
ORTHOPHOSPHATE	SOLIDS, TOTAL
PHOSPHORUS (REACTIVE AS P)	SOLIDS, TOTAL DISSOLVED
PHOSPHOROUS 32, TOTAL	SOLIDS, TOTAL DISSOLVED (TDS)
PHOSPHOROUS, TOTAL ELEMENTAL	SOLIDS, TOTAL DISSOLVED-180 DEG.C
PHOSPHOROUS, TOTAL, IN BOTTOM DEPOSITS	SOLIDS, TOTAL DISSOLVED PERCENT BY WEIGHT
PHOSPHOROUS, TOTAL ORGANIC (AS P)	SOLIDS, TOTAL DISSOLVED (INORGANIC)
PHOSPHORUS, TOTAL (AS P)	SOLIDS, TOTAL FIXED
PHOSPHORUS, TOTAL PERCENT REMOVAL	SOLIDS, TOTAL SUSP. NON-VOLATILE
PHOSPHORUS, TOTAL SOLUBLE (AS PO4)	SOLIDS, TOTAL SUSPENDED
POTASSIUM, DISSOLVED (AS K)	SOLIDS, TOTAL VOLATILE
POTASSIUM, IN BOTTOM DEPOSITS	SOLIDS, TOTAL DISSOLVED, TOTAL TONS
POTASSIUM, PCT EXCHANGE	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED
POTASSIUM, TOTAL PCT IN WATER, (PCT)	SOLIDS, TOTAL SUSP PER PRODUCTION
POTASSIUM, TOTAL RECOVERABLE	SOLIDS, TOTAL SUSP. PER 1000 GALLONS
PROPARGITE	SOLIDS, TOTAL SUSP. PER CFS OF STREAMFLW
RATIO FECAL COLIFORM & STREPTOCOCCI	SOLIDS, TOTAL SUSPENDED, LOADING RATE
RESIDUE, SETTLEABLE	SOLIDS, TOTAL SUSPENDED, NET VALUE
RESIDUE, TOTAL FILTERABLE	SOLIDS, VOLATILE DISSOLVED
RESIDUE, TOTAL NON-SETTLEABLE	SOLIDS, VOLATILE SUSPENDED
RESIDUE, TOTAL VOLATILE	SOLIDS, VOLATILE SUSPENDED,
RESIDUE, VOLATILE NONFILTERABLE	% REMOVAL
SEAWATER GEL MUD	SOLIDS, VOLATILE SUSP., IN MIXED LIQUOR
SETTLEABLE SOLIDS PERCENT REMOVAL	SOLIDS, DRY, DISCHARGE TO SOL. HANDLING SYS.
SILICA, DISSOLVED (AS SIO2)	SOLIDS, DRY, INCIN. AS% OF DRY SOL. FROM TRMTPLT
SILICON, TOTAL	SOLIDS, DRY, REMOVED FROM SOL. HANDLING SYS.
SILICA, TOTAL (AS SIO2)	SOLIDS, TOT. VOLATILE PERCENT REMOVAL
SLUDGE BUILD-UP IN WATER	SOLIDS, VOLATILE % OF TOTAL SOLIDS
SLUDGE, RATE OF WASTING	SOLIDS-FLOTNG-VISUAL DETRMNTN-#
SLUDGE SETTLEABILITY 30 MINUTE	DAYS OBS
SLUDGE VOLUME DAILY INTO A WELL	SULFATE
SODIUM ADSORPTION RATIO	SULFATE (AS S)
SODIUM ARSENITE	SULFATE, DISSOLVED (AS SO4)
SODIUM CHLORIDE (SALT)	SULFATE IN SEDIMENT
SODIUM, DISSOLVED (AS NA)	SULFATE, TOTAL (AS SO4)
SODIUM HEXAMETA-PHOSPHATE	SULFIDE, DISSOLVED, (AS S)
SODIUM IN BOTTOM DEP (AS NA) (DRY WGT)	SULFIDE, TOTAL
SODIUM NITRITE	SULFIDE, TOTAL (AS S)
SODIUM, %	SULFITE (AS S)
SODIUM, % EXCHANGE- ABLE SOIL, TOTAL	SULFITE (AS SO3)
SODIUM, SLUDGE, TOT, DRY WEIGHT (AS NA)	SULFITE WASTE LIQUOR PEARL BENSON INDEX
SODIUM SULFATE, TOTAL	SULFUR DIOXIDE TOTAL
SODIUM, TOTAL (AS NA)	SULFUR, TOTAL
SODIUM, TOTAL RECOVERABLE	SULPHUR, TOTAL ELEMENTAL
SOLIDS ACCUMULATION RATE TOT DRY WEIGHT	
SOLIDS, FIXED DISSOLVED	
SOLIDS, FIXED SUSPENDED	

SUM BOD AND AMMONIA, WATER
SURFACTANTS, AS CTAS
SURFACTANTS (LINEAR ALKYLATE
SULFONATE)
SURFACTANTS (MBAS)
SUSPENDED SOLIDS
SUSPENDED SOLIDS, TOTAL ANNUAL
SUSPENDED SOLIDS, TOTAL DISCHARGE
TOTAL CHLORIDE RESIDUAL, BROMINE
TOTAL SUSP. SOLIDS-LB/CU FT PROCESS
TRIARYL PHOSPHATE

ULTRAVIOLET LIGHT TRANSMITTANCE
VANADIUM, DISSOLVED (AS V)
VANADIUM, SUSPENDED (AS V)
VANADIUM, TOTAL
VANADIUM, TOTAL (AS V)
VANADIUM, TOTAL DRY WEIGHT (AS V)
VANADIUM, TOTAL RECOVERABLE
VEGETATIVE COVER
WLA BOD-5 DAY VALUE

APPENDIX D: GROUP 2 POLLUTANTS

Group 2 Pollutants. This list of pollutants is based on Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations.

Metals

All metals not specifically listed under Group 1.

Inorganics

Cyanide

Total Residual Chlorine

Organics

All organics not specifically listed under Group 1.

Other*

* The following list of pollutants are hereby included as Group 2 pollutants (pursuant to Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations) under the classifications of "other."

1, 2, 4-TRIMETHYL-BENZENE	1,2,3,4,6,7,8,9-
1, 3, 5-TRIMETHYL-BENZENE	OCTACHLORODIBENZOFURAN
1,1 DICHLORO 1,2,2,2	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-
TETRAFLUROETHANE	DIOX
1,1 DICHLORO 2,2,2-TRIFLUOROETHANE	1,2,3,4,6,7,8-HEPTA
1,1,1 TRICHLORO-2,2,2-TRIFLUOROETHANE	CHLORODIBENZOFURAN
1,1,1,2,2-PENTA-FLUROETHANE	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-
1,1,1,3,3-PENTA-FLUROBUTANE	DIOXN
1,1,1-TRICHLORO-ETHANE	1,2,3,4,7,8,9-HEPTA
1,1,1-TRICHLOROETHANE, DRY WEIGHT	CHLORODIBENZOFURAN
1,1,1-TRIFLUORO- ETHANE	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN
1,1,2,2-TETRACHLORO-ETHANE	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN
1,1,2,2-TETRACHLOROETHANE, DRY	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN
WEIGHT	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN
1,1,2,2-TETRACHLOROETHYLENE	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN
1,1,2-TRICHLORO-ETHANE	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1,2,3,7,8-PENTACHLORODIBENZOFURAN
1,1,2-TRICHLOROETHANE, DRY WEIGHT	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN
1,1-DICHLORO-1-FLUROETHANE	1,2,3-TRICHLOROPROPANE
1,1-DICHLOROETHANE	1,2,4,5-TETRACHLORO-BENZENE
1,1-DICHLOROETHANE, DRY WEIGHT	1,2,4,5-TETRAMETHYL-BENZENE
1,1-DICHLOROETHENE	1,2,4-TRICHLORO-BENZENE
1,1-DICHLOROETHYLENE	1,2,4-TRICHLOROBENZENE, DRY WEIGHT
1,1-DICHLOROETHYLENE, DRY WEIGHT	1,2-BIS(2-CHLOROETH-ONY) ETHANE
1,1-DIMETHYL-HYDRAZINE	1,2-CIS-DICHLORO-ETHYLENE
1,2,3 TRICHLORO-BENZENE	1,2-DICHLORO-1,1,2-T
1,2,3 TRICHLORO-ETHANE	1,2-DICHLOROBENZENE
	1,2-DICHLOROBENZENE, DRY WEIGHT

1,2-DICHLOROETHANE
 1,2-DICHLOROETHANE, DRY WEIGHT
 1,2-DICHLOROETHANE, TOTAL WEIGHT
 1,2-DICHLOROPROPANE
 1,2-DICHLOROPROPANE, DRY WEIGHT
 1,2-DICHLOROPROPENE
 1,2-DIPHENYL-HYDRAZINE
 1,2-DIPHENYL-HYDRAZINE, DRY WEIGHT
 1,2-PROPANEDIOL
 1,2-TRANS-DICHLORO- ETHYLENE
 1,2-TRANS-DICHLOROETHYLENE, DRY WEIGHT
 1,3 DICHLOROPROPANE
 1,3 DICHLOROPROPYLENE
 1,3-DIAMINOUREA
 1,3-DICHLOROBENZENE
 1,3-DICHLOROBENZENE, DRY WEIGHT
 1,3-DICHLOROPROPENE, TOTAL WEIGHT
 1,4 DICHLOROBUTANE
 1,4_____DIOXANE
 1,4-DDT (O,P-DDT)
 1,4-DICHLOROBENZENE
 1,4-DICHLOROBENZENE, DRY WEIGHT
 1,4-XYLENE
 1-BROMO-2-CHLOROETHANE
 1-CHLORO-1,1-DIFLUOROETHANE
 1-ETHOXY-2-METHYLPROPANE
 1-HYDROXY-ETHYLIDENE
 1-METHYLNAPHTHALENE
 1-NITROSOPIPERIDINE
 2,2-DIBROMO-3-NITRILOPROPIONAMIDE
 2,2-DICHLOROPROPANE
 2,2-DICHLOROVINYL DIMETHYLPHOSPHATE
 2,2-DIMETHYL-2,3-DI-HYDRO-7-BENZOFURANOL
 2,3 DICHLOROPROPYLENE
 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN
 2,3,4,6-TETRACHLORO-PHENOL
 2,3,4,7,8-PENTACHLORODIBENZOFURAN
 2,3,7,8 CHLORO-DIBENZOFURAN
 2,3,7,8 TETRACHLORO-DIBENZO FURAN (TCDF)
 2,3,7,8 TETRACHLORODIBENZO-P-DIOXIN
 2,3,7,8 TETRACHLORODIBENZO-P-DIOXIN SED,
 2,4,5 - T
 2,4,5, TP(SILVEX)
 2,4,5-TP(SILVEX) ACIDS/SALTS WHOLE WATER SAMPLE
 2,4,5 - TRICHLORO- PHENOL
 2,4,5-TRICHLOROPHENOXYPROPIONIC ACID
 2,4,6 TRICHLOROPHENOL, DRY WEIGHT
 2,4,6-TRICHLORO-PHENOL
 2,4-D SALTS AND ESTERS
 2,4-DB
 2,4-DICHLOROPHENOL
 2,4-DICHLOROPHENOXYACETIC ACID
 2,4-DIMETHYLPHENOL
 2,4-DINITROPHENOL
 2,4-DINITROTOLUENE
 2,4-DINITROTOLUENE, DRY WEIGHT
 2,4-TOLUENEDIAMINE
 2,5-TOLUENEDIAMINE
 2,6-DINITROTOLUENE
 2,6-DINITROTOLUENE, DRY WEIGHT
 2-ACETYL AMINO- FLOURCENE
 2-BUTANONE
 2-BUTANONE PEROXIDE
 2-CHLOROANILINE
 2-CHLOROETHANOL
 2-CHLOROETHYL VINYL ETHER, DRY WEIGHT
 2-CHLOROETHYL VINYL ETHER (MIXED)
 2-CHLORONAPHTHALENE
 2-CHLOROPHENOL
 2-ETHYL-1-HEXANOL
 2-ETHYL-2-METHYL-DIOXOLANE
 2-HEXANONE
 2-METHYL-2-PROPANOL (TBA)
 2-METHYL-4,6-DINITROPHENOL
 2-METHYL-4-CHLOROPHENOL
 2-METHYLNAPHTHALENE
 2-METHYLPENTANE
 2-METHYLPHENOL
 2-METHYLPYRIDINE
 2-NAPHTHYLAMINE
 2-NITROANILINE
 2-NITROPHENOL
 2-PROPANONE
 2-SECONDARY BUTYL-4,6-DINITROPHENOL
 3,3-DICHLORO- BENZIDINE
 3,3-DICHLOROBENZIDINE, DRY WEIGHT
 3,4 BENZOFLUORAN-THENE
 3,4,5 TRICHLORO- GUACACOL
 3,4,6-TRICHLORO-CATECHOL
 3,4,6-TRICHLORO-GUAIACOL
 3-CHLOROPHENOL
 3-METHYLHEXANE
 3-METHYLPENTANE
 3-METHYLPYRIDINE
 3-NITROANILINE, TOTAL IN WATER
 4,4-BUTYLDENE BIS-(6-T-BUTYL-M-CRESOL)
 4,4-DDD (P,P-DDD)
 4,4-DDE (P,P-DDE)
 4,4-DDT (P,P-DDT)
 4,6-DINITRO-O-CRESOL
 4-BROMOPHENYL PHENYL ETHER
 4-CHLORO-3, 5-DIMETHYLPHENOL
 4-CHLORO-3-METHYL PHENOL
 4-CHLOROPHENYL PHENYL ETHER
 4-METHYLPHENOL

4-NITRO-M-CRESOL
4-NITRO-N-METHYLPHTHALIMIDE, TOTAL
4-NITROPHENOL
9,10 DICHLOROSTEARIC ACID
9,10 EPOXYSTEARIC ACID
A-BHC-ALPHA
ABIETIC ACID
ACENAPHTHENE
ACENAPHTHENE, SED (DRY WEIGHT)
ACENAPHTHYLENE
ACEPHATE (ORTHENE, ORTRAN)
ACETALDEHYDE
ACETAMINOPHEN
ACETIC ACID
ACETONE
ACETONE, DRY WEIGHT
ACETONE IN WASTE
ACETOPHENONE
ACID COMPOUNDS
ACIDS, TOTAL VOLATILE (AS ACETIC ACID)
ACROLEIN
ACROLEIN, DRY WEIGHT
ACRYLAMIDE MONOMER
ACRYLIC ACID
ACRYLONITRILE
ACRYLONITRILE, DRY WEIGHT
ACTINIUM 228
A-ENDOSULFAN-ALPHA
ALACHLOR (BRAND NAME-LASSO)
ALACHLOR, DISSOLVED
ALDICARB
ALDICARB SULFONE
ALDICARB SULFOXIDE
ALDRIN
ALDRIN + DIELDRIN
ALDRIN, DRY WEIGHT
ALKYL BENZENE SULFONATED (ABS)
ALKYLDIMETHYL ETHYL AMMONIUM
BROMIDE
ALKYLDIMETHYLBENZYL AMMONIUM
CHLORIDE
ALPHA ACTIVITY
ALPHA EMITTING RADI-UM ISOTOPES,
DISSOL.
ALPHA GROSS RADIOACTIVITY
ALPHA, DISSOLVED
ALPHA, SUSPENDED
ALPHA, TOTAL
ALPHA, TOTAL, COUNTING ERROR
ALPHABHC DISSOLVED
ALPHA-ENDOSULFAN
AMETRYN ORGANIC PESTICIDE
AMIBEN (CHLORAMBEN)
AMINES, ORGANIC TOTAL
AMINOTROL - METHYLENE PHOSPHATE
AMYL ALCOHOL

ANILINE
ANTHRACENE
ANTIMONY IN BOTTOM DEPOSITS (DRY
WGT)
ANTIMONY, DISSOLVED (AS SB)
ANTIMONY, TOTAL (AS SB)
ANTIMONY, TOTAL RECOVERABLE
AROMATICS, SUBSTITUTED
AROMATICS, TOTAL PURGEABLE
ARSENIC, POTENTIALLY DISSOLVED
ARSENIC, DISSOLVED (AS AS)
ARSENIC, DRY WEIGHT
ARSENIC, TOTAL (AS AS)
ARSENIC, TOTAL RECOVERABLE
ASANA
ASBESTOS
ASBESTOS (FIBROUS)
A-TERPINEOL
ATRAZINE
ATRAZINE, DISSOLVED
AZIDE
AZOBENZENE
BALAN (BENEFIN)
BARIUM IN BOTTOM DEPOSITS (DRY WGT)
BARIUM, POTENTIALLY DISSOLVED
BARIUM, DISSOLVED (AS BA)
BARIUM, TOTAL (AS BA)
BARIUM, TOTAL RECOVERABLE
BASE NEUTRALS & ACID (METHOD 625),
TOTAL
BASE NEUTRALS & ACID (METHOD 625),
EFFLNT
BASE/NEUTRAL COMPOUNDS
BAYER 73 LAMPREYCIDE IN WATER
B-BHC-BETA
B-BHC-BETA DISSOLVED
B-ENDOSULFAN-BETA
BENFLURALIN, (ORG. PESTICIDE ACT. INGD)
BENOMYL & CARBEND. ORGANIC
PESTICIDE
BENTAZON, TOTAL
BENZENE
BENZENE (VOLATILE ANALYSIS)
BENZENE HEXACHLORIDE
BENZENE SULPHONIC ACID
BENZENE, DISSOLVED
BENZENE, DRY WEIGHT
BENZENE, HALOGENATED
BENZENE, TOLUENE, XYLENE IN
COMBINATION
BENZENE, ETHYL BENZENE TOLUENE,
XYLENE COMBINATION
BENZENE HEXACHLORIDE
BENZIDINE
BENZIDINE, DRY WEIGHT
BENZISOTHIAZOLE

BENZO(A) FLUORANTHENE
 BENZO(A) ANTHRACENE
 BENZO(A) PYRENE
 BENZO(A) PYRENE, DRY WEIGHT
 BENZO(B) FLUORANTHENE (3,4-BENZO)
 BENZO(GHI) PERYLENE
 BENZO(K) FLUORANTHENE
 BENZOFURAN
 BENZY CHLORIDE
 BENZYL ALCOHOL
 BENZYL CHLORIDE
 BERYLLIUM IN BOTTOM DEPOSITS (DRY WGT)
 BERYLLIUM, DISSOLVED (AS BE)
 BERYLLIUM, POTENTIALLY DISSOLVED
 BERYLLIUM, TOTAL (AS BE)
 BERYLLIUM, TOTAL RECOVERABLE (AS BE)
 BETA, DISSOLVED
 BETA, SUSPENDED
 BETA, TOTAL
 BETA, TOTAL, COUNTING ERROR
 BETASAN(N-2-MERCAPTO ETHYL BENZENE SULFAMID
 BEZONITRILE (CYANOBENZENE)
 BHC, TOTAL
 BHC-ALPHA
 BHC-BETA
 BHC-DELTA
 BHC-GAMMA
 BIFENTHRIN
 BIS -- PHENOL-A (ALPHA)
 BIS (2-CHLORO- ISOPROPYL) ETHER
 BIS (2-CHLOROETHOXY) METHANE
 BIS (2-CHLOROETHOXY) METHANE, DRY WT.
 BIS (2-CHLOROETHYL) ETHER
 BIS (2-ETHYLHEXYL) PHTHALATE
 BIS (2-ETHYLHEXYL) PHTHALATE, DRY WGT
 BIS (CHLOROMETHYL) ETHER
 BIS (TRICHLOROMETHYL) SULFONE
 BIS ETHER
 BISMUTH 214
 BISMUTH, TOTAL (AS BI)
 BISPHENOL-A
 BROMACIL
 BROMACIL (HYVAR)
 BROMACIL, LITHIUM
 BROMOCHLOROMETHANE
 BROMODICHLOROETHANE
 BROMOFORM
 BROMOFORM, DRY WGT
 BROMOMETHANE
 BROMOXYNIL ORGANIC PESTICIDE
 BROMOXYNIL OCTANOATE
 BUSAN 40 ORGANIC PESTICIDE
 BUSAN 85 ORGANIC PESTICIDE
 BUTACHLOR
 BUTANE
 BUTANOIC ACID
 BUTANOL
 BUTANONE
 BUTHDIENE TOTAL
 BUTOXY ETHOXY ETHANOL TOTAL
 BUTYL ACETATE
 BUTYL BENZYL PHTHALATE
 BUTYLATE (SUTAN)
 CADMIUM
 CADMIUM TOTAL RECOVERABLE
 CADMIUM IN BOTTOM DEPOSITS (DRY WGT)
 CADMIUM SLUDGE SOLID
 CADMIUM SLUDGE TOTAL
 CADMIUM, POTENTIALLY DISSOLVD
 CADMIUM, DISSOLVED (AS CD)
 CADMIUM, PERCENT REMOVAL
 CADMIUM, SLUDGE, TOTAL DRY WGT (AS CD)
 CADMIUM, TOTAL (AS CD)
 CAFFEINE
 CAPTAFOL
 CAPTAN
 CARBAMATES
 CARBARYL TOTAL
 CARBN CHLOROFRM EXT-RACHTS, ETHER INSOLUBL
 CARBOFURAN
 CARBON DISULFIDE (CS2)
 CARBON TETRACHLORIDE
 CARBON TETRACHLORIDE, DRY WEIGHT
 CARBON, CHLOROFORM EXTRACTABLES
 CARBON, DISSOLVED ORGANIC (AS C)
 CARBOSULFAN, TOTAL
 CERIUM, TOTAL
 CESIUM 137
 CESIUM, TOTAL (AS CS)
 CHIRAL
 CHLOR, PHENOXY ACID GP, NONE FOUND
 CHLORAL
 CHLORAL HYDRATE
 CHLORAMINE RESIDUAL
 CHLORDANE (CA OCEAN PLAN DEFINITION)
 CHLORDANE (TECH MIX & METABS), DRY WGT
 CHLORDANE (TECH MIX. AND METABOLITES)
 CHLORDANE, ALPHA, WHOLE WATER
 CHLORDANE, GAMMA, WHOLE WATER
 CHLORENDIC ACID
 CHLORETHOXYFOS
 CHLORINATED DIBENZO-FURANS, EFFLUENT
 CHLORINATED DIBENZO-FURANS, SLUDGE

CHLORINATED DIBENZO-P-DIOXINS, EFFLUENT
 CHLORINATED DIBENZO-P-DIOXINS, SLUDGE
 CHLORINATED ETHANES
 CHLORINATED HYDRO-CARBONS, GENERAL
 CHLORINATED METHANES
 CHLORINATED ORGANIC COMPOUNDS
 CHLORINATED PESTI-CIDES, TOTAL
 CHLORINATED PESTI-CIDES, TOTAL & PCBS
 CHLORINATED PHENOLS
 CHLORINATION
 CHLORINE DIOXIDE
 CHLORINE DOSE
 CHLORINE RATE
 CHLORINE USAGE
 CHLORINE, COMBINED AVAILABLE
 CHLORINE, FREE AVAILABLE
 CHLORINE, FREE RESIDUAL, TOTAL EFFLUENT
 CHLORINE, TOTAL RESIDUAL
 CHLORINE, TOTAL RESIDUAL (DSG. TIME)
 CHLORINE, TOTAL RES. DURATION OF VIOLATION
 CHLOROBENZENE
 CHLOROBENZENE, DRY WEIGHT
 CHLOROBENZILATE
 CHLOROBUTADIENE (CHLOROPRENE)
 CHLORODIBROMOMETHANE
 CHLORODIBROMOMETHANE, DRY WEIGHT
 CHLORODIFLUORO-METHANE
 CHLORODIMEFORM
 CHLOROETHANE
 CHLOROETHANE, TOTAL WEIGHT
 CHLOROETHYLENE BISTHIOCYANATE
 CHLOROFORM
 CHLOROFORM EXTRACTABLES, TOTAL
 CHLOROFORM, DISSOLVED
 CHLOROFORM, DRY WEIGHT
 CHLOROHEXANE, TOTAL
 CHLOROMETHANE
 CHLOROMETHYL BENZENE
 CHLORONEB ORGANIC PESTICIDE
 CHLORONITROBENZENE
 CHLOROPHENOXY PROPANANOL
 CHLOROSYRINGALDEHYDE, EFFLUENT
 CHLOROTHALONIL ORGANIC PESTICIDE
 CHLOROTOLUENE
 CHLOROXAZONE
 CHLORPHENIRAMINE
 CHLORPYRIFOS
 CHROMIUM
 CHROMIUM SLUDGE SOLID
 CHROMIUM SLUDGE TOTAL
 CHROMIUM TOTAL RECOVERABLE
 CHROMIUM TRIVALENT IN BOTTOM DEPOSITS
 CHROMIUM, DISSOLVED (AS CR)
 CHROMIUM, DRY WEIGHT
 CHROMIUM, HEXAVALENT
 CHROMIUM, HEXAVALENT (AS CR)
 CHROMIUM, HEXAVALENT DISSOLVED (AS CR)
 CHROMIUM, HEXAVALENT IN BOT DEP (DRY WGT)
 CHROMIUM, HEXAVALENT POTENTIALLY DISOLVED
 CHROMIUM, HEXAVALENT TOT RECOVERABLE
 CHROMIUM, SUSPENDED (AS CR)
 CHROMIUM, TOTAL
 CHROMIUM, TOTAL (AS CR)
 CHROMIUM, TOTAL DRY WEIGHT (AS CR)
 CHROMIUM, TOTAL IN BOT DEP (WET WGT)
 CHROMIUM, TOTAL PERCENT REMOVAL
 CHROMIUM, TRIVALENT (AS CR)
 CHROMIUM, TRIVALENT, POTENTIALLY DISSOLVED
 CHRYSENE
 CIS-1,3-DICHLORO PROPENE
 CITRIC ACID
 CN, FREE (AMENABLE TO CHLORINE)
 COLUMBIUM, TOTAL
 COMBINED METALS SUM
 COPPER
 COPPER AS SUSPENDED BLACK OXIDE
 COPPER IN BOTTOM DEPOSITS (DRY WGT)
 COPPER SLUDGE SOLID
 COPPER SLUDGE TOTAL
 COPPER TOTAL RECOVERABLE
 COPPER, DISSOLVED (AS CU)
 COPPER, PERCENT REMOVAL
 COPPER, POTENTIALLY DISSOLVED
 COPPER, SUSPENDED (AS CU)
 COPPER, TOTAL (AS CU)
 COPPER, TOTAL PER BATCH
 COUMAPHOS
 CRESOL
 CYANATE (AS OCN)
 CYANAZINE
 CYANIDE (A)
 CYANIDE AND THIOCYANATE - TOTAL
 CYANIDE COMPLEXED TO RANGE OF COMPOUND
 CYANIDE FREE NOT AMENABLE TO CHLORIN.
 CYANIDE IN BOTTOM DEPOSITS (DRY WGT)
 CYANIDE SLUDGE SOLID
 CYANIDE, FILTERABLE, TOTAL
 CYANIDE, FREE AVAILABLE

CYANIDE, FREE-WATER PLUS
 WASTEWATERS
 CYANIDE, DISSOLVED STD METHOD
 CYANIDE, FREE (AMEN. TO CHLORINATION)
 CYANIDE, TOTAL (AS CN)
 CYANIDE, TOTAL RECOVERABLE
 CYANIDE, WEAK ACID, DISSOCIABLE
 CYCLOATE (RONEET)
 CYCLOHEXANE
 CYCLOHEXANONE
 CYCLOHEXYL AMINE (AMINO HEXAHYDRO)
 CYCOHEXANONE
 CYFLUTHRIN
 DAPONIL (C8CL4N2)
 DACTHAL
 DAZOMET
 DCPA, ORGANIC PESTICIDE
 DDD IN WHOLE WATER SAMPLE
 DDE
 DDT
 DDT/DDD/DDE, SUM OF P, P & O,P ISOMERS
 DECACHLOROBIPHENYL (DCBP) TOTAL
 DECHLORANE PLUS
 DEF, ORGANIC PESTICIDE
 DEHYDROABIETIC ACID
 DELNAV
 DELTA BENZENE HEXACHLORIDE
 DELTAMETHRIN
 DEMETON
 DIAZINON
 DIBENZO (A,H) ANTHRACENE
 DIBENZO (A,H) ANTHRACENE, DRY WEIGHT
 DIBENZOFURAN
 DIBROMOCHLORO-METHANE
 DIBROMODICHLOROMETHANE
 DIBROMOMETHANE
 DICHLONE
 DICHLORAN, TOTAL
 DICHLOROBENZENE
 DICHLOROBENZENE, ISOMER
 DICHLOROBENZYLTRIFLUORIDE
 DICHLOROBROMOMETHANE
 DICHLOROBROMOMETHANE, DRY WEIGHT
 DICHLOROBUTADIENE
 DICHLOROBUTENE-(ISOMERS)
 DICHLORODEHYDRO-ABEITIC ACID
 DICHLORODIBROMOMETHANE
 DICHLORODIFLUORO-METHANE
 DICHLOROETHENE, TOTAL
 DICHLOROFUORO METHANE
 DICHLOROMETHANE
 DICHLOROPROPYLENE, 1,2
 DICHLOROTOLUENE
 DICHLOROTRIFLUORO- ETHANE
 DICHLORVOS, TOTAL
 DICHLORVOS, TOTAL DISSOLVED
 DICHLORVOS, TOTAL SED DRY WEIGHT
 DICHLORVOS, TOTAL SUSPENDED
 DICYCLOHEXYLAMINE, TOTAL
 DICYCLOPENTADIENE
 DIDECYLDIMETHYL AMMONIUM CHLORIDE
 DIDROMOMETHANE, 1-2
 DIELDRIN
 DIELDRIN, DRY WEIGHT
 DIETHL METHYL BENZENESULFONAMIDE
 DIETHYL PHTHALATE
 DIETHYL PHTHALATE, DRY WEIGHT
 DIETHYLAMINE
 DIETHYLAMINOETHANOL
 DIETHYLBENZENE
 DIETHYLENE GLYCOL DINITRATE, TOTAL
 DIETHYLHEXYL PHTHALATE ISOMER
 DIETHYLHEXYL- PHTHALATE
 DIETHYLSTILBESTEROL
 DIFOLATAN
 DIISOPROPYL ETHER
 DIMETHOXYBENZIDINE
 DIMETHYL BENZIDINE
 DIMETHYL DISULFIDE TOTAL
 DIMETHYL NAPHTHALENE
 DIMETHYL PHTHALATE
 DIMETHYL PHTHALATE
 DIMETHYL PHTHALATE, DRY WEIGHT
 DIMETHYL SULFIDE TOTAL
 DIMETHYLAMINE
 DIMETHYLANILINE
 DI-N-BUTYL PHTHALATE
 DI-N-BUTYL PHTHALATE, DRY WEIGHT
 DI-NITRO BUTYL PHENOL (DNBP)
 DINITROTOLUENE
 DI-N-OCTYL PHTHALATE
 DI-N-OCTYL PHTHALATE, DRY WEIGHT
 DINOSEB
 DINOSEB (DNBP)
 DIOXANE
 DIOXATHION ORGANIC PESTICIDE
 DIOXIN
 DIOXIN (TCDD) SUSPENDED
 DISSOLVED RADIOACTIVE GASSES
 DISULFOTON
 DIURON
 DMDS
 DOCOSANE
 DODECYLGUANIDINE SALTS
 DYPHYLLINE
 EDTA
 EDTA AMMONIATED
 ENDOSULFAN SULFATE
 ENDOSULFAN, ALPHA, IN WASTE
 ENDOSULFAN, BETA, IN WASTE
 ENDOSULFAN, TOTAL
 ENDOTHALL SALTS & ESTERS, ORG. PEST.

ENDRIN	GLYPHOSATE, TOTAL
ENDRIN + ENDRIN ALDEHYDE (SUM)	GOLD, TOTAL (AS AU)
ENDRIN ALDEHYDE	GROSS BETA
EPHEDRINE SULFATE	GUAFENSIN
EPICHLOROHYDRIN	GUANIDINE NITRATE
EPTC (EPTAM)	GUTHION
ESTRADIOL	HALOGEN, TOTAL ORGANIC
ETHALFLURALIN WATER, TOTAL	HALOGEN, TOTAL RESIDUAL
ETHANE, 1,2-BIS (2- CLRETHXY), HOMLG	HALOGENATED HYDRO-CARBONS, TOTAL
SUM	HALOGENATED ORGANICS
ETHION	HALOGENATED TOLUENE
ETHOXYQUIN	HALOGENS, ADSORBABLEORGANIC
ETHYL ACETATE	HALOGENS, TOTAL ORGAN-ICS BOTTOM
ETHYL BENZENE	SEDIMENT
ETHYL ETHER BY GAS CHROMATOGRAPH	HALOGENS, TOTAL COMBINED
ETHYL METHANESULFONATE	HALOMETHANES, SUM
ETHYL METHYL-DIOXOLANE	HEPTACHLOR
ETHYL PARATHION	HEPTACHLOR + HEPTACHLOR EPOXIDE
ETHYLBENZENE	HEPTACHLOR, DRY WEIGHT
ETHYLBENZENE, DRY WEIGHT	HEPTANE
ETHYLENE	HERBICIDES, TOTAL
ETHYLENE CHLOROHYDRIN	HEXACHLOROBENZENE
ETHYLENE DIBROMIDE (1,2	HEXACHLOROBENZENE, DRY WEIGHT
DIBROMOETHANE)	HEXACHLOROBIPHENYL
ETHYLENE GLYCOL	HEXACHLOROBUTADIENE
ETHYLENE GLYCOL DINITRATE	HEXACHLOROBUTADIENE, DRY WEIGHT
ETHYLENE OXIDE	HEXACHLOROCYCLOHEXANE (BHC) TOTAL
ETHYLENE THIOUREA (ETU)	HEXACHLOROCYCLO-PENTADIENE
ETHYLENE, DISSOLVED (C2H4)	HEXACHLOROCYCLOPENTADIENE, DRY
EXPLOSIVE LIMIT, LOWER	WEIGHT
EXPLOSIVES, COMBINED TNT + RDX +	HEXACHLOROETHANE
TETRYL	HEXACHLOROETHANE, DRY WEIGHT
FENARIMOL ORGANIC PESTICIDE	HEXACHLOROPENTADIENE
FENVALERATE ORGANIC PESTICIDE	HEXACHLOROPHENE
FERRICYANIDE	HEXADECANE
FLUORANTHENE	HEXAHYDROAZEPINONE
FLUORANTHENE, DRY WEIGHT	HEXAMETHYL-PHOSPHORAMINE (HMPA)
FLUORENE	HEXAMETHYLBENZENE
FLUORENE, DRY WEIGHT	HEXANE
FLUORIDE-COMPLEX	HEXAZIMONE
FLUSILAZOLE	HMX-1,3,5,7-TETRA ZOCINE (OCTOGEN)
FOAMING AGENTS	HYDRAZINE
FOLPET WATER TOTAL	HYDRAZINES, TOTAL
FORMALDEHYDE	HYDROCARBON, TOTAL RECOVERABLE
FORMIC ACID	HYDROCARBONS NITRATED
FREON 113 (1,1,1-TRIFLOURO-2,2-	HYDROCARBONS NITRATED, TOTAL
FREON, TOTAL	HYDROCARBONS, AROMATIC
FUEL, DIESEL, #1	HYDROCARBONS, TOTAL GAS
FURANS	CHROMATOGRAPH
FURFURAL	HYDROCARBONS, IN H2O,IR,CC14 EXT.
GALLIUM, TOTAL (AS GA)	CHROMAT
GAMMA-BHC	HYDROGEN CYANIDE
GAMMA, TOTAL	HYDROQUINONE
GAMMA, TOTAL COUNTING ERROR	HYDROXYACETOPHENONE
GASOLINE, REGULAR	HYDROXYQUINOLINE TOTAL
GERMANIUM, TOTAL (AS GE)	HYDROXYZINE

INDENE
INDENO (1,2,3-CD) PYRENE
INDENO (1,2,3-CD) PYRENE, DRY WEIGHT
INDIUM
IODINE 129
IODINE RESIDUAL
IODINE TOTAL
ISOBUTYL ACETATE
ISOBUTYL ALCOHOL
ISOBUTYRALDEHYDE
ISODECYLDIPHENYL-PHOSPHATE
ISODRIN
ISO-OCTANE
ISOOCTYL 2,4,5-T
ISOOCTYL SILVEX
ISOPHORONE
ISOPHORONE, DRY WEIGHT
ISOPIMARIC ACID
ISOPRENE
ISOPROPALIN WATER, TOTAL
ISOPROPANOL
ISOPROPYL ACETATE
ISOPROPYL ALCOHOL (C3H8O), SED.
ISOPROPYLBENZENE
ISOPROPYL ETHER
ISOPROPYLBIPHENYL, TOTAL
ISOPROPYLIDINE DIOXYPHENOL
ISOTHIAZOLONE
ISOTHIOZOLINE, TOTAL
ISOXSUPRINE
KELTHANE
KEPONE
KN METHYL ORGANIC PESTICIDE
LANTHANUM, TOTAL
LEAD
LEAD TOTAL RECOVERABLE
LEAD 210
LEAD 210, TOTAL
LEAD 212
LEAD 214
LEAD SLUDGE SOLID
LEAD SLUDGE TOTAL
LEAD, DISSOLVED (AS PB)
LEAD, DRY WEIGHT
LEAD, POTENTIALLY DISSOLVD
LEAD, TOTAL (AS PB)
LEAD, TOTAL DRY WEIGHT (AS PB)
LINDANE
LINOLEIC ACID
LINOLENIC ACID
LINURON ORGANIC PESTICIDE
M-ALKYLDIMETHYLBENZYLAMCL
MALATHION
MB 121
MCPA 2-ETHYLHEXYL ESTER
MERCAPTANS, TOTAL

MERCAPTOBENZOTHAZOLE
MERCURY
MERCURY TOTAL RECOVERABLE
MERCURY, DISSOLVED (AS HG)
MERCURY, DRY WEIGHT
MERCURY (HG), IN BARITE, DRY WEIGHT
MERCURY, POTENTIALLY DISSOLVD
MERCURY, TOT IN BOT DEPOSITS (DRY WGT)
MERCURY, TOTAL (AS HG)
MERCURY, TOTAL (LOW LEVEL)
METALS TOXICITY RATIO
METALS, TOTAL
METALS, TOX PRIORITY POLLUTANTS, TOTAL
METAM POTASSIUM
META-XYLENE
METHAMIDOPHOS ORGANIC PESTICIDE
METHAM SODIUM (VAPAM)
METHANE
METHANOL, TOTAL
METHOCARBAMOL
METHOMYL
METHOXYCHLOR
METHOXYPROPYLAMINE
METHYL ACETATE
METHYL BROMIDE
METHYL METHANESULFONATE
METHYL BROMIDE, DRY WEIGHT
METHYL CHLORIDE
METHYL CHLORIDE, DRY WEIGHT
METHYL CYANIDE (ACETONITRILE)
METHYL ETHYL BENZENE
METHYL ETHYL KETONE
METHYL ETHYL SULFIDE
METHYL FORMATE
METHYL ISOBUTYL KETONE (MIBK)
METHYL MERCAPTAN
METHYL METHACRYLATE
METHYL NAPHTHALENE
METHYL PARATHION
METHYL STYRENE
METHYLAMINE
METHYLCYCLOPENTANE
METHYLENE BIS-THIOCYANATE
METHYLENE CHLORIDE
METHYLENE CHLORIDE, DRY WEIGHT
METHYLENE CHLORIDE, SUSPENDED
METHYLHYDRAZINE
METRIBUZIN (SENCOR), WATER, DISSOLVED
METRIOL TRINITRATE, TOTAL
MIREX
MOLYBDENUM DISSOLVED (AS MO)
MOLYBDENUM, TOTAL (AS MO)
MONOCHLOROACETIC ACID

MONO-CHLORO-BENZENES
 MONOCHLOROBENZYLTRIFLUORIDE
 MONOCHLORODEHYDRO- ABIETIC ACID
 MONOCHLOROTOLUENE
 MP062 (STEWART)
 NABAM, ORGANIC PESTICIDE
 NABONATE
 N-AMYL ACETATE
 NAPHTHALENE
 NAPHTHALENE, DRY WEIGHT
 NAPHTHENIC ACID
 NAPROPAMIDE (DEVRIOL)
 N-BUTYL ACETATE
 N-BUTYL-BENZENE SULFONAMIDE (IN WAT)
 N-BUTYL-BENZENE (WHOLE WATER, UG/L
 NEPTUNE BLUE
 N-HEPTADECANE
 NIACINAMIDE
 NICKEL
 NICKEL SLUDGE SOLID
 NICKEL SLUDGE TOTAL
 NICKEL TOTAL RECOVERABLE
 NICKEL, DISSOLVED (AS NI)
 NICKEL, POTENTIALLY DISSOLVED
 NICKEL, SUSPENDED (AS NI)
 NICKEL, TOTAL (AS NI)
 NICKEL, TOT IN BOTTOM DEPOSITS (DRY
 WGT)
 NICKEL, TOTAL PER BATCH
 NICOTINE SULFATE
 NITROBENZENE
 NITROBENZENE, DRY WEIGHT
 NITROCELLULOSE
 NITROFURANS
 NITROGEN, ORGANIC, DISSOLVED (AS N)
 NITROGLYCERIN BY GAS
 CHROMATOGRAPHY
 NITROGUANIDINE
 NITROSODIPHENYLAMINE
 NITROSTYRENE
 N-METHYL-2-PYRROLIDONE
 N-NITROSO COMPOUNDS, VOLATILE
 N-NITROSODIBUTYL-AMINE
 N-NITROSODIETHYL-AMINE
 N-NITROSODIMETHYL-AMINE
 N-NITROSODIMETHYL-AMINE, DRY WEIGHT
 N,N-DIETHYL CARBANILIDE
 N,N-DIMETHYL FORMAMIDE
 N-NITROSODI-N-BUTYLAMINE
 N-NITROSODI-N-PROPYLAMINE
 N-NITROSODI-N-PROPYLAMINE, DRY
 WEIGHT
 N-NITROSODIPHENYL-AMINE
 N-NITROSODIPHENYLAMINE, DRY WEIGHT
 N-NITROSOPYRROLIDINE
 NONHALOGENATED VOLATILE ORGANICS
 NONPURGEABLE ORGANIC HALIDES
 NORFLURAZON ORGANIC PESTICIDE
 N PENTANE
 N-PROPYLBENZENE
 O-CHLOROBENZYL CHLORIDE
 OCTACHLORO-CYCLOPENTENE
 OCTACHLORODIBENZO P DIOXIN
 OCTACHLORODIBENZOFURAN
 OCTYLPHENOXY POLYETHOXYETHANOL
 OIL/GREASE CALCULATED LIMIT
 OIL, PETROLEUM ETHER EXTRACTABLES
 OLEIC ACID
 ORDRAM (HYDRAM)
 ORGANIC ACTIVE IN-GREDIENTS
 (40 CFR 455)
 ORGANIC COMPOUNDS, CHLOROFORM
 EXTRACT.
 ORGANIC HALIDES, TOTAL
 ORGANIC PESTICIDE CHEMICALS
 (40 CFR 455)
 ORGANICS, GASOLINE RANGE
 ORGANICS, TOTAL
 ORGANICS, TOTAL HALOGENS (TOX)
 ORGANICS, TOTAL PURGE-ABLES (METHOD
 624)
 ORGANICS, TOTAL TOXIC (TTO)
 ORGANICS-TOTAL VOLATILE (NJAC
 REG.7:23-17E)
 ORGANICS, VOLATILE (NJAC REG. 7:23-17E)
 ORTHENE
 ORTHOCHLOROTOLUENE
 ORTHO-CRESOL
 ORTHO-XYLENE
 O-TOLUIDINE
 OXALIC ACID
 OXYTETRACYCLINE HYDROCHLORIDE
 P,P-DDE-DISSOLVED
 P,P-DDT-DISSOLVED
 PALLADIUM, TOTAL (AS PD)
 P-AMINOBIIPHENYL
 PANTHALIUM, TOTAL
 PARABEN (METHYL AND PROPYL)
 PARACHLOROMETA CRESOL
 PARA-DICHLOROBENZENE
 PARAQUAT
 PARATHION
 PCB-1016 (AROCHLOR 1016)
 PCB-1221 (AROCHLOR 1221)
 PCB-1232 (AROCHLOR 1232)
 PCB-1242 (AROCHLOR 1242)
 PCB-1248 (AROCHLOR 1248)
 PCB-1254 (AROCHLOR 1254)
 PCB-1260 (AROCHLOR 1260)
 PCB-1262
 PCB, TOTAL SLUDGE, SCAN CODE
 PCBs IN BOTTOM DEPS. (DRY SOLIDS)

PCNB, ORGANIC PEST.
 P-CRESOL
 P-DIMETHYLAMINO-AZOBENZENE
 PEBULATE (TILLAM)
 PENDIMETHALIN ORGANIC PESTICIDE
 PENTACHLOROBENZENE
 PENTACHLOROETHANE
 PENTACHLOROPHENOL
 PENTANE, TOTAL EFFLUENT
 PERFLUOROBUTANE SULFONAMIDE
 PERFLUOROBUTANOIC ACID
 PERFLUOROBUTANOIC SULFONATE
 PERFLUOROOCTANE SULFONAMIDE
 PERFLUOROOCTANE SULFONATE
 PERFLUOROOCTANOIC ACID
 PERMETHRIN, TOTAL
 PERTHANE
 PESTICIDES, GENERAL
 P-ETHYLTOLUENE
 PETROL HYDROCARBONS, TOTAL
 RECOVERABLE
 PHENACETIN
 PHENANTHRENE
 PHENANTHRENE, DRY WEIGHT
 PHENOL, SINGLE COMPOUND
 PHENOLIC COMPOUNDS, SLUDGE TOTAL,
 DRY WEIGHT
 PHENOLIC COMPOUNDS, UNCHLORINATED
 PHENOLICS IN BOTTOM DEPOSITS (DRY
 WGT)
 PHENOLICS, TOTAL RECOVERABLE
 PHENOLS
 PHENOLS, CHLORINATED
 PHENOXY ACETIC ACID
 PHENYLPROPANOLAMINE
 PHENYLTOLOXAMINE
 PHORATE
 PHOSMET, ORGANIC PESTICIDE
 PHOSPHATED PESTICIDES
 PHOSPHOROTHIOIC ACID 0,0,0-TRIETHYL
 ESTR
 PHTHALATE ESTERS
 PHTHALATES, TOTAL
 PHTHALIC ACID
 PHTHALIC ANHYDRIDE
 PIRIMICARB
 PLATINUM, TOTAL (AS PT)
 POLONIUM 210
 POLYACRILAMIDE CHLORIDE
 POLYBROMINATED BIPHENYLS
 POLYBROMINATED DIPHENYL OXIDES
 POLYCHLORINATED BIPHENYLS (PCBS)
 POLYMETHYLACRYLIC ACID
 POLY-NUCLEAR AROMATICS (POLYRAM)
 POTASSIUM 40
 PRIORITY POLLUTANTS TOTAL EFFLUENT
 PROFENOFOS
 PROMETON, ORGANIC PESTICIDE
 PROMETRYN, ORGANIC PESTICIDE
 PRONAMIDE, ORGANIC PESTICIDE
 PROPABHLOR (RAMROD) DISSOLVED
 PROPACHLOR, ORGANIC PESTICIDE
 PROPANE, 2-METHOXY-2-METHYL (MTBE)
 PROPANIL
 PROPAZINE, ORGANIC PESTICIDE
 PROPANE, TOTAL
 PROPYL ACETATE
 PROPYLENE OXIDE
 PROPYLENGLYCOL, TOTAL
 PROTACTINIUM 234, DRY WEIGHT
 PURGEABLE AROMATICS METHOD 602
 PURGEABLE HYDRO-CARBONS, METH. 601
 PURGEABLE ORGANIC HALIDES
 PYMETROZINE
 PYRENE
 PYRENE, DRY WEIGHT
 PYRETHRINS
 PYRIDINE
 PYRIFENOX
 QUARTERNARY AMMONIUM COMPOUNDS
 QUINOLINE
 RADIATION-GROSS ALPHA TOT DISSOLVED
 RADIATION-GROSS ALPHA TOT
 SUSPENDED
 RADIATION, GROSS BETA
 RADIATION, GROSS ALPHA
 RADIOACTIVITY
 RADIOACTIVITY, GROSS
 RADIUM 224
 RADIUM 226 + RADIUM 228, TOTAL
 RADIUM 226, DISSOLVED
 RADIUM 228, TOTAL
 RARE EARTH METALS, TOTAL
 RATIO OF FECAL COLIFORM TO FECAL
 STREPOC
 R-BHC (LINDANE) GAMMA
 RDX, DISSOLVED
 RDX, TOTAL
 RESIN ACIDS, TOTAL
 RESORCINOL
 RHODIUM, TOTAL
 ROTENONE
 ROUNDUP
 ROVRAL
 RUBIDIUM, TOTAL (AS RB)
 SAFROLE
 SAMARIUM, TOTAL (AS SM IN WATER)
 SELENIUM SLUDGE SOLID
 SELENIUM, ACID SOLUBLE
 SELENIUM, DISSOLVED (AS SE)
 SELENIUM, DRY WEIGHT
 SELENIUM, POTENTIALLY DISSOLVD

SELENIUM, SLUDGE, TOTAL DRY WEIGHT
SELENIUM, TOTAL (AS SE)
SELENIUM, TOTAL RECOVERABLE
SEVIN (CARBARYL) IN TISSUE
SEVIN (CARBRYL)
SILVER
SILVER TOTAL RECOVERABLE
SILVER IN BOTTOM DEPOSITS (DRY WGT)
SILVER, DISSOLVED (AS AG)
SILVER, IONIC
SILVER, POTENTIALLY DISSOLVED
SILVER, TOTAL (AS AG)
SILVER, TOTAL PER BATCH
SILVEX
SODIUM CHLORATE
SODIUM DICHROMATE
SODIUM DIMETHYL-DITHIOCARBAMATE,
TOTAL
SODIUM-O-PPTH
SODIUM PENTACHLORO- PHENATE
SODIUM POLYACRYLATE, TOTAL
SOPP
SOPP, LOADING RATE
STIROFOS
STROBANE
STRONTIUM 90, TOTAL
STRONTIUM, DISSOLVED
STRONTIUM, TOTAL (AS SR)
STYRENE
STYRENE, TOTAL
SULFABENZAMIDE
SULFACETAMIDE
SULFATHIAZOLE
SULFOTEPP (BLADAFUME)
TANNIN AND LIGNIN
TCDD EQUIVALENTS
TCMTB
TEBUCONAZOLE
TEBUPIRIMFOS
TEBUTHIURON ORGANIC PESTICIDE
TECHNETIUM-99
TEFLUTHRIN
TELLURIUM, TOTAL
TEMEPHOS
TERBACIL
TERBUFOS
TERBUFOS (COUNTER) TOTAL
TERBUTHYLAZINE ORGANIC PESTICIDE
TERBUTRYN, ORGANIC PESTICIDE
TETRA SODIUM EDTA
TETRACHLORDIBENZOFURAN, 2378-(TCDF)
SED,
TETRACHLOROETHANE, TOTAL
TETRACHLOROETHENE
TETRACHLOROETHYLENE

TETRACHLOROETHYLENE, DRY WEIGHT
TETRACHLOROGUAIACOL (4CG) IN WHOLE
WATER
TETRAHYDRO-3,5-DIMETHYL-2-HYDRO-
1,3,5-TH
TETRAHYDROFURAN
TETRAMETHYL AMMONIUM HYDROXIDE
TETRAMETHYLBENZENE
THALLIUM 208
THALLIUM IN BOTTOM DEPOSITS (DRY
WGT)
THALLIUM, ACID SOLUBLE
THALLIUM, DISSOLVED (AS TL)
THALLIUM, POTENTIALLY DISSOLVED
THALLIUM, TOTAL (AS TL)
THALLIUM, TOTAL RECOVERABLE
THC, DRY & 02
THEOPHYLLINE
THIABENDAZOLE
THIOBENDAZOLE
THIOCARBAMATES
THIOCYANATE (AS SCN)
THIOSULFATE ION(2-)
THORIUM 230
THORIUM 232
THORIUM 232 PCI/G OF DRY SOLIDS
THORIUM 234
TIN
TIN, DISSOLVED (AS SN)
TIN, TOTAL (AS SN)
TIN, TOTAL RECOVERABLE
TIN, TRI-ORGANO-
TITANIUM, DISSOLVED (AS TI)
TITANIUM, TOTAL (AS TI)
TITANIUM, TOTAL DRY WEIGHT (AS TI)
TOLUENE
TOLUENE, DISSOLVED
TOLUENE, DRY WEIGHT
TOLUENE-2,4 -DIISOCYANITE
TOLYTRIAZOLE
TOPSIN
TOTAL ACID PRIORITY POLLUTANTS
TOTAL BASE/NEUTRAL PRIORITY
POLLUTANTS
TOTAL PESTICIDES
TOTAL PHENOLS
TOTAL POLONIUM
TOTAL PURGEABLE HALOCARBONS
TOTAL TOXIC ORGANICS (TTO) (40 CFR 413)
TOTAL TOXIC ORGANICS (TTO) (40 CFR 433)
TOTAL TOXIC ORGANICS (TTO) (40 CFR
464A)
TOTAL TOXIC ORGANICS (TTO) (40 CFR
464B)
TOTAL TOXIC ORGANICS (TTO) (40 CFR
464C)

TOTAL TOXIC ORGANICS (TTO) (40 CFR 464D)
TOTAL TOXIC ORGANICS(TTO) (40 CFR 465)
TOTAL TOXIC ORGANICS (TTO) (40 CFR 467)
TOTAL TOXIC ORGANICS (TTO) (40 CFR 468)
TOTAL TOXIC ORGANICS (TTO) (40 CFR 469)
TOTAL VOLATILE PRIORITY POLLUTANTS
TOXAPHENE
TOXAPHENE, DRY WEIGHT
TOXICS, PERCENT REMOVAL
TRANS-1,2-DICHLORO-ETHYLENE
TRANS-1,3-DICHLORO PROPENE
TREFLAN (TRIFLURALIN)
TRIADIMEFON ORGANIC PESTICIDE
TRIBUTHYLAMINE
TRIBUTYL TIN
TRICHLORO BENZENE
TRICHLORO BENZENE 1,2,4 TOTAL
TRICHLOROETHANE
TRICHLOROETHENE
TRICHLOROETHYLENE
TRICHLOROETHYLENE, DISSOLVED
TRICHLOROETHYLENE, DRY WEIGHT
TRICHLOROFLUORO-METHANE
TRICHLOROGUAIACOL
TRICHLOROMETHANE
TRICHLOROPHENATE-(ISOMERS)
TRICHLOROPHENOL
TRICHLOROTOLUENE
TRICHLOROTRIFLUORO-ETHANE
TRICHLOROFON
TRIETHANOLAMINE
TRIETHYLAMINE
TRIFLURALIN (C13H16F3N3O4)
TRIHALOMETHANE, TOT.
TRIMETHYL BENZENE
TRINITROTOLUENE (TNT), DISSOLVED
TRINITROTOLUENE (TNT), TOTAL
TRIPHENYL PHOSPHATE
TRITHION
TRITIUM (1 H3), TOTAL
TRITIUM, TOTAL
TRITIUM, TOTAL COUNTING ERROR (PC/L)
TRITIUM, TOTAL NET INCREASE H-3 UNITS
TUNGSTEN, DISSOLVED
TUNGSTEN, TOTAL
U-236 TOTAL WTR
URANIUM 235, DRY WEIGHT
URANIUM 238
URANIUM, POTENTIALLY DISSOLVD
URANIUM, 235 TOTAL
URANIUM, 238 TOTAL
URANIUM, NATURAL, DISSOLVED
URANIUM, NATURAL, TOTAL
URANIUM, NATURAL, TOTAL (IN PCI/L)
URANIUM, TOTAL AS U308

URANYL-ION
UREA
VERNAM (S-PROPYLDI-
PROPYLTHIOCARBAMATE)
VINYL ACETATE
VINYL CHLORIDE
VINYL CHLORIDE, DRY WEIGHT
VOLATILE COMPOUNDS (GC/MS)
VOLATILE FRACTION ORGANICS (EPA 624)
VOLATILE HALOGENATED HYDROCARBONS
VOLATILE HALOGENATED ORGANICS
(VHO), TOT
VOLATILE HYDROCARBONS
VOLATILE ORGANIC COMPOUND (VOC)
VOLATILE ORGANICS DETECTED
XANTHATES
XC POLYMER IN DRILLING FLUIDS
XYLENE
XYLENE, PARA-TOTAL
ZINC
ZINC IN BOTTOM DEPOSITS (DRY WGT)
ZINC SLUDGE SOLID
ZINC SLUDGE TOTAL
ZINC TOTAL RECOVERABLE
ZINC, DISSOLVED (AS ZN)
ZINC, DRY WEIGHT
ZINC, PERCENT REMOVAL
ZINC, POTENTIALLY DISSOLVED
ZINC, TOTAL
ZINC, TOTAL (AS ZN)
ZIRAM, ORGANIC PESTICIDE
ZIRCONIUM, TOTAL

EXHIBIT B



California
Water
Environment
Association

and its

TRI-COUNTIES SECTION

present to

MARK BENNETT



this

Operator of the Year Award

2006



California
Water
Environment
Association

7677 Oakport Street, Suite 600
Oakland, CA 94621

RECEIVED
MAR 13 2009

March 9, 2009

Carpinteria Sanitary District Wastewater Treatment Facility
Mark Bennett
5351 Sixth St
Carpinteria, CA 93013

Dear Mark:

Congratulations on your agency being selected as CWEA's 2008 recipient of the Plant of the Year, Less than 5MGD Award. Preparations are underway to honor you at CWEA's 81st Annual Conference being held at the Palm Springs Convention Center, April 28 to May 1, 2009. A plaque honoring your agency as the winner of this category will be presented to you at the Awards Luncheon on Friday, May 1st.

Additionally, your organization will be recognized and awarded a Certificate at the Supergroup Committee breakfast meeting at this event.

Once again congratulations, I look forward to you attending the Award Luncheon. You can register online by visiting the website at: www.cwea.org/conferences or by using the conference brochure that is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Agor".

Steve Agor
CWEA Membership & External Relations Board Chair

Enclosure



California
Water
Environment
Association

and its
TRI-COUNTIES SECTION

present to

KENNETH "CASEY" BALCH



this

Operator of the Year Award

2014



CARPINTERIA
Sanitary District

MICHAEL DAMRON, President
LIN GRAF, Director
MIKE MODUGNO, Director
JEFF MOORHOUSE, Director
GERALD VELASCO, Director

CRAIG MURRAY, P.E., General Manager

FOR IMMEDIATE RELEASE

Contact: Craig Murray, General Manager
(805) 684-7214 x12
craigm@carpsan.com

**RINCON POINT SEPTIC TO SEWER PROJECT
RECEIVES PRESTIGIOUS AWARDS**

CARPINTERIA, CA – The Carpinteria Sanitary District received the **2014 Capital Project of the Year Award** from the California Association of Sanitation Agencies for the recently completed Rincon Point Septic to Sewer Conversion Project. The District's General Manager, Craig Murray, was on hand January 22nd at CASA's 2015 Winter Conference in Palm Springs to receive the statewide award and to give a presentation on the 15-year long saga that resulted in the extension of public sewer service to the beachfront Rincon Point community.

"The selection panel unanimously chose this project as the standout among fifteen other applicants with exceptional capital improvement projects," said Tom Williams, chair of the CASA Awards Committee. "The Carpinteria Sanitary District's perseverance and determination to complete this challenging task were truly remarkable."

The Rincon Point Septic to Sewer Conversion Project was initiated in 1999 amid concerns about near shore water quality at the famed surfing beach. It took well over a decade to deal with a host of administrative, political, legal and engineering challenges, but the project was successfully completed in August 2014.

The Rincon Point sewer project was also recognized as the **Public Works Project of the Year** in the Environmental category by the Central Coast Chapter of the American Public Works Association. This award was conferred at the chapter's annual awards banquet on January 21st in Nipomo. The District was one of three award winners whose projects will be submitted for consideration in APWA's national awards program later this year.



General Manager Craig Murray and Directors Jeff Moorhouse, Jerry Velasco and Lin Graf receiving the CASA 2014 Capital Project of the Year Award.

About Carpinteria Sanitary District:

The Carpinteria Sanitary District is an independent special district which provides wastewater collection, treatment and disposal services to the residents and businesses of the City of Carpinteria and surrounding unincorporated areas in the Carpinteria Valley.

The District was formed in 1928 to provide wastewater collection and disposal to area residents. During the 1930's and 40's wastewater was collected and discharged to the ocean without the benefit of treatment. It was during this period that the bulk of the sewer system serving the downtown area was constructed.

Over time, the District's wastewater collection has been expanded to serve the community's needs. The system currently consists of approximately 40 linear miles of sewer pipeline ranging from 6" to 24" in diameter. The District also owns and operates seven sewage pump stations that are necessary to convey flow to the wastewater treatment plant. Currently the District provides service to approximately 16,500 people and has just under 4,100 user accounts.

For more information please visit our website www.CarpSan.com.



California
Water
Environment
Association
7677 Oakport Street, Suite 600
Oakland, CA 94621-1935

March 23, 2015

Matt Oliver
5300 Sixth Street
Carpinteria CA 93013

Dear Matt Oliver:

Congratulations! Carpinteria Sanitary District has been selected as CWEA's 2014 recipient of the Collection System of the Year Small (0-249 Miles). Preparations are under way to honor your organization at CWEA's Annual Conference, which will be held at the Town & Country Resort in San Diego, April 28-May 1, 2015. We will be honoring your organization's accomplishment at the following CWEA Annual Conference events:

Collection System Committee Breakfast Meeting

Thursday, April 30, 7:00 - 8:30AM

Your organization will be awarded a certificate.

CWEA Awards Luncheon

Friday, May 1, Noon - 1:30 PM

Your organization will be presented a plaque honoring your win!

Please verify rooms and times on the AC15 onsite guide.

In addition your organization's award will be celebrated at the **Annual Conference Awards Pavilion** where photos of winners will be displayed. To be included, please email photos of your organization and team to Sheena Bell sbell@cwea.org by April 1.

Congratulations again! I hope to see you in San Diego. You can register for the Annual Conference at myAC15.com.

Sincerely,

Alec Mackie

CWEA Membership & External Relations Committee Chair

EXHIBIT C

From: [Mark Bennett](mailto:Mark.Bennett@carpsan.com)
To: [Craig Murray](mailto:Craig.Murray@carpsan.com)
Subject: FW: Noncompliance Notification
Date: Thursday, October 04, 2012 11:11:15 AM

FYI

Mark Bennett
Operations Manager
Carpinteria Sanitary District
5351 Sixth Street
Carpinteria, CA 93013
(805) 684-7214 x17 phone
(805) 566-6599 fax

www.carpsan.com

From: VonLangen, Peter@Waterboards [<mailto:Peter.VonLangen@waterboards.ca.gov>]
Sent: Thursday, October 04, 2012 10:55 AM
To: Mark Bennett; Harris, Ken@Waterboards
Subject: RE: Noncompliance Notification

Thanks Mark, got your voice messages yesterday.

Peter von Langen, Ph.D., P.G.
Engineering Geologist
Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
pvonlangen@waterboards.ca.gov
Phone 805-549-3688
Fax 805-788-3580

From: Mark Bennett [<mailto:MarkB@carpsan.com>]
Sent: Thursday, October 04, 2012 10:38 AM
To: Harris, Ken@Waterboards; VonLangen, Peter@Waterboards
Subject: Noncompliance Notification

Noncompliance notification for 10/3/2012.

Mark Bennett
Operations Manager
Carpinteria Sanitary District
5351 Sixth Street
Carpinteria, CA 93013
(805) 684-7214 x17 phone
(805) 566-6599 fax



Carpinteria Sanitary District
MEMORANDUM

Date: 10/4/12

To: Mr. Roger Briggs - Executive Officer
Central Coast Regional Water Quality Control Board

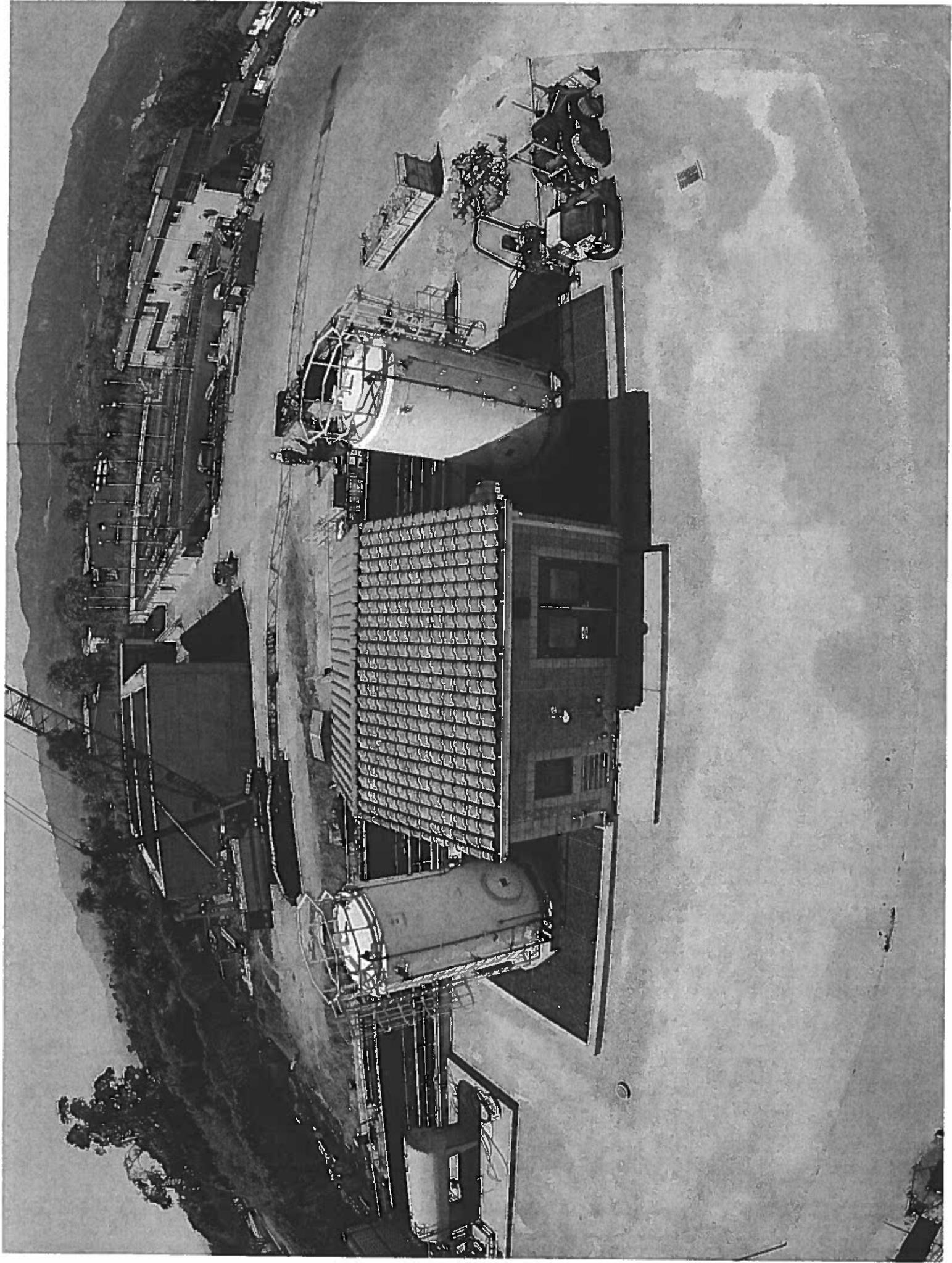
From: Mark Bennett - Operations Manager

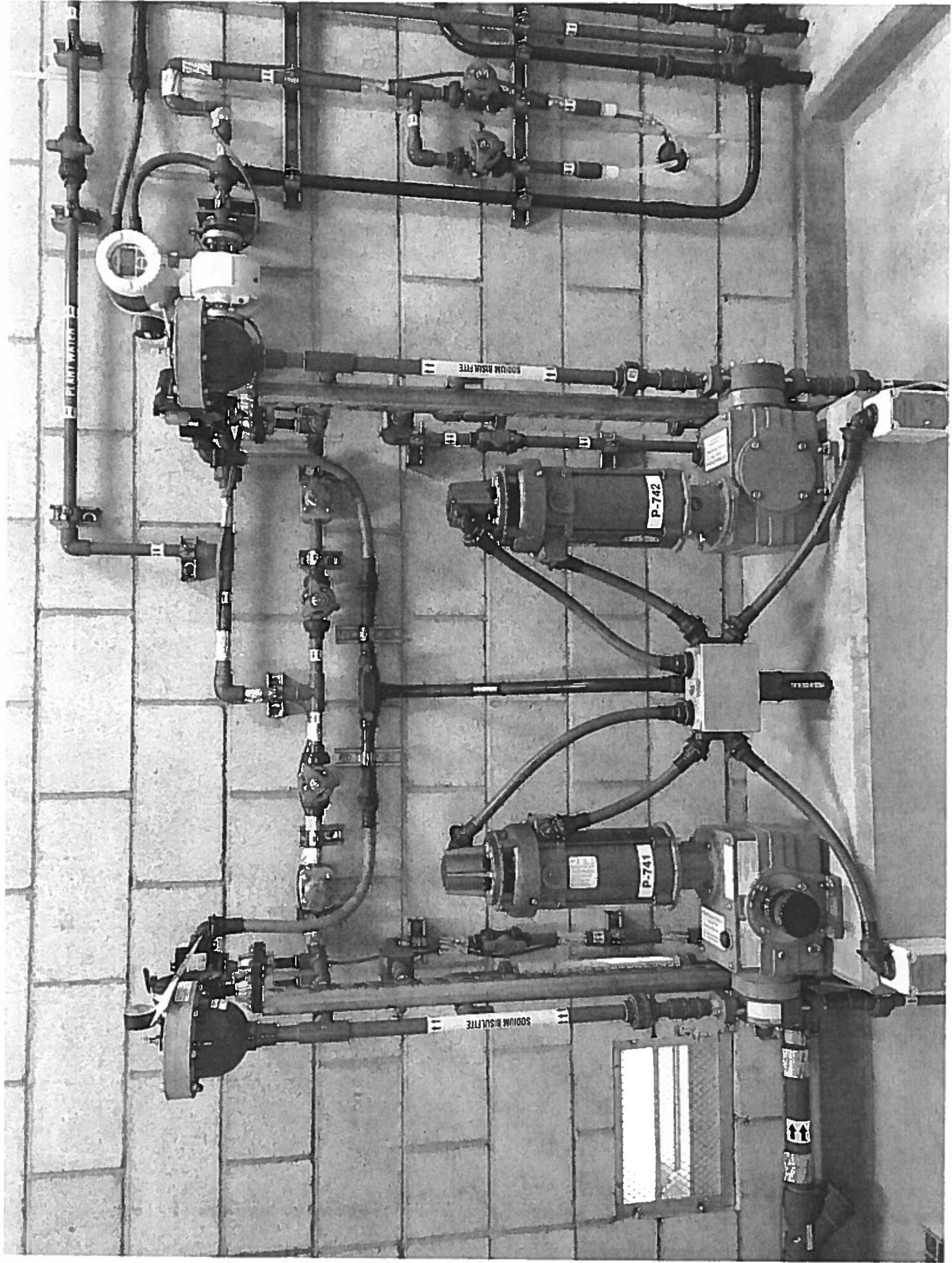
CC: Craig Murray, P.E. - General Manager

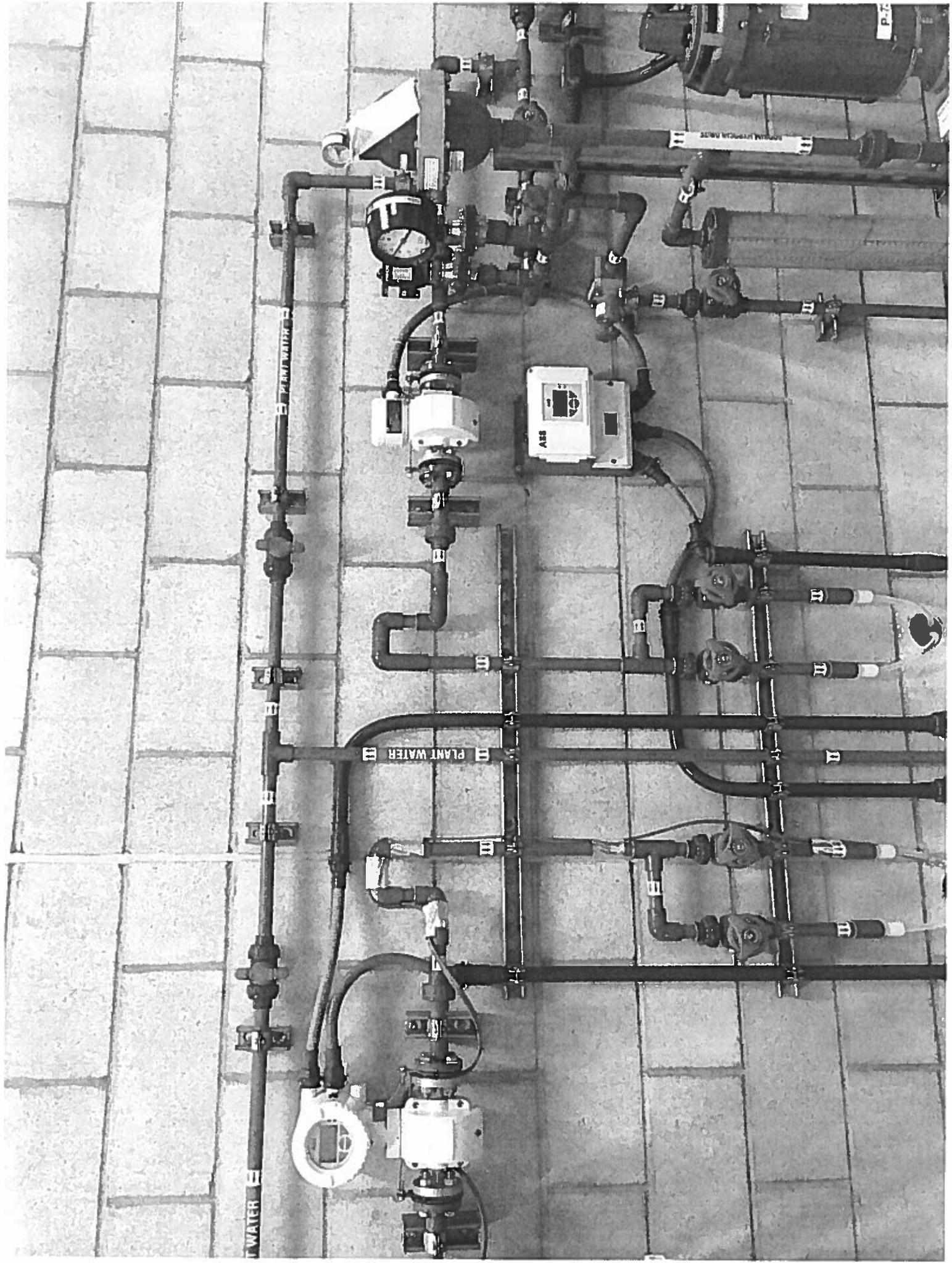
Re: Noncompliance Notification

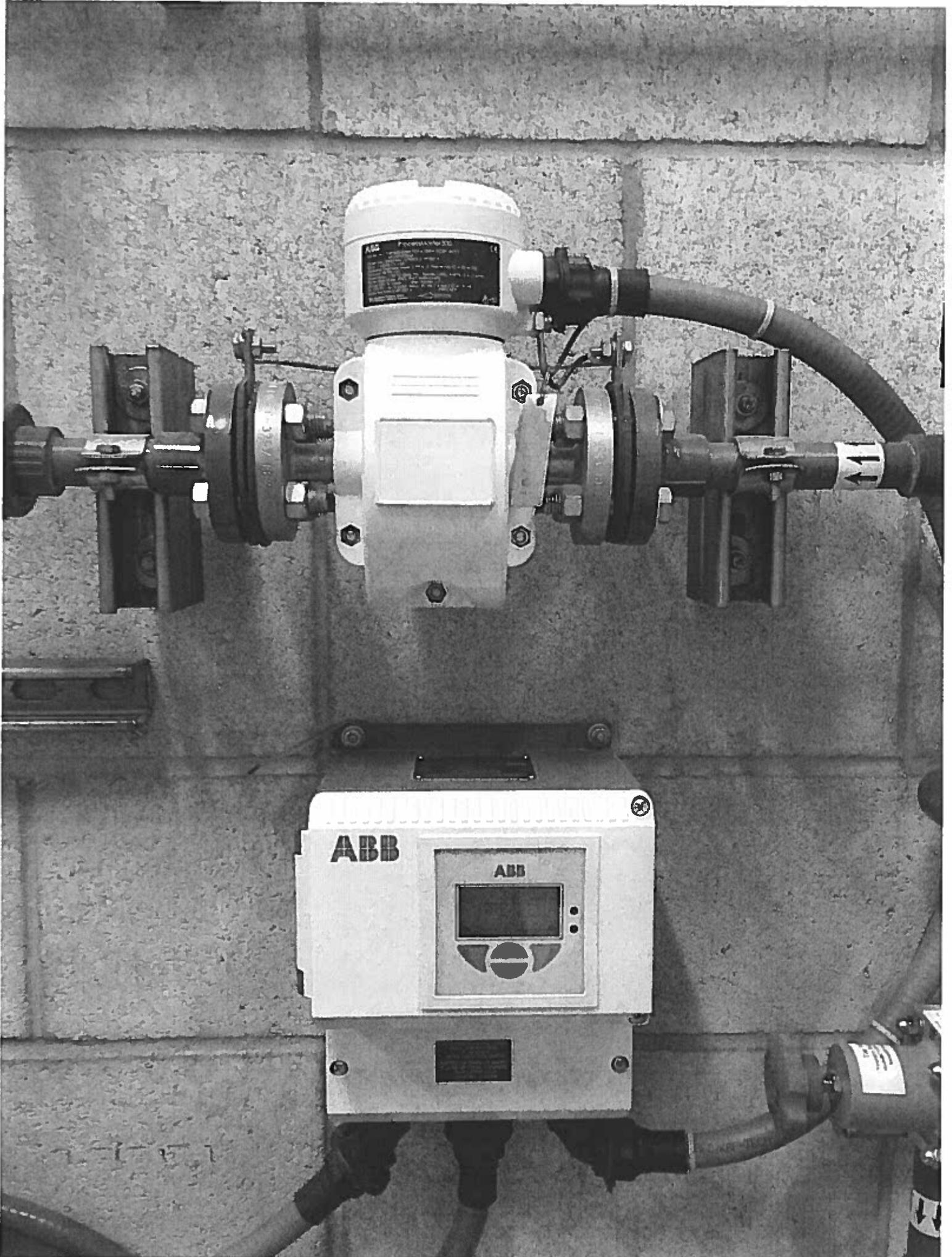
On October 3, 2012 at 4:08 am to 9:45 am the Carpinteria Sanitary District disinfection system malfunctioned. The District estimates 281,250 gallons of effluent were discharged during this period. The cause is suspected to be an air bound chemical feed pump. The District had over 1200 gallons of Sodium Hypochlorite in inventory at that time. The District notified the Central Coast Water Board and left messages for Peter Von Langen and his supervisor. The District also notified the department of Health Services and the Preharvest Shellfish Unit Environmental Management Branch California Department of Public Health.

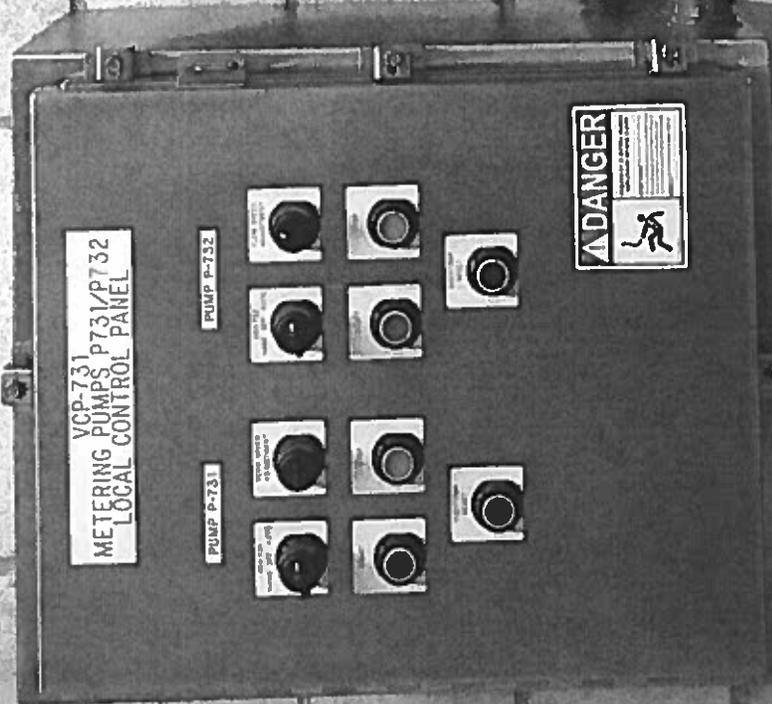
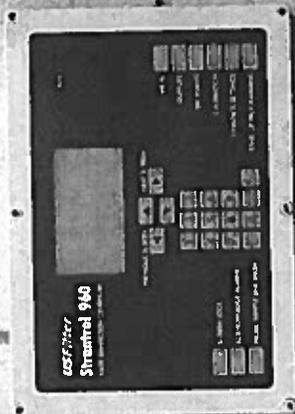
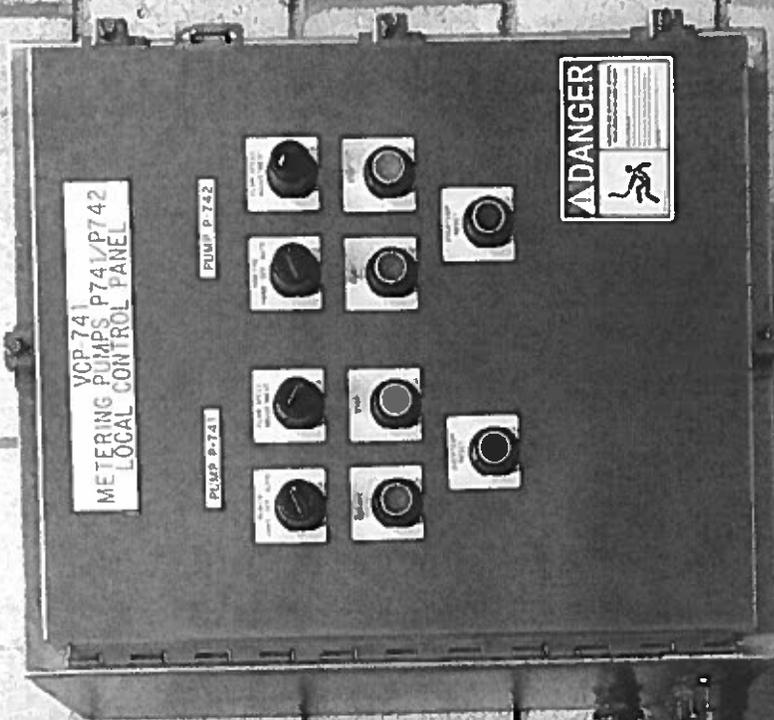
EXHIBIT D

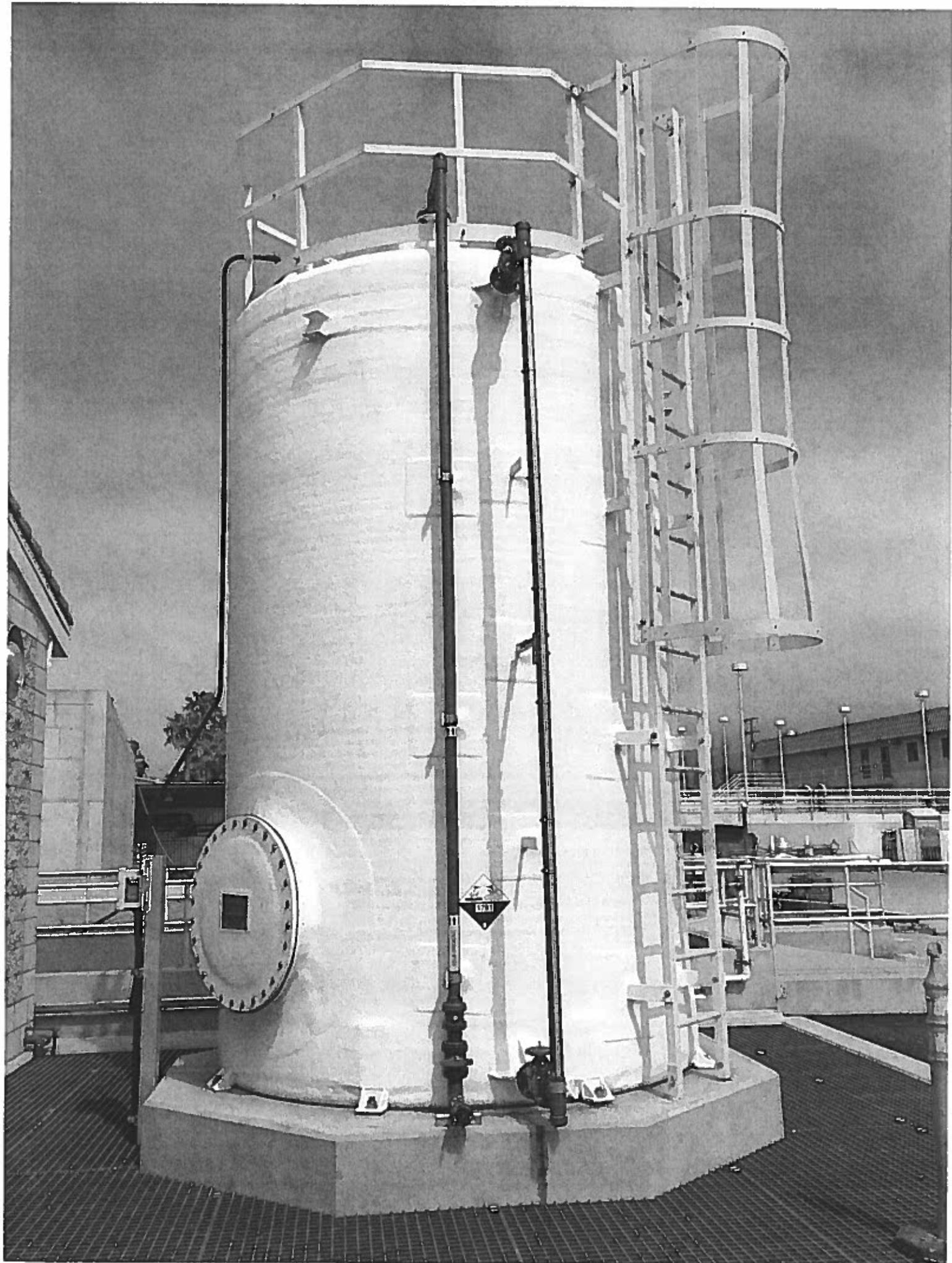




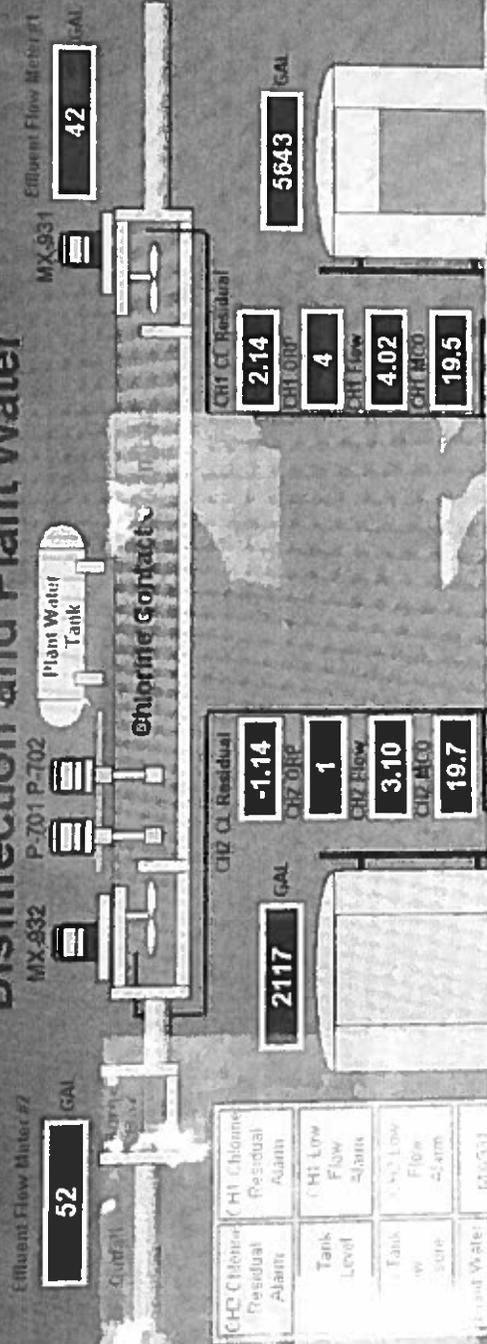








Disinfection and Plant Water



CH2 Chlorine Residual Alarm	CH1 Chlorine Residual Alarm
Tank Level Alarm	CH1 Low Flow Alarm
Tank Low Flow Alarm	CH2 Low Flow Alarm
Plant Water	MIX301

Admin Only

11-04-2008 10:05:36

01/22/05 08:53:53

05/07/02 07:14:10

22-08-20 08:01:10

Ack Alarm [F1]

Silence Alarms [F2]

Clear Alarm [F3]

Close [F4]

EXHIBIT E

Chemical Disinfection System Replacement - Schedule of Values

Completed April 2015

Item #	Description	Quantity	Unit	Extended Cost
1.15	Install/Test Temp Chem Feed System	1	LS	\$9,000.00
1.16	Over Ex/Recompact New Chem Building Pad	1	LS	\$31,200.00
1.17	Place/Compact Aggregate Base	1	LS	\$13,400.00
1.18	Install Electrical Ductbank	1	LS	\$110,000.00
1.19	Excavate Footings	1	LS	\$11,000.00
1.20	Place Rebar	1	LS	\$30,000.00
1.21	F/P/S Foundation	1	LS	\$40,607.00
1.22	F/P/S Tank Pads	1	LS	\$31,802.00
1.23	F/P/S Building Pad	1	LS	\$38,361.00
1.24	F/P/S Containment Walls	1	LS	\$40,364.00
1.25	F/P/S Equipment Pads Door Stops	1	LS	\$10,900.00
1.26	Install Containment Coating	1	LS	\$5,500.00
1.27	Install Masonry Walls	1	LS	\$48,200.00
1.28	Install Diaphragm Pump	1	LS	\$10,500.00
1.29	Coat CMU	1	LS	\$6,500.00
1.30	Electrical Rough-In Masonry	1	LS	\$18,500.00
1.31	Mechanical Rough-In Masonry	1	LS	\$5,200.00
1.32	Install FRP Tanks	1	LS	\$146,500.00
1.33	Install Piping	1	LS	\$15,000.00
1.34	Install FRP Grating	1	LS	\$35,700.00
1.35	Install FRP Doors and Windows	1	LS	\$17,000.00
1.36	Install HVAC	1	LS	\$15,500.00
1.37	Install Eyewash Stations	1	LS	\$8,900.00
1.38	Install Structural Steel	1	LS	\$47,000.00
1.39	Install Roof Deck	1	LS	\$10,000.00
1.40	Install Soffits/Fascia Board	1	LS	\$7,100.00
1.41	Install Roofing	1	LS	\$19,500.00
1.42	Paint Chemical Building	1	LS	\$12,000.00
1.43	Install Chem Feed Pumps/VFDs/Piping	1	LS	\$115,000.00
1.44	Install VFD's	1	LS	\$40,000.00
1.45	Install Chem Piping	1	LS	\$15,000.00
1.46	Install Electrical Conduits/Appurtances	1	LS	\$33,000.00
1.47	Install UCP 700	1	LS	\$52,200.00
1.48	Install Instruments	1	LS	\$58,700.00
1.49	Install SBS Heat Trace/Insulation	1	LS	\$22,000.00
1.50	Pull/Terminate/Test Electrical Wire	1	LS	\$31,000.00
1.51	Startup and Test HVAC	1	LS	\$4,200.00
1.52	Install Interior/Exterior Lighting	1	LS	\$18,500.00
1.53	Startup/Testing/Training New Chemical Feed Facility	1	LS	\$4,000.00
1.54	Demo Temp Chemical Feed Facilities	1	LS	\$3,200.00
TOTAL COST				\$1,192,034.00

EXHIBIT F

From: [Fischer, Jim@Waterboards](mailto:Fischer_Jim@Waterboards)
To: [Mark Bennett](mailto:Mark_Bennett); [VonLangen, Peter@Waterboards](mailto:VonLangen_Peter@Waterboards); [Sarmiento, Leo@Waterboards](mailto:Sarmiento_Leo@Waterboards)
Cc: [Craig Murray](mailto:Craig_Murray); [Mark Rogers](mailto:Mark_Rogers)
Subject: RE: Follow up
Date: Wednesday, November 06, 2013 5:26:01 PM

Thanks Mark. Appreciate the follow up information.
Jim

From: Mark Bennett [<mailto:MarkB@carpsan.com>]
Sent: Wednesday, November 06, 2013 12:13 PM
To: VonLangen, Peter@Waterboards; Fischer, Jim@Waterboards; Sarmiento, Leo@Waterboards
Cc: Craig Murray; Mark Rogers
Subject: Follow up

Gentlemen –

I wanted to follow up on one item from your visit to our facility last Tuesday. In response to the October 3, 2012 incident, which involved a short duration loss of disinfection, we actually did create and put in place a hard alarm for a low chlorine dose condition. This alarm, which we worked with our contract control system integrator to establish, has been active and functional since 10/22/2012. I am sorry that I did not remember this fact clearly during our meeting, but I do have documentation to support this sequence of events and the timing. The chlorination system has been working properly for the past year and we have not had any alarm conditions occur. We did test the alarm yesterday to verify that it is still working properly.

Again, we are still standing by to provide you any documentation or additional information you may need. I just thought this specific clarification was important to support the fact that our response to the incident was both thorough and timely.

Thank you,

Mark Bennett
Operations Manager
Carpinteria Sanitary District
5351 Sixth Street
Carpinteria, CA 93013
(805) 684-7214 x17 phone
(805) 566-6599 fax

www.carpsan.com

EXHIBIT G

APPENDIX L

**AQUATIC BIOASSAYS CONSULTING LABORATORIES
REPORT**

**Draft Response to Item 9 of the Notice of Violation Letter from the Central Coast
Regional Water Quality Control Board to the Carpinteria Sanitary District,
December 10, 2013**

Prepared by:

Daniel Hennessy, Anchor QEA, LLC

Scott Johnson, Aquatic Bioassay & Consulting Laboratories, Inc.



Summary of Qualifications for Dan Hennessy

Mr. Dan Hennessy is a Managing Scientist for Anchor QEA in Bellingham, Washington. He has led and supported a wide range of environmental assessment and restoration projects. With 20 years of professional experience, he has worked on a diversity of environmental projects and contributed at all levels, including as a project manager, technical advisor, aquatic toxicology laboratory manager, and field team leader. This experience provides a pragmatic knowledge base to efficiently assess complex issues, including human and ecological risks from complex exposure pathways, and the selection of appropriate interpretative criteria. His primary areas of expertise are aquatic ecology, toxicology, and ecological and human health risk assessment. Mr. Hennessy's work experience has included significant contributions to state and federal remedial investigation/feasibility studies, aquatic and terrestrial ecological risk assessments, human health risk assessments, sediment and water quality studies and criteria development, biological monitoring, habitat analysis, natural resource damage assessments, and discharge permit evaluations.

Education

University of Washington, M.S., Fisheries Science, 1998

Western Washington University, B.S., Environmental Science, 1992

University of California, Irvine, B.A., Social Science, 1990

Professional Memberships and Registrations

Member, Society of Environmental Toxicology and Chemistry, 1994 to present

Member, Association for Environmental Health & Sciences, 2007 to present

40-hour HAZWOPER Training and current 8-hour Refresher Course, 2013

Summary of Qualifications for Scott Johnson

Mr. Scott Johnson is the Laboratory Director for Aquatic Bioassay & Consulting Laboratories (Aquatic Bioassay) in Ventura, California. Mr. Johnson joined Aquatic Bioassay in 2001 and currently manages the freshwater bioassessment and marine monitoring programs for several of the largest municipal, state, and private agencies in the State of California. His career has focused on the effects of anthropogenic contaminants and habitat conditions on the composition and integrity of biological communities, the development and implementation of both distributed and centralized environmental database systems, and laboratory management. Mr. Johnson began his career with the City of Los Angeles, where he managed the biology laboratories and was responsible for the regulatory permits pertaining to the Los Angeles River, Santa Monica Bay, and Los Angeles Harbor. He joined EcoAnalysis, Inc., an environmental analysis and database company in 1994, advancing to President in 1998. He has numerous scientific papers and presentations to his credit.

Education

California State University, Long Beach, M.S., Biology, 1988

California State University, Long Beach, B.S., Biology (minor in Chemistry), 1981

University of Uppsala, Sweden, Limnology studies, 1978 to 1979

Professional Memberships and Registrations

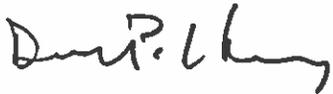
Board, Southern California Chapter of the Society of Environmental Toxicologists and Chemists, 2010 to 2013

Board, Southwestern Association of Freshwater Invertebrate Taxonomists, 2007 to 2011

Member, Technical Advisory Committee for the Southern California Stormwater Monitoring Coalition, 2006 to present

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Daniel Hennessy, Anchor QEA, LLC



Scott Johnson, Aquatic Bioassay & Consulting Laboratories, Inc.



Introduction

The following evaluation partially addresses the information request in the notice of violation letter from the Central Coast Regional Water Quality Control Board (CCRWQCB) to Craig Murray (Carpinteria Sanitary District; CSD) dated December 10, 2013. The letter is regarding three self-reported deviations of CSD National Pollutant Discharge Elimination System (NPDES) permit provisions. Specifically addressed herein is Item 9 of the letter, Impacts of Discharge. Included in this evaluation are an assessment of potential short and long-term impacts of the discharge events on public health and animal and plant communities (including sensitive and/or endangered species in the Pacific Ocean located downstream of the CSD outfall), and on the overall ecosystem downstream of the discharges. Supporting evaluations and sampling and analysis activities are described.

Three reported discharge events are addressed, an October 3, 2012, loss of disinfection and two chlorine residual effluent limit excursions, one on January 3, 2013, and the other on January 7, 2013. The potential for effluent exposure to aquatic life and people is a function of the effluent concentration and rate of discharge to the receiving water. The fate and transport of effluent in the receiving water is a function of the chemical and physical conditions of the receiving environment. Effluent that has not been disinfected has the potential to contain pathogens that are at sufficient concentrations to be harmful to human health through water contact recreation or shellfish harvesting. Effluent that contains excess residual chlorine has the potential to pose adverse acute effects on aquatic biota, including threatened or endangered species. The CSD NPDES permit specifies concentrations of pathogenic bacteria and residual chlorine limits under different exposure and sampling regimes, and these are the primary basis for determining potential impacts to people and aquatic life. The permit also specifies the application of the minimum initial dilution factor. Review of the technical basis for the effluent limits and the dilution factor provided in the CSD NPDES permit were beyond the scope of this review and they were applied per the permit.

This evaluation applied conservative assumptions to compare available data from the three discharge events to CSD NPDES permit requirements. Recognizing the high energy environment of the beach where the CSD outfall is located, the distribution of effluent beyond the initial dilution zone was also evaluated using a simple mixing model. Overall, impacts to aquatic biota from the chlorine residual events, including threatened or

endangered species, is unlikely. Likewise, it is unlikely that the loss of disinfection event posed any threat to people involved in water contact recreation or shellfish harvesting. Uncertainties associated with the data, assumptions, and evaluation are detailed at the end of this discussion in the Risk Characterization and Uncertainty Evaluation section.

Problem Formulation

The problem formulation includes a review of discharge event information, the determination of likely ecological receptors and human uses in the area of discharge, and summarizes diffuser and receiving water characteristics. The methods used to evaluate potential impacts of the discharges follow established environmental risk assessment steps including:

- Effects assessment including a review of permit conditions and relevant water quality benchmarks established for the protection of aquatic life and human health
- Exposure assessment including an evaluation of discharge event duration and magnitude, and fate and transport considerations
- Risk characterization and discussion of uncertainties

Discharge Event Information

The discharge occurred from the CSD outfall diffuser, which is located approximately 1,000 feet offshore in approximately 30 feet of water. The CSD outfall is regulated under NPDES permit CA0047364. The outfall diffuser section is approximately 93 feet long, with diffuser ports located every 6 feet. Post-event monitoring data were not collected by CSD for the loss of disinfection incident. The three events addressed in the letter and reviewed herein are one loss of disinfection event on October 3, 2012, and two similar short duration chlorine residual events on January 3, 2013 and January 7, 2013. Details related to these three incidents were provided by CSD for the purposes of this analysis.

For the October 3, 2012 loss of disinfection, the event lasted for 5 hours 37 minutes with total estimated flow of 231,076 gallons¹. During this period, the effluent flow rate ranged from approximately 400 gallons per minute (gpm) to 1,700 gpm. In support of the evaluation of the loss of disinfection event, on January 6, 2014, CSD staff collected samples of ocean

¹ The event flow was initially estimated by CSD to be 281,250 gallons. The actual amount, 231,076 gallons, was subsequently calculated by Carollo Engineers.

water and un-disinfected secondary effluent. The CSD certified laboratory then conducted multi-tube fermentation bacteriological analyses for total and fecal coliform most probable number (MPN) on plant effluent before chlorination, plant effluent after chlorination, ocean water, and effluent-spiked ocean water at a 93:1 dilution(see Attachment 1). These results were used in lieu of post-event monitoring data and indicate the MPN counts that could be expected for the event in plant effluent (160,000 coliform MPN/100 milliliters [mL] and 92,000 fecal MPN/100 mL, respectively) and under the permit-established dilution factor of 93:1 (490 coliform MPN/100 mL and 330 fecal MPN/100 mL).

One chlorine residual event occurred on January 3, 2013, with a 26-minute duration starting at 8:26 a.m. and a total estimated flow of 22,610 gallons. A second chlorine residual event occurred on January 7, 2013, with a 2-minute duration starting at 7:27 a.m. and a total estimated flow of 2,060 gallons. Total chlorine concentrations measured in the first and second events were 10.4 milligrams per liter (mg/L) and 7.8 mg/L, respectively.

Ecological and Human Receptors

Beneficial uses of the Pacific Ocean around the outfall include water contact recreation, marine habitat, shellfish harvesting, wildlife habitat, migration of aquatic organisms, and spawning, reproduction, and/or early development. For the purpose of this assessment, water quality objectives specified in the CSD NPDES permit were applied to evaluate potential impacts to the above listed beneficial uses.

An appropriate and required literature search of the California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDDB²) was conducted. The following quadrangles were queried for known sensitive Elements of Occurrence of natural communities, plants, and animals using the commercial computer application RAREFIND 3: Carpinteria (3411945) and Santa Barbara (3411946). This information is often helpful in determining which elements might be present and should be looked for, or perhaps are at least expected to occur. This list was further refined to reflect one species, the Southern California distinct population segment (DPS) of steelhead (*Oncorhynchus mykiss irideus*), that is expected to be present in the habitat of the outfalls (located approximately 1,000 feet

² California Natural Diversity Data Base (CNDDDB). 2014. Rarefind data output for the Cambria USGS 7.5-minute quadrangle, January, 2014. California Department of Fish and Wildlife. Sacramento, California. Accessed online January 16, 2014, from the following link: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>

offshore in approximately 30 feet of water). The Southern California DPS of steelhead is a federally endangered species and a CDFW Species of Special Concern. Shorebirds and wetland or dune species were not included due to the location of the outfalls 500 feet offshore. The tidewater goby was not considered because it lives in lagoon, estuary, and brackish marsh shallow water areas.

For the purpose of this evaluation, only chlorine exposure was considered for aquatic life. Bacterial loading from secondary effluent is unlikely to have an impact on aquatic biota. Further, there are no interpretative criteria for pathogen exposure to aquatic life. The water quality objectives in the Ocean Plan (2012)³ are intended to be protective of marine communities, including vertebrate, invertebrate, and plant species. Therefore, the Ocean Plan water quality objectives for total chlorine residual applying to intermittent discharges not exceeding 2 hours was applied to characterize potential risk to aquatic life from the chlorine residual events. For the purpose of evaluating potential impacts on listed species, the receptor evaluated was individual steelhead. As discussed below in the Exposure and Effects Assessment section, toxicity data applied by EPA (1985)⁴ to develop the aquatic life criteria for chlorine were used to develop an acute benchmark for steelhead.

Humans potentially exposed are those involved in water contact recreation and shellfish harvesting. Chlorine discharges at the levels observed are well below the conservative EPA dermal screening levels for residential tap water of 240 mg/L.⁵ Therefore, chlorine was not considered a risk to people. For the purpose of this evaluation, only potential effects from exposure to total coliform and fecal coliform bacteria were considered for people.

Diffuser and Receiving Water

The outfall diffuser section is a 93-foot section with diffuser pipes spaced 6 feet apart along the entire diffuser length. The dilution zone is defined as the region in which the rapid, initial mixing occurs and provides the basis for determining the minimum initial dilution ratio of seawater to effluent achieved during the initial mixing phase in the dilution zone. The minimum initial dilution ratio is calculated under an assumption that no current flows

³ State Water Resources Control Board. 2012. Water Quality Control Plan, Ocean Waters of California.

⁴ U.S. Environmental Protection Agency (EPA). 1985. Ambient Water Quality Criteria for Chlorine – 1984. EPA 440/5-84-030. January, 1985.

⁵ <http://www.epa.gov/region9/superfund/prg/>

across the discharge structure. Waves and currents in the vicinity of the discharge structure will significantly dilute effluent beyond the minimum initial dilution ratio. The CSD permit applies a dilution ratio of 93:1 to the discharge to determine effluent limitations derived from Ocean Plan water quality objectives.

To better understand the fate and transport of the effluent plume a simple point discharge effluent mixing model developed by the U.S. Army Corps of Engineers (USACE) was applied. The calculation follows the dilution volume method for confined disposal facility (CDF) effluent discharges in USACE (1998)⁶. This method was selected because it is a relatively simple model that is consistent with a point effluent discharge into a tidal receiving water.

Exposure and Effects Assessment

Chlorine

Discharges of chlorine are common because it is used to disinfect effluents. In salt water, the addition of chlorine results in a solution that contains free chlorine and chlorine-produced oxidants including hypochlorous acid (HOCl) and hypochlorite ion (OCl⁻). Because saltwater contains bromide, hypobromous acid (HOBr), hypobromous ion (OBr⁻), and bromamines are also produced. The term *chlorine-produced oxidants* is used to refer to the sum of these oxidants in salt water and is measured by the methods for total chlorine residual (EPA 1985).

Per the permit, water quality objectives for total chlorine residual applying to intermittent discharges not exceeding 2 hours shall be determined using the following equation:

$$\text{Log } y = -0.43 (\text{log } x) + 1.8$$

where:

- y = the water quality objective (in micrograms per liter [µg/L]) to apply when chlorine is being discharged
- x = the duration of uninterrupted chlorine discharge in minutes

⁶ U.S. Army Corps of Engineers (USACE). 1998. Evaluation of Dredged Material Proposed for Discharge in Water of the U.S. – Testing Manual, Appendix C.

The applicable effluent limitation must then be determined using Equation No. 1 from the Ocean Plan (2012) as follows:

$$C_e = C_o + D_m (C_o - C_s)$$

where:

- C_e = the effluent concentration limit, in $\mu\text{g/L}$
- C_o = the concentration (water quality objective) to be met at the completion of initial dilution, in $\mu\text{g/L}$
- C_s = background seawater concentration, in $\mu\text{g/L}$
- D_m = minimum probable initial dilution expressed as parts seawater per part wastewater; the minimum probable initial dilution applying to the discharger is 93:1, therefore, $D_m = 93$

For the purpose of evaluating potential effects on individuals from the Southern California DPS of steelhead, the National Ambient Water Quality Criteria for Chlorine (EPA 1985) was reviewed for acute toxicity data for species of the genus *Oncorhynchus*. The saltwater genus mean acute value (GMAV) for *Oncorhynchus* (0.047 mg/L) was used as a conservative benchmark to evaluate potential impacts on individual steelhead. Other Pacific Ocean fish and invertebrate species data used by EPA (1985) had higher GMAV. This benchmark is applied per EPA methods and represents a 1-hour average concentration. Marine plant toxicity benchmarks reported by EPA (1976)⁷ ranged from 0.075 to 0.330 mg/L and are all above the GMAV value for *Oncorhynchus*. Therefore, the selected value is also protective of marine plant species.

For the January 3, 2013, 8:26 a.m. chlorine residual event, which had a duration of 19 minutes, the calculated water quality objective for total chlorine residual is 1.7 mg/L. The measured total chlorine concentration in the effluent discharge was 10.4 mg/L. The effluent concentration at the edge of the zone of initial dilution is 0.11 mg/L.

⁷ Gentile, J.H., J. Cardin, M. Johnson, and S. Sosnowski. 1976. Power plants, chlorine, and estuaries. EPA-600/3-76-055.

For the January 7, 2013, 7:24 a.m. chlorine residual event, which had a duration of 2 minutes, the calculated water quality objective for total chlorine residual is 4.4 mg/L. The measured total chlorine concentration in the effluent discharge was 7.8 mg/L. The concentration at the edge of the dilution zone is 0.084 mg/L.

For both chlorine residual events, the concentrations were substantially below the water quality objective, and therefore short- or long-term impacts to aquatic life from these events are unlikely.

Bacterial

Bacterial discharges may adversely impact water contact recreation and shellfish harvesting beneficial uses, and therefore potential impacts are mitigated by CSD by applying chlorine as a disinfectant. The CSD permit limit for total coliform is 2,300 MPN/100 mL as a daily maximum, or 23 MPN/100 mL as a weekly median. The Ocean Plan (2012) receiving water standards are a single maximum total coliform of 10,000 MPN/100 mL, and fecal coliform of 400 MPN/100 mL. The 30-day geometric mean standard is total coliform of 1,000 MPN/100 mL, and fecal coliform of 200 MPN/100 mL.

Using samples collected on January 6, 2014, the CSD laboratory tested total coliform and fecal coliform in plant effluent before chlorination and under the permit-established dilution factor of 93:1. During the loss of chlorination event, the effluent flowed through the 80,000-gallon serpentine chlorine contact tank prior to entering the ocean outfall pipe. Therefore, some level of disinfection likely continued due to mixing within the reactor for a period of time after failure of the chemical feed pump. As such, the laboratory test using untreated effluent diluted with ocean water at the permit-established dilution factor of 93:1 is the most appropriate measure of bacterial concentrations released from the outfall diffuser to the initial dilution zone during the Loss of Disinfection event. The test assumes no chlorination, but appropriately dilutes the effluent to conservatively estimate bacterial concentrations. Applying the dilution factor to the 100 percent effluent test result would likely overestimate exposure because coliform colony-forming units decrease with time in seawater⁸. In the 93:1 ocean water-to-effluent dilution test, the total coliform were 490 MPN/100 mL, and fecal

⁸ Dawe, L.L and W.R. Penrose. 1978. "Bactericidal" Property of Seawater: Death or Debilitation? *Applied and Environmental Microbiology* 35(5):829-833.

coliform were 330 MPN/100 ml. In the 100 percent effluent MPN tests, the total coliform were 160,000 MPN/100 mL, and fecal coliform were 92,000 MPN/100 mL.

Risk Characterization and Uncertainty Evaluation

Chlorine

It is unlikely that concentrations outside the zone of initial dilution were above the intermittent discharge permit limit for chlorine. For the January 3, 2013, 7:24 a.m. chlorine residual event, which had a duration of 2 minutes, the estimated concentration at the edge of the dilution zone is 0.084 mg/L. This value is well below the calculated permit limit for total chlorine residual for this event (4.4 mg/L). For the January 7, 2013, 8:26 a.m. chlorine residual event, which had a duration of 19 minutes, the estimated concentration at the edge of the zone of initial dilution is 0.11 mg/L. This value is well below the calculated permit limit for total chlorine residual for this event (1.7 mg/L).

Because of the potential for individuals of the Southern California DPS of steelhead to be present near the outfall, and the exceedance of the acute toxicity benchmark at the edge of the initial dilution zone, the exposure to steelhead was evaluated using the simple mixing model assuming a tidal current velocity of 0.1 foot/second and a 25-foot water column mixing depth (Tables 1 and 2). For the January 3, 2013 event, the effluent residual chlorine concentration at the edge of the zone of initial dilution, 0.084 mg/L, would reach a concentration of 0.047 mg/L (the steelhead acute toxicity benchmark) in approximately 15 seconds and at a distance of approximately 2 feet from the point of discharge. For the January 7, 2013 event, the effluent residual chlorine concentration at the edge of the zone of initial dilution, 0.11 mg/L, would reach a concentration of 0.047 mg/L (the steelhead acute toxicity benchmark) in approximately 24 seconds and at a distance of approximately 2 feet from the point of discharge. Given that the 2-minute and 19-minute durations of the chlorine residual events are less than the acute toxicity benchmark 1-hour averaging time, no adverse impact on individuals of the Southern California DPS of steelhead would be expected from either of the chlorine residual events.

Bacterial

Because bacterial samples were not available for the October 3, 2012, Loss of Disinfection event, the CSD laboratory conducted multi-tube fermentation tests using untreated effluent in a 93:1 ocean water-to-effluent dilution test to estimate conditions in the initial dilution

zone. In this test the total coliform were 490 MPN/100 mL, and fecal coliform were 330 MPN/100 ml. Under this set of test conditions, the CSD permit limit for total coliform (2,300 MPN/100 mL as a daily maximum) was not exceeded, nor were the Ocean Plan (2012) receiving water standards for a single maximum total coliform of 10,000 MPN/100 mL or fecal coliform of 400 MPN/100 mL.

Because there is uncertainty associated with the actual bacterial concentrations at the edge of the zone of dilution during the event, the worst case 100 percent effluent MPN tests were evaluated using the mixing model (Table 3). The effluent concentration at the edge of the zone of initial dilution, 990 MPN/100 mL, would reach a concentration of 400 MPN/ 100 mL (the fecal coliform single maximum concentration) in approximately 20 seconds and at a distance of approximately 2 feet from the point of discharge. Given the relatively small area this represents, no adverse impacts to human direct contact recreation or shellfish harvesting would be expected from the loss of disinfection event.

Summary

Three discharge events were evaluated for potential impacts to people and aquatic biota, including sensitive and/or endangered species: an October 3, 2012, loss of disinfection and two reported chlorine residual effluent limit excursions, one on January 3, 2013, and the other on January 7, 2013. Under reasonable maximum exposure scenarios, none of the events resulted in an exceedance of applicable water quality limits and no adverse impacts to human direct contact recreation or shellfish harvesting or aquatic life would be expected.

Steelhead, the single endangered species that could have potentially been near the outfall during the discharge events, was evaluated using data from EPA (1985) aquatic life criteria for chlorine. Based on the duration of the residual chlorine events and conservative plume dilution model, no adverse impact on individuals of the Southern California DPS of steelhead would be expected from either of the two chlorine residual events.

Tables

Table 1
Estimate of Plume Mixing Characteristics for January 3, 2013 Chlorine Residual Event

Parameter	Variable	Units	Value	Basis
Effluent Concentration Back-Calculated to Achieve 150-foot Mixing Zone				
<i>Effluent Concentration</i>	C_0	Parts/L	0.11	<i>Chlorine concentration estimated in effluent (10.4 mg/L, 93:1 dilution)</i>
Assumptions				
Discharge Rate	V_p	cfs	2.64	Event duration was 19 minutes. Estimated flow during event was 22,610 gallons. There are 0.133 cubic feet in 1 gallon.
Average Tidal Current	V_w	ft/sec	0.100	Assumed tidal current in location of discharge
Aquatic Life Protective Concentration	C_c	mg/L	0.047	Based on <i>Oncorhynchus</i> acute value from EPA (1985) Aquatic Life Criteria for Chlorine
Assumed Water Column Mixing Depth	d	ft	25	Mixing depth could occur to the water depth of up to 42 feet
Assumed Turbulent Dissipation Parameter	λ	unitless	0.005	Recommended in USACE (1998) for estuary system
Estimate of Concentration with a 150-foot Mixing Zone				
Time to reach 150 ft	t	sec	1,500	$t = 150 \text{ ft} / V_w$
Mixing Zone Width at 150 ft	L	ft	713	$L = (t * \lambda / 0.094)^{3/2}$
Mixing Volume at 150 ft	V_a	cfs	1,782	$V_a = V_w * d * L$
Mixed Concentration at 150 ft	C_m	mg/L	0.0002	$C_m = C_0 * V_p / (V_a + V_p)$
Estimate of Mixing Zone Required to Meet Water Quality Criteria				
Mixing Factor Required to Achieve Effluent Limit	D	unitless	1.4	$D = (C_0 - C_c) / C_c$. Assumes background concentration is zero
Mixing Volume to Achieve Mixing	V_a	cfs	4	$V_a = V_p * D$
Mixing Zone Width Required to Achieve Mixing	L	ft	1	$L = V_a / (d * V_w)$
Time to Spread to Achieve Mixing Zone Width	t	sec	24	$t = (1/\lambda) * (0.094 * L^{2/3})$. Assumes a point discharge with an initial width of 0 feet
Length of Mixing Zone Required to Meet Aquatic Life Protective Concentration	X	ft	2.4	$X = V_w * t$

Notes:

Calculation based on the Dilution Volume Method for CDF Effluent Discharges in USACE (1998).

Table 2
Estimate of Plume Mixing Characteristics for January 7, 2013 Chlorine Residual Event

Parameter	Variable	Units	Value	Basis
Effluent Concentration Back-Calculated to Achieve 150-foot Mixing Zone				
Effluent Concentration	C_0	Parts/L	0.08	Chlorine concentration estimated in effluent (7.8 mg/L, 93:1 dilution)
Assumptions				
Discharge Rate	V_p	cfs	2.28	Event duration was 2 minutes. Estimated flow during event was 2,060 gallons. There are 0.133 cubic feet in 1 gallon.
Average Tidal Current	V_w	ft/sec	0.100	Assumed tidal current in location of discharge
Aquatic Life Protective Concentration	C_c	mg/L	0.047	Based on <i>Oncorhynchus</i> acute value from EPA (1985) Aquatic Life Criteria for Chlorine
Assumed Water Column Mixing Depth	d	ft	25	Mixing depth could occur to the water depth of up to 42 feet
Assumed Turbulent Dissipation Parameter	λ	unitless	0.005	Recommended in USACE (1998) for estuary system
Estimate of Concentration with a 150-foot Mixing Zone				
Time to reach 150 ft	t	sec	1,500	$t = 150 \text{ ft} / V_w$
Mixing Zone Width at 150 ft	L	ft	713	$L = (t * \lambda / 0.094)^{3/2}$
Mixing Volume at 150 ft	V_a	cfs	1,782	$V_a = V_w * d * L$
Mixed Concentration at 150 ft	C_m	mg/L	0.0001	$C_m = C_0 * V_p / (V_a + V_p)$
Estimate of Mixing Zone Required to Meet Water Quality Criteria				
Mixing Factor Required to Achieve Effluent Limit	D	unitless	0.8	$D = (C_0 - C_c) / C_c$. Assumes background concentration is zero
Mixing Volume to Achieve Mixing	V_a	cfs	2	$V_a = V_p * D$
Mixing Zone Width Required to Achieve Mixing	L	ft	1	$L = V_a / (d * V_w)$
Time to Spread to Achieve Mixing Zone Width	t	sec	15	$t = (1/\lambda) * (0.094 * L^{2/3})$. Assumes a point discharge with an initial width of 0 feet
Length of Mixing Zone Required to Meet Aquatic Life Protective Concentration	X	ft	1.5	$X = V_w * t$

Notes:

Calculation based on the Dilution Volume Method for CDF Effluent Discharges in USACE (1998).

Table 3
Estimate of Plume Mixing Characteristics for October 3, 2012 Loss of Disinfection Event

Parameter	Variable	Units	Value	Basis
Effluent Concentration Back-Calculated to Achieve 150-foot Mixing Zone				
Effluent Concentration	C_0	MPN/L	9,892.5	<i>Fecal coliform bacteria estimated concentration in effluent (92,000 MPN/100 mL, 93:1 dilution)</i>
Assumptions				
Discharge Rate	V_p	cfs	1.52	Event duration was 5 hours 37 minutes. Estimated flow during event was 231,076 gallons. There are 0.133 cubic feet in 1 gallon.
Average Tidal Current	V_w	ft/sec	0.100	Assumed tidal current in location of discharge
Effluent Limit	C_c	MPN/L	4,000	Ocean plan single sample maximum 400 MPN/100 mL
Assumed Water Column Mixing Depth	d	ft	25	Mixing depth could occur to the water depth of up to 42 feet
Assumed Turbulent Dissipation Parameter	λ	unitless	0.005	Recommended in USACE (1998) for estuary system
Estimate of Concentration with a 150-foot Mixing Zone				
Time to reach 150 ft	t	sec	1,500	$t = 150 \text{ ft} / V_w$
Mixing Zone Width at 150 ft	L	ft	713	$L = (t * \lambda / 0.094)^{3/2}$
Mixing Volume at 150 ft	V_a	cfs	1,782	$V_a = V_w * d * L$
Mixed Concentration at 150 ft	C_m	MPN/L	8,4318	$C_m = C_0 * V_p / (V_a + V_p)$
Estimate of Mixing Zone Required to Meet Water Quality Criteria				
Mixing Factor Required to Achieve Effluent Limit	D	unitless	1.5	$D = (C_0 - C_c) / C_c$. Assumes background concentration is zero
Mixing Volume to Achieve Mixing	V_a	cfs	2	$V_a = V_p * D$
Mixing Zone Width Required to Achieve Mixing	L	ft	1	$L = V_a / (d * V_w)$
Time to Spread to Achieve Mixing Zone Width	t	sec	17	$t = (1/\lambda) * (0.094 * L^{2/3})$. Assumes a point discharge with an initial width of 0 feet
Length of Mixing Zone Required to Meet Effluent Limit	X	ft	1.7	$X = V_w * t$

Notes:

Calculation based on the Dilution Volume Method for CDF Effluent Discharges in USACE (1998).

Attachment 1
Effluent and Ocean Sample Bacteriological Test Results

CSD Laboratory
Total & Fecal Coliform (MTF)

Form 9921BE-0

LTB Solution # R-376
 BGB Solution # R-126
 EC Solution # R-243
 Phos. Buffer # R-415

Sampling Point:
Plant Effluent After Chlorination
 Date & Time Collected:
 1-6-14/10:25
 Sample collected By:
 FZ

Results:
 Coliform MPN/100 ML
 2-0
 Fecal MPN/100 ML
 <1.8

Dilutions In	10			1			0.1			0.01		
	10	10	10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Portions In ML	10	10	10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Persumptive 24	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-
Confirmed 24	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-
Fecal Coliform 24	-	-	-	-	-	-	-	-	-	-	-	-
Date: 1-6-14	Date: 1-7-14			Date: 1-8-14			Date: 1-9-14			Date: 1-10-14		
Time: 1:20	Time: 2:30			Time: 1:45			Time: 1:15			Time: 1:10		
Started By: FZ	Read By: FZ			Read By: FZ			Read By: FZ			Read By: FZ		

Remarks: Ocean Study 2014

All test done by "Standard Method" (20th Ed.) SM9221B/SM9221C,E

CSD Laboratory
Total & Fecal Coliform (MTF)

Results:
 Coliform MPN/100 ML: **160,000**
 Fecal MPN/100 ML: **92,000**

Sampling Point:
Plant Effluent Before Chlorination
 Date & Time Collected: **1-6-14 / 10:20**
 Sample collected By: **FZ**

LTB Solution # **R-376**
 BGB Solution # **R-126**
 EC Solution # **R-243**
 Phos. Buffer # **R-415**

Dilutions In Portions In ML	10			1			0.1			0.01			0.001		
	10	10	10	1.0	1.0	1.0	10	10	10	1.0	1.0	1.0	1.0	1.0	1.0
Persumptive 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Confirmed 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fecal Coliform 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Date: **1-6-14** Date: **1-7-14** Date: **1-8-14** Date: **1-9-14**
 Time: **1:20** Time: **1:00** Time: **1:00** Time: **1:25**
 Started By: **FZ** Read By: **FZ** Read By: **FZ**

Remarks: Ocean Study 2014.

All test done by "Standard Method" (20th Ed.) SM9221B/SM9221C,E

CSD Laboratory
Total & Fecal Coliform (MTF)

LTB Solution # R-376
BGB Solution # R-126
EC Solution # R-243
Phos. Buffer # R-415

Sampling Point:
 OCEAN
Date & Time Collected:
 1-6-14 / 10:30
Sample collected By:
 BT

Results:
 Coliform MPN/100 ML: 23
 Fecal MPN/100 ML: 13

Dilutions In	10			1			0.1			0.01						
	10	10	10	1.0	1.0	1.0	10	10	10	1.0	1.0	1.0	1.0			
Portions In ML																
Persumptive 24	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	
Confirmed 24	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	
Fecal Coliform 24	-	+	+	+												
Date: 1-6-14	Date: 1-7-14			Date:			Date:			Date: 1-8-14						
Time: 1:00	Time: 2:15			Time:			Time:			Time: 1:40						
Started By: FH	Read By: FH			Read By:			Read By:			Read By: FH						

Remarks: Ocean Study 2014

All test done by "Standard Method" (20th Ed.) SM9221B/SM9221C,E

CSD Laboratory
Total & Fecal Coliform (MTF)

LTB Solution # R-376
 BGB Solution # R-126
 EC Solution # R-243
 Phos. Buffer # R-415

Sampling Point:
OCEAN (*SPIKED)
 Date & Time Collected:
1-6-14 / 10:30
 Sample collected By:
BT

Results:
 Coliform MPN/100 ML 490
 Fecal MPN/100 ML 330

Dilutions In Portions In ML	10			1			0.1			0.01			0.001		
	10	10	10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Persumptive 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48															
Confirmed 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
48															
Fecal Coliform 24	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Date: <u>1-6-14</u>	Date: <u>1-7-14</u>			Date: <u>1-8-14</u>			Date: <u>1-9-14</u>			Date: <u>1-10-14</u>			Date: <u>1-10-14</u>		
Time: <u>1:00</u>	Time: <u>1:45</u>			Time: <u>1:20</u>			Time: <u>1:15</u>			Time: <u>1:10</u>			Time: <u>1:10</u>		
Started By: <u>FK</u>	Read By: <u>FK</u>			Read By: <u>FK</u>			Read By: <u>FK</u>			Read By: <u>FK</u>			Read By: <u>FK</u>		

Remarks: Ocean Study 2014. * Ocean sample spiked with plant effluent before chlorination (93:1).

All test done by "Standard Method" (20th Ed.) SM9221B/SM9221C,E

EXHIBIT H

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2010-0505
IN THE MATTER OF

THE CITY OF CHICO
CHICO WATER POLLUTION CONTROL PLANT
BUTTE COUNTY

This Order is issued to the City of Chico (hereafter referred to as Discharger) pursuant to California Water Code (CWC) section 13385, which authorizes the imposition of Administrative Civil Liability (ACL). This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements (WDRs) Order R5-2004-0073 (NPDES No. CA0079081).

The Executive Officer of the Central Valley Regional Water Quality Control Board (hereafter Central Valley Water Board) finds, with respect to the Discharger's acts, or failure to act, the following:

1. The Discharger owns and operates the Chico Water Pollution Control Plant (CWPCP), which provides sewerage service to the community of Chico. Treated municipal/industrial wastewater is discharged to the Sacramento River, a water of the United States.
2. On 4 June 2004, the Central Valley Water Board issued the Discharger WDRs Order R5-2004-0073, which regulates discharges of waste from the CWPCP.
3. On 17 March 2009, the Assistant Executive Officer issued the Discharger Administrative Civil Liability Complaint R5-2009-0523 (Complaint), which charged the Discharger with Administrative Civil Liability in the amount of \$153,000, pursuant to CWC section 13385. The amount of the liability for the discharge violations was established based upon a review of the factors cited in CWC section 13385, which is described in Finding No. 25.

PREVIOUS ENFORCEMENT ACTIONS

4. On 17 March 2008, the Central Valley Water Board issued Complaint R5-2008-0509, charging the Discharger with administrative civil liability of \$100,000 for effluent chlorine residual violations from incidents on 21 August 2007 and 4 September 2007. The complaint indicated that approximately 3.124 million gallons of secondary treated effluent, which was not properly chlorinated or dechlorinated, was discharged to the Sacramento River due to electrical power problems with the chemical feed supply system. The duration of the 21 August 2007 and 4 September 2007 incidents was approximately 11 hours. On

2 December 2008, the Central Valley Water Board issued Administrative Liability Order R5-2008-0593, requiring the Discharger to submit a check for \$31,981 to the Central Valley Water Board, and to complete a Supplemental Environmental Project (SEP) for the remaining amount of the Order (\$68,019). The SEP consists of a Water Quality and Citizen Monitoring Program for the Big Chico Creek drainage. The SEP will be completed by 1 April 2010. The Central Valley Water Board has accepted payment from the Discharger of the penalty associated with ACL Complaint R5-2008-0509, and will consider this matter resolved upon receiving a report detailing the expenditure of at least \$68,019 on the SEP.

5. On 15 May 2007, the Central Valley Water Board issued ACL Complaint R5-2007-0512. Pursuant to CWC section 13385(h), a mandatory penalty of \$3,000 was imposed due to effluent chlorine residual violations from an incident on 9 December 2006. ACL Complaint R5-2007-0512 indicated that approximately 388,180 gallons of effluent, which was not properly chlorinated and /or dechlorinated, was discharged to the Sacramento River due to electrical power problems with the chemical feed supply system. The Central Valley Water Board has accepted payment from the Discharger of the penalty associated with ACL Complaint R5-2007-0512, and considers this prior matter resolved.
6. On 19 July 2005, the Central Valley Water Board issued ACL Complaint R5-2005-0520. Pursuant to CWC section 13385(h), a mandatory penalty of \$9,000 was imposed due to effluent chlorine residual violations from several incidents that occurred on 14 March 2004, 24 July 2004, and 16 March 2005. ACL Complaint R5-2005-0520 indicated that effluent, which was not properly chlorinated and /or dechlorinated, was discharged to the Sacramento River due to electrical and mechanical failures with the chemical feed supply system. The Central Valley Water Board has accepted payment from the Discharger of the penalty associated with ACL Complaint R5-2005-0520, and considers this prior matter resolved.
7. On 19 February 2004, the Central Valley Water Board issued ACL Complaint R5-2004-0500. Pursuant to CWC section 13385(h), a mandatory penalty of \$15,000 was imposed due to effluent chlorine residual violations from several incidents that occurred on 16 October 2002, 5 April 2003, 1 May 2003, 7 November 2003, and 29 January 2004. ACL Complaint R5-2004-0500 indicated that effluent, which was not properly chlorinated and /or dechlorinated, was discharged to the Sacramento River due to electrical and mechanical failures with the chemical feed supply system. The Central Valley Water Board has accepted payment from the Discharger of the penalty associated with ACL Complaint R5-2002-0500, and considers this prior matter resolved.
8. On 24 July 2002, the Central Valley Water Board issued ACL Complaint R5-2002-0515. Pursuant to CWC section 13385(h), a mandatory penalty of \$9,000 was imposed due to effluent chlorine residual violations from several

incidents that occurred on 24 January 2002, 25 January 2002, and 30 June 2002. ACL Complaint R5-2002-0515 indicated that effluent, which was not properly chlorinated and /or dechlorinated, was discharged to the Sacramento River due to mechanical and electrical failures with the chemical feed supply system. The Central Valley Water Board has accepted payment from the Discharger of the penalty associated with ACL Complaint R5-2002-0515, and considers this prior matter resolved.

9. On 29 November 2000, the Central Valley Water Board issued ACL Complaint R5-2000-0528. Pursuant to CWC section 13385(h), a mandatory penalty of \$6,000 was imposed due to effluent chlorine residual violations from several incidents that occurred on 1 January 2000 and 28 February 2000. The complaint indicated that effluent, which was not properly chlorinated and /or dechlorinated, was discharged to the Sacramento River due to mechanical and electrical failures with the chemical feed supply system. The Central Valley Water Board has accepted payment from the Discharger of the penalty associated with ACLC R5-2000-0528, and considers this prior matter resolved.

DISCHARGE VIOLATIONS

10. WDRs Order R5-2004-0073 contains the following Discharge Prohibition that was violated when the Discharger discharged partially-treated wastewater to the Sacramento River:

Discharge Prohibition A.1:

1. Discharge of treated wastewater at allocation or in a manner different from that described in Findings Nos. 2, 3 and 4 is prohibited.

Finding No. 4:

The treatment system consists of screening for removal of large solids, grit removal, primary clarification, activated sludge treatment with secondary clarification, and chlorination/dechlorination.

11. WDRs Order R5-2004-0073 contains the following effluent limitations that were violated by the Discharger by discharging the partially-treated wastewater to the Sacramento River:

Effluent Limitation B.1:

1. Effluent shall not exceed the following limits at Discharge 001:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Monthly Median</u>	<u>4-day Average</u>	<u>Daily Maximum</u>
Chlorine Residual	mg/L	--	--	--	0.01	0.02 ^c
^c 1-hour average						

16/17 May 2008 Incident

12. On 16 May 2008, sodium hypochlorite tanks at the CWPCP were changed out in the evening. Sometime after the crew went home for day, these tanks lost prime and ceased discharging sodium hypochlorite to the chlorine contact basin. Sodium hypochlorite treatment is an important part of the disinfection process that disinfects the secondary wastewater (removing pathogens/coliform) prior to the dechlorination process.
13. The Supervisory Control and Data Acquisition (SCADA) system did not indicate an alarm condition because the "set-point" was set at 0.00 mg/L of chlorine. The continuous residual chlorine analyzer "flat-lined" at 0.1 mg/L of chlorine, therefore it did not trigger an alarm. The sodium hypochlorite was not being discharged to the chlorine contact basin from 5:00pm (16 May 2008) to 7:40am (17 May 2008). By 5:40 pm (16 May 2008) sodium hypochlorite was not present in the effluent flow. When the operator on weekend duty noticed the absence of residual chlorine in the initial residual chlorine analyzer, he immediately began diverting the flow to the emergency holding pond. On 18 May 2008, the Discharger notified the Central Valley Water Board of the incident. On 19 May 2008, the Discharger collected a sample of the wastewater that was stored in the emergency treatment ponds (after being diverted on 17 May 2008), and the results indicated >1,600 MPN/100 mL of total coliform.
14. Approximately 4.7 million gallons of secondary-treated effluent that did not receive any disinfection with sodium hypochlorite was discharged to the Sacramento River over a 16-hour timeframe between 16 May 2008 and 17 May 2008, in violation of WDRs Order R5-2004-0073, Discharge Prohibition A.1.

15 June 2008 Incident

15. On 15 June 2008, a malfunctioning programmable logic controller (PLC) in the chemical feed building caused a significant amount of flow to be discharged without receiving full treatment, in violation of WDRs Order R5-2004-0073, Discharge Prohibition A.1. The PLC was cycling on and off every couple of seconds. This caused the chemical feed pumps to remain off due to the lack of a continuous signal from the PLC. The malfunction caused the sodium hypochlorite and the sodium bisulfite pumps to stop feeding chemicals to the secondary treated unit. When the PLC malfunctioned, the alarm dialer initiated an alarm call out sequence to the plant operators. The plant operator diverted the effluent to the plant emergency storage ponds approximately 23 minutes after the pumps had been shut down.
16. Approximately 113,000 gallons of secondary treated effluent that did not receive any disinfection with sodium hypochlorite was discharged to the Sacramento River for a 23-minute time span in which the plant effluent decreased from 1.92 mg/L of chlorine to 1.58 mg/L of chlorine. The maximum daily residual chlorine (based on 1-hr averages) for the incident was 0.08 mg/L of chlorine.

17. In the past nine years, there have been approximately sixteen separate effluent violations of residual chlorine. The majority of the events have been related to electrical failure problems with the chemical feed system electronics. There have been a total of \$142,000 mandatory minimum penalties assessed during the last seven years.
18. In summary, during May and June 2008, the Discharger violated the total residual chlorine effluent limitations set forth in Effluent Limitations B.1 for 113,000 gallons, and violated Discharge Prohibition A.1 for 4.7 million gallons of effluent (not properly chlorinated/dechlorinated). A total of approximately 4.813 million gallons of partially treated secondary treated effluent were discharged to the Sacramento River in violation of WDRs Order R5-2004-0073.

REGULATORY CONSIDERATIONS

19. CWC section 13376 states, in part:

Any person discharging pollutants or proposing to discharge pollutants to the navigable waters of the United States ... shall file a report of the discharge in compliance with the procedures set forth in Section 13260..." and "The discharge of pollutants...except as authorized by waste discharge requirements [NPDES permit]...is prohibited.

20. CWC section 13385 states, in part:

(a) Any person who violates any of the following shall be liable civilly in accordance with subdivisions (b), (c), (d), (e), and (f):

...
(2) Any waste discharge requirements ... issued pursuant to this chapter ...
...

(c) Civil liability may be imposed administratively by the state board or a regional board pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 in an amount not to exceed the sum of both the following:

(1) Ten thousand dollars (\$10,000) for each day in which the violation occurs.

(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) times the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons."

21. The Discharger has violated WDRs Order R5-2004-0073 by violating effluent limitations and by discharging waste to surface waters without the proper treatment, which includes chlorination and dechlorination. WDRs Order R5-2004-0073 was issued by the Board pursuant to Chapter 5.5 of the CWC, and therefore, the Board may impose liability upon the Discharger pursuant to CWC section 13385 for the violations.

CALCULATION OF PENALTY FOR DISCHARGE VIOLATIONS

22. The maximum administrative civil liability which can be imposed by the Central Valley Water Board under CWC section 13385 is \$10,000 per day per violation plus \$10 per gallon discharged in excess of 1,000 gallons not subject to clean up. As stated in Finding No. 18, approximately 4.813 million gallons of undisinfected secondary-treated wastewater were discharged to the Sacramento River on 16 and 17 of May and 15 June 2008. The maximum administrative civil liability is \$30,000 (3 days times \$10,000 per day of violation) plus \$48,119,000 (4.813 million gallons minus 1,000 gallons for each discharge not subject to cleanup multiplied by \$10 per gallon), for a **total maximum liability of \$48,149,000.**
23. CWC section 13385(e) states:

In determining the amount of any liability imposed under this section, the regional board ... shall take into account 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. At a minimum, liability shall be assessed at a level that recovers the economic benefits, if any, derived from the acts that constitute the violation.
24. Pursuant to CWC section 13385(e), the minimum administrative civil liability the Board may impose is equivalent to the economic benefit accrued by the Discharger for not implementing management and/or physical improvements necessary to prevent the discharges. The 4.813 million-gallon discharges were the result of the Discharger's failure to provide adequate control measures to prevent fluctuations of the programmable logic controller and/or the SCADA system properly registering alarms due to the low residual alarm point on the residual chlorine analyzer. Economic benefit is estimated to be at least as much as the amount that the Discharger saved in one year by not hiring an after-hours operator. The Board believes that if personnel were onsite during all peak flow periods, they would have been able to divert the flow of effluent to the three-holding/oxidation ponds, instead of the Sacramento River.

The Discharger may have saved at least **\$52,657 - 70,565** by not taking the

actions required to prevent the violations described in this Complaint. This savings is based on a cost estimate of providing for a Grade III WWTP operator. This operator could have been present during the non-working hours of the CWPCP (evenings and weekends). Cost estimates have been obtained from a City of Chico 2007-2008 Summary of Salaries. This indicates an annual salary of approximately \$52,657.00 to \$70,565.42 per year for a WWTP Operator Grade III to be at the plant and to take action when alarm conditions occur and/or when the alarm system malfunctions. Pursuant to the California Code of Regulations, title 23, section 3680, in Class II, III, and IV plants, supervisors and shift supervisors shall possess valid operator certificates no more than one grade lower than the class of plant operated. The Plant is a Grade IV wastewater treatment plant, therefore a Grade III Operator as a shift supervisor would have been needed on weekend and evenings. Therefore, the minimum liability for the two occurrences is in the range of \$52,657 to \$70,565.

25. The following table contains the factors that were considered pursuant to CWC section 13385(e) in setting the initial penalty amount:

Factor	Consideration
Nature, Circumstances, Extent, and Gravity of the Violations	The Discharger has violated WDRs Order R5-004-0073 by discharging partially-treated wastewater to the Sacramento River. A total of 113,000 gallons of discharged wastewater violated the total residual chlorine effluent limitation, and 4.7 million gallons of discharged wastewater was not properly disinfected.
Degree of Culpability	The Discharger has had several enforcement actions against it for similar occurrences. In the last 9 years, there has been \$142,000 in penalties assessed for sixteen violations.
Voluntary Cleanup Efforts	There was no cleanup of the discharged wastewater. When the Discharger noticed the effluent violations, it diverted the wastewater discharge into the onsite emergency storage ponds.
Susceptibility to Cleanup or Abatement	The total amount of partially-treated wastewater is not susceptible to cleanup. By the time the violations were corrected, the partially-treated wastewater was most likely diluted in the receiving water.
Degree of Toxicity of the Discharge	The discharge on 15 June 2008 had a total chlorine residual of up to 1.92 mg/L, which could have been toxic to the organisms in the immediate vicinity of the discharge. The Discharger did not notice any fish kills downstream of the discharge.
Prior History of Violations	See Findings Nos. 4-9. The Discharger's history of violations did not mitigate the penalty amount, because the Discharger was on notice of the problems prior to the violations that are the subject of this Order.
Economic Benefit or Savings Resulting from the Violation	See Finding No. 24 for a discussion of this factor.
Ability to Pay	The Discharger is a municipality that charges fees for services provided. The Discharger has not submitted evidence of inability to pay the penalty.

Factor	Consideration
Other Matters that Justice May Require	Staff costs for responding to the violations are approximately \$10,000.

26. The monthly sewage rate for the City of Chico is approximately \$16.11/mth (based on May 2008 data). A review of other similar wastewater facilities in Butte County, indicate that the average monthly sewage fee is approximately \$21.51/mth (or \$5.40/mth more than CWPCP).
27. CWC section 13385 states, in part:
- (l)(1) In lieu of assessing penalties pursuant to subdivision (h) or (i), the state board or the regional board, with the concurrence of the discharger, may direct a portion of the penalty amount to be expended on a supplemental environmental project in accordance with the enforcement policy of the state board. If the penalty amount exceeds fifteen thousand dollars (\$15,000), the portion of the penalty amount that may be directed to be expended on a supplemental environmental project may not exceed fifteen thousand dollars (\$15,000) plus 50 percent of the penalty amount that exceeds fifteen thousand dollars (\$15,000).
- (2) For the purposes of this section, a "supplemental environmental project" means an environmentally beneficial project that a person agrees to undertake, with the approval of the regional board, that would not be undertaken in the absence of an enforcement action under this section.
28. On 18 June 2009, the Discharger submitted a letter proposing to fund the Big Chico Creek Water Quality and Citizen Monitoring Program as a supplemental environmental project (SEP) to offset a portion of the administrative civil liability. The proposed water quality monitoring program has a total budget of \$75,000 and will be administered by Big Chico Creek Watershed Alliance. The proposed project would support a significant monitoring effort through 2010, and will include monitoring objectives to closely track the effects of land use practices on water quality, within the Big Chico Watershed Area.
- The Central Valley Water Board's Prosecution Team finds that the Discharger's proposal is complies with the terms of the State Water Board's Policy for Supplemental Environmental Projects. Details of the SEP are provided in Attachment A, a part of this Order.
29. Issuance of this Administrative Civil Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000, et seq.), in accordance with California Code of Regulations, title 14, section 15321 (a)(2).
30. On 23 April 2009, the Central Valley Water Board delegated the authority to issue Administrative Civil Liability Orders, where the matter is not contested by the Discharger, to the Executive Officer (Resolution R5-2009-0027).

31. This Order constitutes a settlement of the violations alleged in Administrative Civil Liability Complaint R5-2009-0523. Notice of this settlement will be published on the Central Valley Water Board's website, and will be provided to all interested parties. This Order becomes final upon expiration of the 30-day public notice and comment period mandated by Federal regulations (40 CFR 123.27) and upon signature.

IT IS HEREBY ORDERED that administrative civil liability of \$153,000 shall be imposed by the Central Valley Water Board as follows:

1. **Within 30 days of this Order becoming final**, the Discharger shall pay \$78,000 by check, which shall contain a reference to "ACL Order R5-2010-0505" and shall be made payable to the *State Water Pollution Cleanup and Abatement Account*.
2. Attachment A, a part of this Order, describes the Big Chico Creek Watershed SEP, which has been proposed by the Discharger. Attachment A includes a project description, a series of deadlines, and an estimated budget. The Central Valley Water Board hereby suspends \$75,000 of the assessed administrative civil liability, pending completion of the SEP. Upon satisfactory completion of the SEP, the suspended portion of the administrative civil liability shall be dismissed.
3. The Discharger must obtain explicit approval from the Executive Officer for any significant departures from the project description contained in Attachment A. Failure to obtain approval for any significant departures may result in the assessment of the full amount of the suspended civil liabilities.

The Executive Officer may extend the deadlines in Attachment A if the Discharger demonstrates that unforeseeable contingencies have created delays, provided that the Discharger continues to undertake all appropriate measures to meet the deadlines. The Discharger shall make any deadline extension in advance of the deadline, and the request shall be in writing. Any extension request not replied to in writing shall be deemed denied.

Should the Executive Officer reasonably conclude that the Discharger is not making progress implementing the SEP, the Executive Officer may demand payment of the difference between the \$75,000 suspended by this Order and the amount that the Discharger has already expended. The Discharger shall remit payment within 30 days of such a demand.

4. **By 1 April 2011**, the Discharger shall provide a final report documenting completion of the supplemental environmental project as described in Attachment A of this Order, and proof of expenditures totaling at least \$75,000 on the SEP. Should the Discharger spend less than \$75,000 on the implementation

of the SEP, the remaining balance shall be due by 30 April 2011, and shall be made by check, which shall contain a reference to "ACL Order R5-2010-0505" and shall be made payable to the *State Water Pollution Cleanup and Abatement Account*.

Though the Big Chico Creek Watershed Alliance will implement the SEP, the Discharger maintains ultimate responsibility that the SEP is completed in a timely manner and that all project deadlines are met.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date this Order becomes final, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality
or will be provided upon request.

Original signed by: Kenneth D. Landau for

PAMELA C. CREEDON, Executive Officer

28 January 2010

Date

ATTACHMENT A

SUPPLEMENTAL ENVIRONMENTAL PROJECT TO ADDRESS ADMINISTRATIVE CIVIL LIABILITY COMPLAINT R5-2009-0523

BIG CHICO CREEK WATERSHED ALLIANCE BIG CHICO CREEK WATER QUALITY AND CITIZEN MONITORING PROGRAM

A. PROPOSED PROJECT DESCRIPTION

The Big Chico Creek watershed is located in a region that includes the interface between the Sierra Nevada Range to the south, and the remnant volcanic flows of the Cascade Range to the north. Headwaters originate from cold-water springs on Colby Mountain and flow 45 miles to its confluence with the Sacramento River. Watershed elevation ranges from about 120 feet at the mouth to 6000 feet on Colby Mountain. The watershed also encompasses three smaller sub-drainages to the north: Sycamore, Mud, and Rock (ECR, 1998). The underlying geology includes areas where the creek cuts through Tuscan layers important in the recharge of the Lower Tuscan aquifer, which is being explored for a regional conjunctive use project.

The Big Chico Creek watershed has been modified for flood control, suffers impacts from urban population increases, and has lost important riparian habitat in its agricultural areas, yet still supports spring run salmon spawning and rearing and fall run rearing near the Sacramento River, as well as western pond turtle, foothill yellow-legged frog and other sensitive species.

The watershed also includes urban, suburban, rural residential, orchard, rangeland, and forestry land uses. These diverse and localized impacts of land use are sometimes difficult to detect and information collected over a long temporal scale is important to determine variations due strictly to land use practices. Citizen monitoring groups are perfect for collecting information needed to determine long-term trends in stream habitat quality as a function of diverse land use.

The proposed project, which will be implemented by the Big Chico Creek Watershed Alliance (Alliance) intends to assess and monitor water quality in the Big Chico Creek Watershed through a multi-pronged approach which engages community members in monitoring efforts, compiles and analyzes data collected, and provides education and outreach to promote understanding and action related to watershed health. The project will implement and extend a successful citizen monitoring program in which the Alliance has already worked closely with the City of Chico and other partners. This project will continue to be managed and guided with the leadership of expert staff. A Technical Advisory Committee (TAC) with both state level and relevant local expertise and content knowledge, will provide recommendations for reviewing and updating existing Monitoring Plan (MP) and Quality Assurance Project Plan (QAPP).

Volunteers will be recruited and coordinated in Street Teams to participate in the monitoring activities. Training will be provided for identified Teams using last year's updated Volunteer Monitoring Manual, and will include standard methods and sampling protocols, and correct use of equipment. This

ensures data quality objectives are met and that data integrity is consistent with the previous four years of data from the Alliance's Citizen Monitoring Program.

Utilizing the schedule and parameters outlined in the MP, watershed monitoring activities will be conducted at 10 established monitoring stations. Multiple surveys collect data to track chemical physical and biological parameters to assess water condition. Additionally, continuous water temperature and storm event monitoring are conducted. Field and Laboratory testing will be consistent with an updated MP and QAPP.

Stream Teams meet regularly to conduct ongoing water monitoring efforts during May through October, collecting relevant project data. Additional monitoring events are scheduled according to the MP and include bioassessment, storm event and post restoration site surveys. The Alliance has most of the existing water testing equipment available for use; however some updated monitoring equipment kits and supplies (e.g. batteries and calibration fluids) will be required. The Stream Teams are a part of the project educational outreach that provides the training of the volunteers, teachers, and students who conduct the water quality monitoring. Teachers and students from at least three local schools participate in the monitoring activities.

In 2010, the Alliance proposes to plan and facilitate four (4) public meetings to inform the public of the Citizen Monitoring program results, trends, and effectiveness. The meetings will be organized and facilitated by the Alliance's Watershed Coordinator during the first year in different venues and formats to broaden the awareness of both the City's efforts in supporting a Citizen Monitoring program and highlight community action to improve water quality.

Electronic information distribution will be supported through the Big Chico Creek Watershed Alliance website. Project data reports, maps, monitoring schedules and educational information will be posted quarterly. This electronic information will be highlighted in the four public meetings so that the public knows where to further seek water quality information on a consistent basis.

B. REPORTING DEADLINES

The State Water Board's Policy on Supplemental Environmental Projects states that all Orders allowing Supplemental Environmental Projects must, "Require periodic reporting (quarterly reporting at a minimum) on the performance of the SEP by the discharger to the Water Board to monitor the timely and successful completion of the SEP. Copies of the periodic reports must be provided to the Division of Financial Assistance of the State Water Board."

Quarterly Reports:

- Due **1 January, 1 April, 1 July, 1 October** of each project year.
- Shall contain a summary of project actions taken up to the current date
- Shall contain a basic accounting of costs expended on the SEP to the current date

Final Report:

- Due **1 April 2011** (no quarterly report due on this date)

- Shall contain a project summary
- Shall contain a final accounting of costs expended on the SEP

C. PROPOSED PROJECT BUDGET

BIG CHICO CREEK WATER QUALITY AND CITIZENS MONITORING PROGRAM BUDGET

REVENUE		\$ 75,000
EXPENSES		
I.	Personnel Costs	
a.	BCCWA Watershed Coordinator	\$ 14,500
	Subtotal	\$ 14,500
b.	Benefits	\$ 5,299
	Total Personnel Costs	\$ 19,799
II.	Operating Expenses	
a.	Supplies, Telephone, Copying, Postage	\$ 600
b.	Travel and Conference	\$ 600
c.	Operating Expenses, accounting, insurance, etc	\$ 2,500
d.	Meeting Expenses, Equipment and Facility rental	\$ 1,200
e.	Sub Contractors & Project Operations incl.	\$ 32,680
	Sub Contractor Operating Expenses	\$ 6,550
	Monitoring Equipment & Lab Cost	\$ 7,500
	Total Operating Expenses	\$ 51,630
	Subtotal Personnel/Operate Exp.	\$ 71,429
	BCCWA overhead expense at 4%	\$ 3,571
	TOTAL BUDGET	\$ 75,000

PROPOSED PROJECT TASKS AND ACTIVITIES

TASKS AND ACTIVITIES WITH TIME DESIGNATION	HOURS
Task 1. Project Management	
1.1 Prepare Project Progress Reports	120
1.2 Prepare Project Final Reports	75

	subtotal	205
Task 2. Revise Monitoring Plan and QAPP		
2.1	Update Monitoring Plan and QAPP	85
2.1	TAC Meeting Facilitation and Recommendation Integration	15
2.3	Landowner Access Agreements	10
	subtotal	110
Task 3 Community Outreach and Partnership Development		
3.1	Develop outreach materials	110
3.2	Website update and maps	100
3.3	Participate in broad community collaboration to highlight project: Endangered Species Fair, Snow Goose Festival, volunteer picnic	100
3.4	Coordinate and host four Citizen Monitoring specific meetings	140
	subtotal	450
Task 4. Training		
4.1	Develop training schedules	30
4.2	Update Volunteer Monitoring Manual	10
4.3	Recruit participants and conduct trainings	135
	subtotal	175
Task 5. Conduct Watershed Monitoring		
5.1	Update and maintain equipment and supplies	60
5.2	Conduct Monitoring	270
5.3	Analyze data and update database	40
5.4	Prepare Data Progress Reports	60
5.5	Prepare Annual Data Report	80
	subtotal	510
Sub Contractor Task and Activities		Total Hours
		1,450
Citizen Volunteers		(In Kind Contribution)
		500

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EXHIBIT I

[California Home](#)



California Integrated Water Quality System Project (CIWQS)

Violation Report (Detailed)

[\[VIEW PRINTER FRIENDLY VERSION\]](#) [\[EXPORT THIS REPORT TO EXCEL\]](#)

SEARCH CRITERIA: [\[REFINE SEARCH\]](#) [\[NEW SEARCH\]](#) [\[GLOSSARY\]](#)

Status Violation, Group By **REGION**, Program (**NPDMUNILRG,NPDMUNIOTH**), Occurred on or after **01/01/2010**, Occurred on or before **12/31/2015**

DRILLDOWN HISTORY: [\[BACK TO SUMMARY\]](#) [\[BACK TO VIO FACILITIES\]](#)

Region 3, Facility South San Luis Obispo SD WWTP

<u>Violation ID</u>	<u>Violated Order</u>	<u>Violation Type</u>	<u>Date</u>	<u>(+) Description</u>	<u>Corrective Action</u>	<u>Source</u>	<u>Classification/Priority</u>
870758	R3-2004-0050	Other Effluent Violation	03/12/2010	Effluent fecal coliform violation. The daily maximum permit limit is 2000 MPN an	Chlorine controller malfunction (apparently a long-term problem). Controller repaired and sampling increased to ensure compliance.	Report	N
873198	R3-2009-0046	Deficient Monitoring	04/18/2010	Discharger failed to provide effluent fecal coliform results for the dates of Ap	Laboratory error.	Report	N
878403	R3-2009-0046	Deficient Monitoring	06/13/2010	Per a RWQCB directive, we are supposed to monitor for fecal coliforms daily. Du	Operator retrained.	eSMR	3
880247	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	07/01/2010	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) 30-Day Average limit is 40 m	Cleaning Fixed Film Reactor (FFR, part of the secondary biological treatment system) with caustic soda to reduce infestation of bugs.	eSMR	2
880248	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	07/01/2010	Total Suspended Solids (TSS) 30-Day Average limit is 40 mg/L and reported value	Trickling filter flushed to reduce larvae growth.	eSMR	2
883611	R3-2009-0046	Order Conditions	05/04/2010	WWTP being operated without an Operation & Maintenance manual in violation of Or	Discharger required to submit plan of corrective action by 8/13/2010.	Inspection	2
883612	R3-2009-0046	Order Conditions	05/04/2010	WWTP being operated without Standard Operating Procedures in violation of Order	Discharger required to submit plan of corrective action by 8/13/2010.	Inspection	2
883613	R3-2009-0046	Order Conditions	05/04/2010	WWTP being operated without written compliance sampling procedures in violation	Discharger required to submit plan of corrective action by 8/13/2010.	Inspection	2
883614	R3-2009-0046	Order Conditions	05/04/2010	Failure to retain monitoring data for the minimum 3 years required in violation	Discharger required to submit plan of corrective action by 8/13/2010.	Inspection	2
883615	R3-2009-0046	Other Water Code Sections	05/04/2010	Failure to report changes in plant operations, certified operators, and discipli	Discharger required to submit plan of corrective action by 8/13/2010.	Inspection	2
883619	R3-2009-0046	Deficient Monitoring	05/04/2010	Discharger purposely avoided collecting representative samples in violation of O	Discharger required to submit plan of corrective action by 8/13/2010.	Inspection	1

888927	R3-2009-0046	Deficient Monitoring	11/29/2010	Total Coliform - Missed one weekly monitoring event.	Operator was verbally counseled by Plant Superintendent to follow the Monitoring Calendar.	eSMR	3
889494	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	12/15/2010	Total Suspended Solids (TSS) Daily Maximum limit is 90 mg/L and reported value w	Having no identified cause of the exceedence, and reviewing the very satisfactory results obtained during the remainder of the month, no corrective action was taken. Effluent Suspended Solids results since the Dec 15th date have continued to provide results in the 20-30 mg/l range.	eSMR	2
892885	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	01/31/2011	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Daily Maximum limit is 90 mg	preventing ducks from landing in clarifier by installing colored line above clarifier	eSMR	2
892779	R3-2009-0046	Deficient Reporting	02/01/2011	late report	Added redundancy in LRO staffing for report submittal and certification	eSMR	2
892780	R3-2009-0046	Deficient Monitoring	02/01/2011	Missed Annual Monitoring for multiple pollutants.	Superintendent to review results one week after recieved Plant to sample twice in 2011	eSMR	2
907286	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	07/31/2011	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Monthly Average limit is 40	Discharger has been evaluating and modifying process controls while conducting additional monitoring to identify the reasons for this and similar violations for both BOD and TSS. This is an ongoing investigation. Discharger is implementing duplicate sampling (for analysis at two labs) and modifying secondary treatment processes to identify source of problem and lower BOD numbers. Recent flushing and renetting of secondary treatment unit (fixed film reactor) may be source of problem. Age of system and lack of secondary treatment system redundancy are also problematic.	eSMR	3
908826	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	08/20/2011	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Weekly Average limit is 60 m	Discharger is implementing duplicate sampling (for analysis at two labs) and modifying secondary treatment processes to identify source of problem and lower BOD numbers. Recent flushing and renetting of secondary treatment unit (fixed film reactor) may be source of problem. Age of system and lack of secondary treatment system redundancy are also problematic.	eSMR	2
908827	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	08/31/2011	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Monthly Average limit is 40	Discharger is implementing duplicate sampling (for analysis at two labs) and modifying secondary treatment processes to identify source of problem and lower BOD numbers. Recent flushing and renetting of secondary treatment unit (fixed film reactor) may be source of problem. Age of system and lack of secondary treatment system redundancy are also problematic.	eSMR	2
911791	R3-2009-0046	Category 1 Pollutant (Effluent Violation for Group 1 Pollutant)	09/10/2011	Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) Weekly Average limit is 60 m	Continue to adjust secondary treatment system and test duplicate samples at three differenc labs.	eSMR	3
912961	R3-2009-0046	Deficient Monitoring	10/19/2011	Failed to grab turbidity sample	grabbed turbidity sample twice following week. All grabbed samples were in compliance, well below the limit of 75 NTus.	eSMR	3
928921	R3-2009-0046	Sanitary Sewer Overflow/Spill	12/19/2010	SSO violated Proh G prohibiting overflow or bypass.		Report	1
928923	R3-2009-0046	Sanitary Sewer Overflow/Spill	12/19/2010	SSO violated Provision VI.C.8 for failure to collect and treat stormwater flows		Report	1
928924	R3-2009-0046	Sanitary Sewer Overflow/Spill	12/19/2010	SSO violated Std. Provision Attach D-1.B.2 for failure to protect treatment faci		Report	1
930699	R3-2009-0046	Other Effluent Violation	06/06/2012	Fecal Coliform Daily Maximum limit is 2000 MPN/100 mL and reported value was 130	Operators suspect may have been contaminated sample equipment. Additional samples were the following day and were within permit limits. Permitting staff recommends no further action at this time.	eSMR	3

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25 Records/Page

Violation ID: An auto-generated unique identifier. Violations from our SMARTS database have a leading "S."

Violated Order: This is the Board Order related to the instance of noncompliance.

Violation Type: This is used to differentiate violations by the use of categories. Violations coming from our SMARTS database have "SW" in the type name

Deficient Monitoring Monitoring is missing or incorrect in some way, such as incorrect analysis method, wrong sampling location, QA/QA criteria not met, etc.

Basin Plan Prohibition Violation of a Basin Plan prohibition not in the permit (e.g., discharge to prohibited zone, etc.)

Best Management Practice (BMP) BMPs not maintained, deficient, or not implemented. Also "SW - Deficient BMP Implementation."

Enforcement Action	Enforcement Action is violated (e.g., if interim limits in a Time Schedule Order are exceeded).
Fees	Annual fees not paid on time or in full.
SW - Failure to Obtain Permit	Failure to obtain coverage under the appropriate storm water NPDES permit.
SW - Unauthorized NSWD	A non-storm water discharge with the appropriate permit/WDRs or without coverage under a General Order or discharges not covered by the discharger's Order
Order Conditions	Violations of prohibitions, provisions, and maintenance-type requirements (e.g., pond freeboard) contains in the permit/WDRs.
Pretreatment	Failure to adequately implement the pretreatment program.
SW - Incomplete/Insufficient SWPPP	Storm Water Pollution Prevention Plan (SWPPP) not on site or not implemented.
Unauthorized Discharge	Dischargers without permit/WDRs or without coverage under a General Order or discharges not covered by the discharger's Order
Deficient Reporting	Incomplete report or failing to notify Water Board of violations
Failure to Notify	Failure to notify the Water Board of a spill within a defined period of time.
Late Report	Report is not received or received after its due date.
Acute Toxicity (ATOX)	Violation of an acute toxicity effluent limit.
Chronic Toxicity (CTOX)	Violation of an chronic toxicity effluent limit.
Category 1 (CAT1)	Violation of an effluent limitation for a Group II Pollutant (e.g., chlorine, copper, cyanide, etc.) A full list is available in Appendix D of the current Enforcement Policy.
Category 2 (CAT2)	Violation of an effluent limitation for a Group I Pollutant (e.g., BOD, TSS, nitrate, etc.) A full list is available in Appendix C of the current Enforcement Policy.
Other Effluent Violation (OEV)	Violation of any constituent-specific effluent limit not included in Group I or II (e.g., pH, turbidity, temperature, coliform, etc.)
Receiving Water - Groundwater	Violation of receiving water limit where discharge is to surface water.
Receiving Water - Surface Water	Violation of receiving water limit where discharge is to groundwater.
Hydromodification	Noncompliance with dredge and fill requirements.
Sanitary Sewer Overflow/Spill	Discharge from collection system (except private laterals); other spills and/or bypassing of treatment unit(s).

Date: This is the date the violation occurred.

Status: Depending on which report the user is viewing, this will either be "violation" or "dismissed." Dismissed violation were at one time believed to be violations (or system-generated), but were later dismissed by Water Board staff.

Description: This is the description of the violation and can be either inputted manually or by the system.

Source: This is where or how the violations was determined (e.g., inspection, report, complaint, etc.)

More information about violations can be found in the Water Quality [Enforcement Policy](#)

The current report was generated with data as of: 04/13/2015
Regional Boards are in the process of entering backlogged data.
As a result, data may be incomplete.

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Violation Report (Facilities)

SEARCH CRITERIA:

Status Violation, Group By REGION, Program (NPDESWW,NPDMUNILRG,NPDMUNIOTH,WDRMUNILRG), Occurred on or after 05/01/2010, Occurred on or before 04/28/2015

DRILLDOWN HISTORY:

Region 3

Facility	Agency	Violations	Class 1 Violations	Class 2 Violations	Class 3 Violations	Priority Violations
<u>Ridgemark Estates WWTP</u>	<u>Sunnyslope CWD</u>	563	0	329	225	0
	<u>Ca Dept of Corrections San Luis</u>					
<u>California Men's Colony WWTP</u>	<u>Obispo</u>	415	1	221	176	0
<u>Lompoc Pen WWTP</u>	<u>US Penitentiary</u>	408	3	13	392	0
<u>Paso Robles WWTP</u>	<u>City of El Paso de Robles</u>	249	0	161	58	0
<u>Mission Hills La Purisima WWTP</u>	<u>Mission Hills CSD</u>	161	0	160	1	0
<u>Nipomo CSD Southland Treatment Facility</u>	<u>Nipomo CSD</u>	115	0	1	114	0
<u>Solvang WWTP</u>	<u>Solvang City</u>	88	0	85	3	0
<u>Soledad Sewage Treatment Plant</u>	<u>Soledad City</u>	81	0	12	69	0
	<u>California American Water Company</u>					
<u>Spreckels Sugar Division</u>	<u>Monterey</u>	74	0	50	24	0
<u>Woodlands Mutual Water Co</u>	<u>Woodlands Mutual Water Company</u>	63	0	53	10	0
<u>Canada Woods Reclamation Facility</u>	<u>Canada Woods Reclamation Facility</u>	60	0	10	47	0
<u>San Juan Bautista WWTP</u>	<u>San Juan Bautista City</u>	57	0	57	0	0
<u>San Luis Obispo WWTP</u>	<u>San Luis Obispo City</u>	57	0	15	40	0
<u>Avila WWTP</u>	<u>Avila Beach CSD</u>	56	0	24	19	0
<u>Camp Roberts Main (West) Garrison WWTP</u>	<u>California National Guard</u>	49	0	16	32	0
<u>Laguna County SD</u>	<u>Laguna Sanitation</u>	49	0	34	13	0
<u>El Estero WWTP NPDES</u>	<u>Santa Barbara City PWD</u>	48	0	12	36	0
	<u>California American Water Company</u>					
<u>Oak Hills Development WWTP</u>	<u>Monterey</u>	42	0	0	42	0
<u>Nipomo CSD Black Lake - Reclaimed Water Producer</u>	<u>Nipomo CSD</u>	42	0	40	2	0
<u>California Utilities</u>	<u>California Utilities Service</u>	37	0	29	8	0
<u>Guadalupe WWTP</u>	<u>Guadalupe City</u>	32	0	6	26	0
<u>South San Luis Obispo SD WWTP</u>	<u>South San Luis Obispo CSD</u>	32	4	17	9	0
<u>Big Basin Redwoods SP WWTP</u>	<u>Ca Dept of Parks & Rec Tahoe</u>	26	0	11	9	0
<u>Goleta SD Reclaimed Water Producer</u>	<u>Goleta SD</u>	25	0	3	22	0
<u>El Estero Reclamation Facility</u>	<u>Santa Barbara City PWD</u>	24	0	1	21	0
<u>Lompoc Regional WRP</u>	<u>Lompoc City</u>	24	0	20	3	0
<u>San Miguel SD WWTP</u>	<u>San Miguel CSD</u>	17	0	17	0	0
<u>Heritage Ranch WWTP</u>	<u>Heritage Ranch CSD</u>	17	0	6	10	0
<u>Salinas Industrial WWTP</u>	<u>Salinas City</u>	11	0	0	11	0
<u>Ragged Point Inn Motel</u>	<u>Ragged Point Inn</u>	9	0	2	5	0
<u>Carpinteria SD WWTP</u>	<u>Carpinteria SD</u>	8	0	6	2	0
<u>Atascadero WWTP</u>	<u>Atascadero City</u>	8	0	1	7	0
<u>Carmel Valley Ranch WWTP (Producer)</u>	<u>California American Water Company</u>					
	<u>Monterey</u>	8	0	5	3	0
	<u>Cuyama Community Services</u>					
<u>Cuyama CSD WWTP</u>	<u>District</u>	8	0	3	4	0
<u>Hollister Domestic WWTP</u>	<u>Hollister City</u>	7	0	6	1	0
<u>Cambria CSD WWTP</u>	<u>Cambria CSD</u>	7	0	7	0	0
	<u>San Luis Obispo CSA #18 San Luis</u>					
<u>Country Club Estates</u>	<u>Obispo Country Club</u>	6	0	0	6	0

California Integrated Water Quality System (CIWQS) - Printer Friendly View

<u>California American Water Company</u>						
<u>Las Palmas Ranch WWTP</u>	<u>Monterey</u>	6	0	5	1	0
<u>Boulder Creek Golf & Cntry Club WWTP</u>	<u>Santa Cruz CSA 07</u>	6	0	5	1	0
<u>Scotts Valley WWTP</u>	<u>Scotts Valley City</u>	6	0	3	2	0
<u>FT. Hunter Liggett WWTP</u>	<u>US Army Garrison Fort Hunter Liggett</u>	6	0	1	5	0
<u>Vista DEL Mar Union School</u>	<u>Vista Del Mar USD</u>	6	0	0	6	0
<u>Montecito SD WWTP</u>	<u>Montecito Sanitary District</u>	5	0	3	2	0
<u>San Simeon WWTP</u>	<u>San Simeon CSD</u>	5	1	2	0	0
<u>Santa Maria WWTP</u>	<u>Santa Maria City</u>	4	0	4	0	0
<u>Cambria Advanced Water Treatment System</u>	<u>Cambria CSD</u>	4	0	4	0	0
<u>MRWPCA Reg Trlmt & Outfall Sys</u>	<u>Monterey Regional WPCA</u>	3	0	1	2	0
<u>Goleta SD WWTP</u>	<u>Goleta SD</u>	3	0	1	2	0
<u>Scotts Valley WWTF Producer</u>	<u>Scotts Valley City</u>	3	0	0	3	0
<u>Pfeiffer Big Sur State Park WWTF</u>	<u>Ca Dept of Parks & Rec Big Sur</u>	2	0	2	0	0
<u>Carmel Area WWTP</u>	<u>Carmel Area Wastewater District</u>	2	0	1	1	0
<u>Watsonville WWTP</u>	<u>Watsonville City</u>	1	0	1	0	0
<u>Greenfield WWTP City of</u>	<u>Greenfield City</u>	1	0	0	1	0
<u>Monterey CSA - Chualar WWTP</u>	<u>Monterey CSA - Chualar</u>	1	0	1	0	0
<u>Morro Bay/Cayucos WWTP</u>	<u>Morro Bay SD</u>	1	0	1	0	0
<u>SCRWA Reclaiming WW Facility</u>	<u>South County Regional WW Authority</u>	1	0	0	1	0
<u>Pismo Beach WWTP</u>	<u>Pismo Beach City</u>	1	0	0	1	0
<u>Price Canyon Production Facility</u>	<u>Freeport-McMoRan Oil & Gas</u>	1	0	0	1	0
<u>Santa Cruz WWTP</u>	<u>Santa Cruz City</u>	1	0	1	0	0
Total		3052	9	1469	1479	0

Violation: An instance of noncompliance

Class 1 violations are violations that pose an immediate and substantial threat to water quality and that have the potential to cause significant detrimental impacts to human health or the environment. Violations involving recalcitrant parties who deliberately avoid compliance are also considered class 1.

Class 2 violations are violations that pose a moderate, indirect, or cumulative threat to water quality. Negligent or inadvertent noncompliance with the potential to cause or allow the continuation of unauthorized discharge or obscuring past violations are also class 2 violations.

Class 3 violations are violations that pose only a minor threat to water quality and include statutorily required liability for late reporting when such late filings do not result in causing unauthorized discharge or allowing one to continue. This class of violations should only include violations by dischargers who are first time or infrequent violators.

Unclassified Violations: Violations entered by dischargers or data entry staff and not yet validated by technical staff.

Priority Violation: No longer applicable after 5/20/2010. Under the former Enforcement Policy, Water Boards ranked violations as either priority or not priority.

- | | | |
|----------------|-------------------------------------|--|
| Region: | 1 - North Coast | 5S - Central Valley, Sacramento Office |
| | 2 - San Francisco Bay | 6T - Lahontan, Tahoe Office |
| | 3 - Central Coast | 6V - Lahontan, Victorville Office |
| | 4 - Los Angeles | 7 - Colorado River |
| | 5F - Central Valley, Fresno Office | 8 - Santa Ana |
| | 5R - Central Valley, Redding Office | 9 - San Diego |

[[Water Board Map](#)]

The current report was generated with data as of 04/28/2015

Enforcement Orders Report

SEARCH CRITERIA:

Region (3), Program (NPDES, NPDMUNILRG, NPDMUNIO, WDRMUNILRG), Effective/Issued between 5/1/2010 and 12/31/2015, Status (Active, Historical)

Enforcement ID	Agency	Facility	Effective Date	Status	Program Type	Order Number	Enf. Action Type	Title	Document & Description
371815	City of El Paso de Robles	Paso Robles WWTP	06/15/2010	Historical	NPDMUNILRG	R3-2010-0032	Admin Civil Liability	Stipulated ACL R3-2010-0032 for Paso Robles WWTP	Paso Robles Stipulated ACL Order EPL final.pdf ExhibitB.pdf ExhibitC.doc.pdf Reissued Expedited Payment Letter Paso Robles.pdf Order and Stipulation for ACL in settlement of EPL R3-2009-0068
371816	Cuyama Community Services District	Cuyama CSD WWTP	10/12/2010	Historical	NPDMUNIO	R3-2010-0023	Admin Civil Liability	Stipulated ACL R3-2010-0023 Resolving EPL R3-2009-0066 for Cuyama WWTP	CuyamaCPrequest.pdf Cuyama EPL ACLO-Stmnt 2010-0023 trans ltr.pdf 2009_0066_cuyama_csd_epl_offer.pdf Settlement and Stipulated ACL Order R3-2010-0023 resolving EPL Offer R3-2009-0066, including Compliance Project to direct \$18,000 to WWTP Disinfection Project. 2009_0071_san_simeon_csd_epl_offer.pdf Satisfaction of Order ACL R3-2010-0033 SEP.pdf SanSimeonSEPRequest.pdf 2010_0033_san_simeon_csd_acl.pdf
371813	San Simeon CSD	San Simeon WWTP	11/18/2010	Historical	NPDMUNIO	R3-2010-0033	Admin Civil Liability	ACL R3-2010-0033 for SAN SIMEON CSD	Settlement and Stipulated ACL Order R3-2010-0033 resolving EPL Offer R3-2009-0071, including Supplemental Environmental Project to direct \$6,000 to WWTP Tertiary Treatment Facilities Construction Project.
377300	Santa Barbara City PWD	El Estero WWTP NPDES	04/07/2011	Historical	NPDMUNILRG	R3-2011-0011	Admin Civil Liability	ACLO R3-2011-0011 Resolving MMP EPL for City of Santa Barbara, El Estero WWTP	EPL R3-2011-0011 El Estero WWTP.pdf Offer to participate in expedited payment program to resolve NPDES violations of WDR R3-2010-0011 as of 12/13/2010 subject to MMP. Proposes to address 6 violations with penalty of \$18,000. Discharger signed waiver 2/9/11. After 30-day public comment (none received), order issued 4/7/11. Discharger submitted check for \$18,000 on 4/19/11. Acct. rec'd check in Sac 4/21/11. EPL 2011-0012 Order to Lompoc w invoice 4-7-11.pdf
377296	Lompoc City	Lompoc Regional WRP	04/07/2011	Historical	NPDMUNILRG	R3-2011-0012	Admin Civil Liability	ACLO R3-2011-0012 Resolving MMP EPL for City of Lompoc WWTP	Offer to participate in expedited payment program to resolve NPDES violations of WDR R3-2006-0037 as of 12/13/2010 subject to MMP. Proposes to resolve 13 MMP violations with penalty of \$39,000. Discharger signed waiver 2/23/11. After 30-day public comment (none received), order issued 4/7/11. Discharger submitted check for \$39,000 on 4/19/11. Acct. rec'd check in Sac 4/21/11. EPL 2011-0011 Order to City of SB w invoice 4-7-11.pdf
377300	Santa Barbara City PWD	El Estero WWTP NPDES	04/07/2011	Historical	NPDMUNILRG	R3-2011-0011	Admin Civil Liability	ACLO R3-2011-0011 Resolving MMP EPL for City of Santa Barbara, El Estero WWTP	Offer to participate in expedited payment program to resolve NPDES violations of WDR R3-2010-0011 as of 12/13/2010 subject to MMP. Proposes to address 6 violations with penalty of \$18,000. Discharger signed waiver 2/9/11. After 30-day public comment (none received), order issued 4/7/11. Discharger submitted check for \$18,000 on 4/19/11. Acct. rec'd check in Sac 4/21/11. EPL R3-2011-0012 Lompoc WWTP.pdf
	Lompoc	Lompoc Regional				R3-2011-	Admin Civil	ACLO R3-2011-0012 Resolving MMP EPL for City of Lompoc	Offer to participate in expedited payment program to resolve NPDES violations of WDR R3-2006-0037 as of 12/13/2010 subject to MMP. Proposes to resolve 13 MMP violations with penalty of \$39,000. Discharger signed waiver 2/23/11. After 30-day public comment (none received), order issued 4/7/11. Discharger submitted check for \$39,000 on 4/19/11. Acct. rec'd

377296	City	WRP	04/07/2011	Historical	NPDMUNILRG 0012	Liability	WWTP	check in Sac 4/21/11.
							ACLO R3-2011-0011	2011_0011_sbarb_civ_epl_signed_waiver_2_9_11.pdf
							Resolving	Offer to participate in expedited payment program to resolve NPDES violations of WDR R3-2010-0011 as of 12/13/2010 subject to MMP. Proposes to address 6 violations with penalty of \$18,000. Discharger signed waiver 2/9/11. After 30-day public comment (none received), order issued 4/7/11. Discharger submitted check for \$18,000 on 4/19/11. Acct. rec'd check in Sac 4/21/11.
377300	Santa Barbara City PWD	El Estero WWTP NPDES	04/07/2011	Historical	NPDMUNILRG 0011	R3-2011-0011	Admin Civil Liability	WWTP
								2011_0012_lompoc_epl_signed_waiver_2_23_11.pdf
							ACLO R3-2011-0012	Offer to participate in expedited payment program to resolve NPDES violations of WDR R3-2006-0037 as of 12/13/2010 subject to MMP. Proposes to resolve 13 MMP violations with penalty of \$39,000. Discharger signed waiver 2/23/11. After 30-day public comment (none received), order issued 4/7/11. Discharger submitted check for \$39,000 on 4/19/11. Acct. rec'd check in Sac 4/21/11.
377296	Lompoc City	Lompoc Regional WRP	04/07/2011	Historical	NPDMUNILRG 0012	R3-2011-0012	Admin Civil Liability	WWTP
								R3-2011-0213_TSO_Transmittal.pdf TSO_R3-2011-0213.pdf
							TSO R3-2011-0213	TSO establishes interim monthly average total nitrogen effluent limit of 59 mg/L as Nitrogen and compliance time schedule for treatment facility upgrades that will enable the Discharger's compliance with NPDES permit R3-2011-0002 as adopted May 5, 2011.
379968	City of El Paso de Robles	Paso Robles WWTP	07/05/2011	Active	NPDMUNILRG 0213	R3-2011-0213	Time Schedule Order	WWTP
								CMC Stmnt & ACLO R3-2012-0042 trans ltr.pdf CMC Stmnt & ACLO R3-2012-0042 Order.pdf
							for Ca Dept of Corrections	MMP Order resolves NPDES violations of WDR R3-2006-0032 as of 11/30/2011 subject to MMP. Addresses 35 violations with penalty of \$105,000, divided into \$45,000 to CAA and \$60,000 to SEP (funding CCAMP).
380294	Ca Dept of Corrections San Luis Obispo	California Men's Colony WWTP	12/19/2011	Historical	NPDMUNILRG 0042	R3-2012-0042	Admin Civil Liability	Obispo
								ACLO R3-2012-0041 for So Si Co SD.pdf
							ACL R3-2012-0041	ACL Order for \$1,109,812.80 for December 2010 SSO (approximately 1,139,825 gallons) to waters of the state and U.S. in violation of WDR 2006-0003-DWQ, NPDES R3-2009-0046, CWA 301, and Water Code 13376. Region 3 staff received petition on 11/5/12, and petition dated 11/1/12
385739	South San Luis Obispo CSD	South San Luis Obispo Sd CS(+)	10/03/2012	Active	NPDMUNILRG 0041	R3-2012-0041	Admin Civil Liability	CO SD
								SJB Stmnt & ACLO R3-2012-0040 trans ltr.pdf MMP ACL R3-2012-0040 for SJB WWTP Final with Attachments.pdf
							ACL R3-2012-0040	Expedited Payment Program Offer R3-2010-0045 transmitted to discharger to resolve MMP for 13 serious violations spanning 5/31/2009 - 6/30/2010 for a total liability of \$39,000. Discharger responded with signed waiver and request for SEP. During SEP development, parties extended violation date range to include 38 violations up to 6/30/2012, and liability of \$114,000, and documented settlement in Stipulated ACL R3-2012-0040.
376304	San Juan Bautista City	San Juan Bautista WWTP	11/28/2012	Historical	NPDMUNILRG 0040	R3-2012-0040	Admin Civil Liability	Bautista
								Heritage Ranch MMP EPL R3-2013-0026 combined.pdf
							ACL R3-2013-0026	EPL Offer to resolve 5 MMP violations from 9/30/2011 through 7/24/2012. Discharger has until 4/11/13 to respond. Discharger submitted signed waiver/acceptance 3/26/13. Posted for public comment on 4/8/13, ended 5/8/13 without comment.
389486	Heritage Ranch CSD	Heritage Ranch WWTP	05/14/2013	Historical	NPDMUNIOH 0026	R3-2013-0026	Admin Civil Liability	RANCH CSD
								SBarb MMP EPL R3-2013-0022 Order with Attachments.pdf
							ACL R3-2013-0022	EPL for 32 MMP violations ranging from 3/3/09 to 5/4/12. Discharger has until April 2, 2013 to respond. Discharger submitted signed waiver/acceptance 3/22/13. Posted for public comment on 4/8/13, ended 5/8/13 without comment.
389320	Santa Barbara City PWD	El Estero WWTP NPDES	05/14/2013	Historical	NPDMUNILRG 0022	R3-2013-0022	Admin Civil Liability	BARBARA CITY PWD
								Heritage Ranch MMP EPL R3-2013-0026 Order with Attachments.pdf
							ACL R3-2013-0026	EPL Offer to resolve 5 MMP violations from 9/30/2011 through 7/24/2012. Discharger has until 4/11/13 to respond. Discharger submitted signed
	Heritage	Heritage				R3-	Admin	HERITAGE

389486	<u>Ranch CSD</u>	<u>Ranch WWTP</u>	05/14/2013	Historical	NPDMUNIOTH	0026	2013-	Civil Liability	RANCH CSD	waiver/acceptance 3/26/13. Posted for public comment on 4/8/13; ended 5/8/13 without comment. SBarb MMP EPL R3-2013-0022 SEP Payment for CCAMP-GAP 5-22-13.pdf
389320	<u>Santa Barbara City PWD</u>	<u>El Estero WWTP NPDES</u>	05/14/2013	Historical	NPDMUNILRG	0022	R3-2013-	Admin Civil Liability	SANTA BARBARA CITY PWD	ACL R3-2013-0022 EPL for 32 MMP violations ranging from 3/3/09 to 5/4/12. Discharger has until April 2, 2013 to respond. Discharger submitted signed waiver/acceptance 3/22/13. Posted for public comment on 4/8/13; ended 5/8/13 without comment. ACL R3-2013-0025 CMC SEP 45K Payment to BFMB Rec'd 6-21-13.pdf EPL for 25 MMP violations ranging from 10/12/11 through 10/2/12. Discharger waived hearing April 16, 2013. Publicly noticed the proposed Order from April 17, 2013, through May 19, 2013, and received no comments. Lompoc MMP EPL R3-2013-0037 Executed Order.pdf EPL for 3 MMP violations from 6/8/11 through 10/14/12. Proposed Order publicly noticed from April 17, 2013, through May 19, 2013, and received no comments.
389423	<u>Ca Dept of Corrections San Luis Obispo</u>	<u>California Men's Colony WWTP</u>	05/23/2013	Historical	NPDMUNILRG	0025	R3-2013-	Admin Civil Liability	Correction San Luis Obispo	ACL R3-2013-0025 CMC MMP EPL R3-2013-0025 Executed Order.pdf EPL for 25 MMP violations ranging from 10/12/11 through 10/2/12. Discharger waived hearing April 16, 2013. Publicly noticed the proposed Order from April 17, 2013, through May 19, 2013, and received no comments.
389830	<u>Lompoc City</u>	<u>Lompoc Regional WRP</u>	05/23/2013	Historical	NPDMUNILRG	0037	R3-2013-	Admin Civil Liability	Lompoc City	ACL R3-2013-0037 EPL for 3 MMP violations from 6/8/11 through 10/14/12. Proposed Order publicly noticed from April 17, 2013, through May 19, 2013, and received no comments.
389423	<u>Ca Dept of Corrections San Luis Obispo</u>	<u>California Men's Colony WWTP</u>	05/23/2013	Historical	NPDMUNILRG	0025	R3-2013-	Admin Civil Liability	Correction San Luis Obispo	ACL R3-2013-0025 CMC MMP EPL R3-2013-0025 Executed Order.pdf EPL for 25 MMP violations ranging from 10/12/11 through 10/2/12. Discharger waived hearing April 16, 2013. Publicly noticed the proposed Order from April 17, 2013, through May 19, 2013, and received no comments.
399710	<u>San Luis Obispo City</u>	<u>San Luis Obispo WWTP</u>	12/01/2014	Active	NPDMUNILRG	0036	R3-2014-	Time Schedule Order	Luis Obispo City WWTP	TSO R3-2014-0036 for San Luis Obispo City WWTP 10-08-2014_TSO_R3-2014-0036_City_SLO.pdf TSO for NPDES permit R3-2014-003 addressing THM and Nitrate effluent limitations Carp Att A FINAL PDF Carp ACLC FINAL PDF Methodology Spreadsheet.pdf Carpinteria MMPs.pdf Carp - cover letter.pdf
400054	<u>Carpinteria SD</u>	<u>Carpinteria SD WWTP</u>	03/02/2015	Active	NPDMUNILRG	0011	R3-2015-	Admin Civil Liability	Carpinteria SD	ACL R3-2015-0011 Alleges discharger discharged 297,896 gallons of undisinfected secondarily treated effluent through its ocean outfall in violation of NPDES permit, and committed five other effluent violations subject to MMP.

Enforcement ID: A unique system identifier for the regulatory measure

Effective Date: The date an enforcement became effective. This can be the Adoption date or the Issuance Date

Program: The Water Boards use the program for billing and for organizing workload

AGT - Above Ground Tanks

CER - 401 Certification: Clean Water Act Section 401 Certification; regulation of dredge and fill projects

CONSTW - Regulates discharges of storm water related to construction activities to waters of the United States

INDSTW - Regulates discharges of storm water related to industrial activities to waters of the United States

IRRI - Irrigated Lands: This program regulates discharges from irrigated agricultural lands, from both irrigation flows and stormwater runoff

Non Point Source: Some of our federal timber harvest areas are regulated under the non-point source program

LNDISP - The Land Disposal program regulates solid waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills

MNSTW1 - Regulates discharges of storm water from facilities under a Municipal Stormwater Phase 1 permit to waters of the United States

MNSTW2 - Regulates discharges of storm water from facilities under the Municipal Stormwater Phase 2 permit to waters of the United States

NON15 - Nonsubchapter 15: - While this program encompasses a wide range of discharges, it typically includes discharges to groundwater through land application.

NPDES - National Pollutant Discharge Elimination System. This is a federal program that regulates discharges of wastewater to waters of the United States

SLIC - Spills, Leaks, Investigations, and Cleanup. Most information about this program is found in the [GeoTracker Database](#)

TANKS - The Underground Storage Tank program protects the public and the environment from petroleum and other hazardous substances releases from tanks. Most information about this program is found in the [GeoTracker Database](#)

TH - Timber Harvest: The regulation of discharges from timber harvest activities, including logging, road construction, and herbicide application

UNREGS - Related to an unregulated site

Order No. - Number assigned when a Water Board adopts an action

Enforcement Action Type - The type of enforcement action taken by the Board

13267 Letter - Requests for technical reports and/or investigation

13308 Enforcement Action - Time schedule order that prescribes a civil penalty if compliance is not achieved in accordance with the time schedule

1st NNC - First Notice of Stormwater Noncompliance

2nd NNC - Second Notice of Stormwater Noncompliance

Administrative Civil Liability - Liabilities imposed by the Regional or State Water Board

Cease and Desist Order - Order that directs the discharger to comply in accordance with a time schedule, or in the event of a threatened violation, take appropriate remedial or preventive action

Cleanup and Abatement Order - These Orders require the discharger to clean up the waste or abate the effects of the waste, or both, or to take other remedial action.

Notice of Non-Compliance for Non-Filers (NF) - Notice to Comply specific to dischargers that have not submitted an application for coverages under a storm water permit

Notice of Stormwater Noncompliance - Water Code Section 12299.25 et seq. requires the Water Boards to provide a notice of noncompliance to any stormwater dischargers who have failed to file a notice of intent, notice of non-applicability, construction certification, or annual report

Notice to Comply - Notices to Comply deal with statutorily defined "minor" violations per Water Code Section 13399 et seq.

Referrals (various) - For resolution by another agency

Settlement Court Order - Not necessarily a Water Board initiated action, this is any Court Settlement that mentions the Water Board as part of the settlement

Time Schedule Order - Requires the discharger to submit a time schedule listing actions the discharger will take to address actual or threatened discharges of waste in violation of requirements

Waste Discharge Requirements - Rescission of WDRs in response to violations

Title - Text field in CIWQS that acts as a summary (for SMARTS storm water records, it displays the WDID)

Document & Description This field contains the link to the documents uploaded into the regulatory databases and more details about the action

The current report was generated with data as of: 04/28/2015

EXHIBIT J

Date: November 28, 2012

California Regional Water Quality Control Board
Central Coast Region
Attn: Monitoring and Reporting Review Section
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Dear Mr. Ken Harris:

Facility Name: Carpinteria Sanitary District
Wastewater Treatment Facility
Address: 5351 Sixth Street
Carpinteria, CA 93013
Contact Person: Mark H Bennett
Job Title: Operations Manager
Phone Number: (805) 684-7214 x17
WDR/NPDES Order Number: CA 0047364, R3-2011-0003

Type of Report (circle one): Monthly Quarterly Semi-Annual Annual

Month(s) (circle applicable months*)
JAN FEB MAR APR MAY JUN
JUL AUG SEP OCT NOV DEC

Year: 2012

Violation(s) (Place an X by the appropriate choice):
 No (there are no violations to report) Yes

If Yes is marked (complete a-g).

a) Parameter(s) in Violation: Loss of Disinfection

b) Section(s) of WDR/NPDES Violated: Table E-3 Note 5

c) Reported Value(s) N/A

d) WDR/NPDES Limit/Condition: Continuous disinfection loss

e) Dates of Violation(s) 10/3/2012
(ref. page of report/data sheet):

f) Explanation of Cause(s): See attached letter.
(attach additional info as needed)

g) Corrective Action(s): See attached letter.
(attach additional info as needed)

In accordance with the Standard Provisions and Reporting Requirements, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact me at the number provided above.

Sincerely,



Mark H Bennett
Operations Manager



Carpinteria Sanitary District MEMORANDUM

Date: 10/04/2012

To: Mr. Ken Harris – Interim Executive Officer
Central Coast Regional Water Quality Control Board

From: Mark Bennett - Operations Manager

CC: Peter Von Langen – Central Coast RWQCB
Craig Murray, P.E. – CSD General Manager

Re: Noncompliance Notification

On October 3, 2012 at 4:08 a.m. the disinfection system at the Carpinteria Sanitary District's wastewater treatment facility malfunctioned. It was restored to full operability the same day at 9:45 a.m. The District estimates the volume of fully treated, but non-disinfected effluent discharged during this event to be 281,250 gallons. Routine effluent sampling was conducted within the period that the equipment was not operational. Results will be reported pursuant the District's NPDES permit and MRP requirements.

The cause of the malfunction is suspected to be an air-locked chemical feed pump. The District had over 1,200 gallons of sodium hypochlorite in inventory at that time. There is no additional evidence that points to causation, and it is noted that the chemical feed pump in question has operated reliably for over a decade and is regularly inspected and maintained.

The District notified the Central Coast Water Board of the event and left telephone messages for Peter Von Langen and also for his supervisor. The District also notified both the Santa Barbara County Environmental Health Department and the Preharvest Shellfish Unit, Environmental Management Branch of the California Department of Public Health.

EXHIBIT K

From: [Peter VonLangen](mailto:Peter.VonLangen)
To: [Craig Murray](mailto:Craig.Murray)
Cc: fatima.ty@epamail.epa.gov; greenberg.ken@epamail.epa.gov; max.kuker@ogenv.com; [Harvey Packard](mailto:Harvey.Packard); [Lauren Alderman](mailto:Lauren.Alderman); [Michael Thomas](mailto:Michael.Thomas); [Philip Isorena](mailto:Philip.Isorena); [Sheila Soderberg](mailto:Sheila.Soderberg)
Subject: RE: TRANSMITTAL OF PG ENVIRONMENTAL'S NPDES COMPLIANCE EVALUATION INSPECTION (CEI) REPORT, PERMIT CA0047364, ORDER NO. R3-2011-0003 CARPINTERIA SANITARY DISTRICT, SANTA BARBARA COUNTY, WDID 3 42 010 1001
Date: Friday, May 11, 2012 9:40:01 AM

Hi Craig,

Sorry for the delay, we have a lot on our plates. The facility is in compliance with its permit and no enforcement is pending from the inspection. The inspection was looking over the facility in great detail and some of the findings were written in a dry inspection compliance tone that may have made it sound worse than reality. The same could be said for the other 3 facilities on the south coast that were inspected by PG Environmental staff from who I had the impression thought the facilities were generally well run. The same could not be said for Cuyama who received a Notice of Violation for the inspection. For Carpinteria it seems much was made of the algae over some of the weirs, which to me didn't seem like a huge deal that merited an unsatisfactory mark in several places through the report. However, I am not a waste water engineer and am very new at learning how these facilities operate so sent the report as it was drafted. The report is a public document since it resides in our files but we don't plan on publishing the document or sending out for mass consumption. You can respond in the next Annual Report and can also send us an email or letter if you wish to have something additional in the file.

Best Regards,
Peter

Peter von Langen, Ph.D., P.G.
Engineering Geologist
Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
pvonlangen@waterboards.ca.gov
Phone 805-549-3688
Fax 805-788-3580

>>> Craig Murray 05/11/12 8:38 AM >>>

Peter - I have not heard back from you or anyone at Region 3 following my email on Tuesday this week. I'm resending to make sure it hit your inbox. This is an important issue for my District. A reply would be helpful to me. Thanks. Craig.

Craig Murray, P.E.
General Manager
Carpinteria Sanitary District
5300 Sixth Street
Carpinteria, CA 93013
P 805.684.7214
C 805.451.7804

From: Craig Murray
Sent: Tuesday, May 08, 2012 1:55 PM
To: VonLangen, Peter@Waterboards
Cc: greenberg.ken@epamail.epa.gov; fatima.ty@epamail.epa.gov; max.kuker@pgenv.com; [Isorena, Philip@Waterboards](mailto:Isorena,Philip@Waterboards); [Alderman, Lauren@Waterboards](mailto:Alderman,Lauren@Waterboards); markb@carpsan.com; ssoderberg@waterboards.ca.gov
Subject: RE: TRANSMITTAL OF PG ENVIRONMENTAL'S NPDES COMPLIANCE EVALUATION INSPECTION (CEI) REPORT, PERMIT CA0047364, ORDER NO. R3-2011-0003 CARPINTERIA SANITARY DISTRICT, SANTA BARBARA COUNTY, WDID 3 42 010 1001

Hi Peter -

We received this email transmitting the NPDES CEI Report for our facility on Friday. I was surprised and disappointed to read the findings as they differed remarkably from the comments we got in the exit interview from PG Environmental staff. I know you had to leave early from the inspection that day and were not at the wrap up meeting, but every indication was that our treatment facility and our record keeping/reporting was outstanding. Aside from one spreadsheet calculation error which was identified and corrected that day, the message we got was that everything was great. As you know, we take enormous pride in the maintenance and condition of our facility and have continued the practices that earned us the 2008 CWEA Plant of the Year Award for the entire state. I presume that you have reviewed the report and I wonder if you concur with the findings or if they were surprising to you also based on your participation in the inspection.

I have a few questions. I would like to know how we can or should respond to the findings of this report. Is there a process to dispute the findings? What is its purpose? Will it result in enforcement proceedings or will there be any response from the RWQCB, SWRCB or EPA? Will it be published and made publicly available?

I have to present this report to my Board of Directors and explain to them what it means and why it is so negatively characterizes our operations. Your prompt reply is greatly appreciated.

Thanks.

Craig Murray, P.E.
General Manager
Carpinteria Sanitary District
5300 Sixth Street
Carpinteria, CA 93013
P 805.684.7214
C 805.451.7804

From: Alderman, Lauren@Waterboards [<mailto:L.Alderman@waterboards.ca.gov>]
Sent: Friday, May 04, 2012 11:43 AM
To: Craig Murray
Cc: VonLangen, Peter@Waterboards; greenberg.ken@epamail.epa.gov; fatima.ty@epamail.epa.gov; max.kuker@pgenv.com; Isorena, Philip@Waterboards
Subject: TRANSMITTAL OF PG ENVIRONMENTAL'S NPDES COMPLIANCE EVALUATION INSPECTION (CEI) REPORT, PERMIT CA0047364, ORDER NO. R3-2011-0003 CARPINTERIA SANITARY DISTRICT, SANTA BARBARA COUNTY, WDID 3 42 010 1001

Please find the attached letter in PDF format regarding the subject project. If you have questions regarding the CEI report, please contact Peter von Langen at (805) 549-3688 pvonlangen@waterboards.ca.gov or Sheila Soderberg (805) 549-3592 at ssoderberg@waterboards.ca.gov.

The Central Coast Regional Water Quality Control Board is increasing its efforts to transmit correspondence and other information electronically, reducing the amount of paper used, and increasing the speed of which information is distributed. Therefore, you are receiving the attached correspondence for the subject site from the Central Coast Water Board in a Portable Data Format (PDF). If you need help opening this document please refer to the link below:

<http://www.adobe.com/products/acrobat/readstep2.html>



Carpinteria Sanitary District

5300 Sixth Street, Carpinteria, CA 93013
(805) 684-7214 • Admin Fax (805) 684-7213 • Plant Fax (805) 566-6599

January 28, 2013

Mr. Peter Von Langen
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

**Subject: Response to Compliance Evaluation Inspection (CEI) Report
Carpinteria Sanitary District Wastewater Treatment Facility
PERMIT CA0047364, ORDER NO. R3-2011-0003**

Dear Peter,

On December 14, 2011, PG Environmental, on behalf of USEPA, conducted a NPDES Compliance Evaluation Inspection (CEI) at the District's wastewater treatment facility. The stated purpose of the inspection was to determine the accuracy and reliability of the District's self-monitoring and reporting program, and to review the facility site.

The District received the written CEI Report in May 2012. Despite very positive indications from PG Environmental staff during the exit interview with respect to the facility condition and the overall compliance status, the report assigned "marginal" and "unsatisfactory" overall ratings in certain reporting categories. The District strongly objects to these findings and this letter is being transmitted to document our response to the report and our specific objections to certain findings.

As you know, the Carpinteria Sanitary District Wastewater Treatment Facility received the prestigious Small Plant of the Year Award for 2008 from the California Water Environment Association (CWEA). We take great pride in the condition of our facility, specifically with respect to its operation and maintenance. As a participant in the CEI inspection, perhaps you may also have difficulty reconciling the appearance of our facility with the findings of the PG Environmental report.

Facility Site Review – Algae Growth on Weirs

The CEI report points to algae accumulation on the weirs in the secondary clarifiers as a significant operational problem. This finding propagates throughout the report and results in a "marginal" overall rating in the Facility Site Review section. In the District's opinion, this issue is grossly overstated. The minor algae growth observed on the fiberglass weirs during the inspection is common and does not impact effluent quality.

The District implements a comprehensive asset management system and maintenance program to establish weir cleaning schedules and to document cleaning activities and weir conditions. The secondary weirs are cleaned with high pressure water on Tuesday and Friday each week. The observed algae buildup during the inspection existed in two small areas as shown in the pictures. Flow over v-notches was potentially affected in no more than three feet of weir length out of a total of 560 linear feet. This represents less than 0.5 % blockage. There was no short circuiting and this representation in the CEI report is false and misleading. Based on the experience of our plant operators, the amount of algae growth on the weirs at the time of the inspection was insignificant.

Following the CEI inspection, maintenance data was review to confirm that the weirs had been washed the day prior to the inspection. While algae growth may not be common in January in Colorado (where the PG Environmental staff are located), in Southern California the sunny winter conditions promote algae growth over a short period of time. The District strongly objects to the report findings and ratings with respect to the issue of algae growth on the secondary clarifier weirs.

Self-Monitoring Program – Influent Monitoring Location

The CEI report assigned an "unsatisfactory" overall rating for the District's Self-Monitoring Program. This was based on the fact that the District has intermittent return flows (e.g. dewatering filtrate) that are conveyed to the facility headworks upstream of the influent flow meter. Technically, the District is indeed measuring and reporting a confluent flow rate (influent plus return flows) instead of a discrete influent flow rate.

The District does not dispute this finding, as this pumping/piping configuration has existing at least since a major facility upgrade that commenced in 1993. The RWQCB regulatory staff is aware of this situation and it has not been identified as a compliance problem through at least four NPDES permit cycles. RWQCB inspectors and engineers have instead simply directed District staff to collect influent samples at times when there are no return flows, so that influent concentrations and mass loading values are accurately represented.

For several reasons, there is no simple or cost-effective way of conveying return flows to an alternate location, downstream of the influent flow meter. Doing so, would require construction of new pumping facilities in order to segregate site stormwater conveyance from an existing sewage lift station at the facility. Additional pumping facilities would be necessary to convey dewatering return flows. Both of these side streams are intermittent and generally insignificant when compared to the total influent flow rate.

While the District acknowledges that this may be considered a deficiency as it pertains to strict NPDES permit compliance, we believe that our self-monitoring program fully meets the intent of the discharge permit and results in accurate percent removal values in our regular reporting. We strongly object to the determination that our Self-Monitoring Program is "unsatisfactory".

Other Findings

The CEI report identified two other compliance issues. The District was reporting the daily average total chlorine residual concentration based on a spreadsheet calculation using continuous chlorine residual monitoring values instead of the average of the daily grab sample

Mr. Peter Von Langen

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analyses. Although the manner of reporting would likely provide a more accurate representation of average residual chlorine concentration, we acknowledged this "deficiency" and it was corrected immediately, during the CEI process. Also, the District's refrigerated influent sampler did not contain a separate thermometer to verify/document internal temperature. A thermometer was installed in the unit immediately following the inspection.

Closure

As stated above, the purpose of this letter is to object to the ratings put forth in the subject CEI report. The District operates and maintains its treatment facility to the highest standard of the industry. While we do not dispute the facts presented in the report, the ratings assigned grossly misrepresent the quality and character of our operation.

Please do not hesitate to contact the District if you require additional information. I can be reached at (805) 684-7214 x17 or by email at MarkB@carpsan.com.

Sincerely,

CARPINTERIA SANITARY DISTRICT



Mark Bennett
Operations Manager

cc: Craig Murray, P.E. – CSD General Manager