

**California Regional Water Quality Control Board
San Francisco Bay Region**

Tentative Cease and Desist Order No. R2-2014-XXXX

**City of Calistoga
Dunaweal Wastewater Treatment Plant**

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), finds that:

Background

1. The City of Calistoga (Discharger) owns and operates the Dunaweal Wastewater Treatment Plant (Plant) located at 1100 Dunaweal Lane, Calistoga, Napa County. The Plant treats domestic, commercial, and industrial wastewater from Calistoga. It has a dry weather design capacity of 0.84 million gallons per day (MGD).
2. On September 8, 2010, the Regional Water Board adopted Order No. R2-2010-0104, which reissued NPDES Permit No. CA0037966 (Permit) regulating the Plant's discharges to the Napa River.
3. Between November 1 and June 15 each year, the Permit authorizes direct discharge of treated wastewater to the Napa River from two discharge points:
 - a. Discharge Point No. 001 is for tertiary-treated wastewater discharges, and;
 - b. Discharge Point No. 002 is for secondary-treated wastewater.

The Permit authorizes these discharges subject to certain prohibitions (section III, Discharge Prohibitions), effluent limitations (section IV, Effluent Limitations and Discharge Specifications), and other requirements. The Permit prohibits discharge to the Napa River unless river flow is sufficient to provide at least 10 to 1 dilution of treated wastewater, as further described in finding 16, below.

4. On January 17, 1996, the Regional Water Board adopted Order No. R2-1996-0011 (General Water Reuse Order), establishing general wastewater reuse requirements for municipal wastewater and water agencies. On May 3, 2005, the Executive Officer authorized the Discharger to discharge tertiary-treated wastewater to City-owned properties and contracted recycled water users, including the City's irrigation fields, Logvy Community Park, and the Mount St. Helena Golf Course, under the General Water Reuse Order. General Water Reuse Order prohibitions A.2 and A.3 prohibit discharges to irrigation areas when soils are saturated, and discharges that escape designated use areas.
5. The Plant treats influent flows up to 1 MGD to tertiary standards. When river discharge is allowed, the Plant discharges tertiary-treated wastewater at Discharge Point 001, after it flows through the Plant's riverside ponds.

6. The Plant treats wet-weather influent flows in excess of 1 MGD to secondary standards and discharges this wastewater at Discharge Point No. 002.
7. Plant discharges to the Napa River were infrequent from fall 2011 through spring 2014 compared to previous years because historically low rainfall and extended drought conditions resulted in low river flows and inadequate dilution for river discharge.
8. On three occasions from 2011 to 2014, the Discharger discharged tertiary-treated wastewater to its irrigation fields such that flows exceeded the capacity of the soil to absorb the discharge, causing runoff to the Napa River:
 - a. The Discharger discharged 26 million gallons (MG) of tertiary-treated wastewater to the irrigation fields from November 22, 2011, to January 20, 2012;
 - b. The Discharger discharged 28 MG of tertiary-treated wastewater to the irrigation fields from April 4 to May 29, 2013; and
 - c. The Discharger discharged 17 MG of tertiary-treated wastewater to the irrigation fields from January 7 to February 27, 2014.
9. To the extent these discharges resulted in runoff to the Napa River, the General Water Reuse Order did not permit them.
10. The Permit (Attachment D, sections I.G.3 and I.G.4) prohibits bypasses other than for essential maintenance to ensure efficient operation. The Regional Water Board may take enforcement action against the Discharger for other types of bypasses unless the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage; there are no feasible alternatives to the bypass; and the Discharger submits notice to the Regional Water Board. In these instances, the Executive Officer may approve bypasses.
11. The Executive Officer approved the discharges listed in finding 8 as anticipated bypasses pursuant to Permit Attachment D, sections I.G.3 and I.G.4.
12. The Executive Officer approved the bypasses because Napa River flows were insufficient to allow permitted discharges and the Discharger was unable to store the treated wastewater. In consideration of the potential adverse effects of the bypasses pursuant to Attachment D section I.G.4 (see 40 C.F.R. § 122.41(m)(4)(ii)), the Executive Officer concluded that discharging to the irrigation fields was preferable to direct discharge to the Napa River because a smaller volume would reach the Napa River. The Executive Officer further concluded that infrequent bypasses would result in minimal adverse effects on the river.
13. The Executive Officer conditioned the November 2011 approval by requiring the Discharger to investigate all feasible alternatives to bypassing, including constructing additional storage. The Discharger completed its *Bypass Alternatives Investigation Report* on June 24, 2013.

Purpose of this Order

14. This Order requires the Discharger to take specific actions to comply with the Permit and General Water Reuse Order for two reasons:
 - a. Plant discharges threaten to violate the Permit's discharge prohibitions against discharges to the Napa River when the river-to-wastewater flow ratio is insufficient to provide adequate dilution. Bypasses to the irrigation fields threaten to violate the General Water Reuse Order, which prohibits runoff of treated wastewater from recycled water use sites, and
 - b. Plant discharges have violated, and threaten to violate, the Permit's antimony effluent limitations.
15. This Order is not necessarily a determination by the Regional Water Board that the Discharger has acted negligently; however, it ensures compliance with the applicable prohibitions.

Discharge Prohibition Violations

16. The Permit (section III, Discharge Prohibitions) contains the following discharge prohibitions, among others:
 - A. *Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.*
 - B. *Discharge from Outfall 001 to receiving water at any point where the river-to-wastewater flow ratio is less than 10:1 is prohibited. Discharge of wastewater from Outfall 002 to receiving water at any point where the river-to-wastewater flow ratio is less than 50:1 is prohibited...*
 - C. *The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in Subsections I.G.2 and I.G.4 of Attachment D of this Order.*
17. The General Water Reuse Order (Section A, Prohibitions) contains the following prohibitions, among others:
 2. *No recycled water shall be applied to irrigation areas during periods when soils are saturated.*
 3. *Recycled water shall not be allowed to escape from the designated area(s) as surface flow that would either pond and/or enter waters of the state.*
18. The Discharger threatens to violate the Permit's discharge prohibitions and the General Water Reuse Order's prohibitions unless corrective actions are taken.
 - a. The Discharger threatens to violate Permit Prohibition A by discharging treated wastewater at a location or in a manner different from that described in the Permit. The Permit authorizes discharges only at Discharge Point Nos. 001 and 002; it does not authorize runoff from recycled water use sites. Such discharges of runoff from the City's irrigation fields have taken place in the past (as approved bypasses), and the likely need

for such discharges in the future remains. The Discharger's treated effluent storage capacity remains insufficient for all times when Napa River flows are too low to allow discharge, and Napa River flows continue to be exceptionally low due to the ongoing drought. The ongoing drought and the effects of climate change may further increase the Discharger's need to discharge in a manner different than that described in the Permit by further reducing the frequency and duration of Napa River flows.

- b. The Discharger threatens to violate Permit Prohibition B by discharging from Discharge Point No. 001 or 002 when the river-to-wastewater flow ratio is insufficient to provide adequate dilution. To date, the Discharger has not violated this prohibition, but only because the Executive Officer has approved bypasses to the City's irrigation fields, consistent with the exceptions found in Attachment D, section I.G.3. Similar bypasses or unauthorized discharges from Discharge Point Nos. 001 or 002 may be necessary and are likely to occur in the future because the Discharger's effluent storage capacity remains insufficient and Napa River flows continue to be exceptionally low. Moreover, the frequency of the Discharger straining or exhausting its storage capacity appears to be increasing. From 1999 through 2010, the Discharger notified the Regional Water Board only once, in 2007, that it was running out of storage capacity and would potentially need to bypass, causing runoff to the Napa River. Furthermore, Executive Officer approval for future bypasses may not be forthcoming because, to authorize a bypass, Attachment D section I.G.4 (see 40 C.F.R. § 122.41(m)(4)(ii)) requires consideration of adverse effects. Occasional bypasses would have minimal adverse effects on the Napa River, but routine bypasses may cause or contribute to unacceptable adverse effects. Finally, the Executive Officer's approval of such bypasses results in violations of General Water Reuse Order Prohibitions A.2 and A.3 that could be avoided if the Discharger had sufficient effluent storage capacity.
- c. The Discharger threatens to violate Permit Prohibition C by bypassing the riverside ponds and Discharge Point No. 001, discharging to irrigation fields or other locations, and then via runoff to the Napa River. Discharge Point Nos. 001 and 002 and the riverside ponds are part of the treatment facility authorized by the Permit; the riverside ponds assist in removing trihalomethanes and total residual chlorine to meet the Permit's effluent limits.
- d. The Discharger threatens to violate General Water Reuse Order Prohibitions A.2 and A.3 during bypass operations by discharging tertiary-treated wastewater to recycled water use sites when the soil may be saturated and runoff may occur.

Antimony Effluent Limitation Violations

- 19. The Permit (section IV.B, Effluent Limitations for Toxic Pollutants – Discharge Points 001 and 002) contains antimony effluent limitations, among others. The average monthly effluent limitation (AMEL) for antimony is 25 micrograms per liter (µg/L), and the maximum daily effluent limitation (MDEL) is 36 µg/L. The Permit requires the Discharger to comply with these limitations at Discharge Point Nos. 001 and 002, with compliance measured at Monitoring Locations EFF-001 and EFF-002 as described in Permit Attachment E.
- 20. The Discharger has violated, and threatens to violate, the Permit's antimony effluent limitations unless corrective actions are taken.

- a. According to the Discharger's self-monitoring reports, from November 2010 through March 2014, the average monthly antimony concentration equaled or exceeded the AMEL during 8 of the 17 months that the Plant discharged to the Napa River (including during approved bypasses), and exceeded the AMEL in 7 of those 8 months. Daily antimony concentrations exceeded the MDEL three times during this same period. Based on influent and collection system monitoring completed in 2012, these Permit violations resulted from unanticipated changes in Plant influent quality. The Discharger has not completed actions necessary to reduce its antimony discharges since reporting these violations.
- b. Future antimony effluent limitation violations appear likely based on a statistical analysis of the effluent data collected from February 2009 through February 2014. The 95th percentile of the antimony data (38 µg/L) exceeds the AMEL (25 µg/L), and the 99th percentile of these data (43 µg/L) exceeds the MDEL (36 µg/L).

Cease and Desist Order Authority

21. Water Code section 13301 authorizes the Regional Water Board to issue a cease and desist order when it finds that a waste discharge is taking place, or threatening to take place, in violation of Regional Water Board requirements.
22. Pursuant to Water Code section 13385(j)(3), mandatory minimum penalties required by Water Code sections 13385(h) and (i) do not apply when a discharger complies with a cease and desist order issued pursuant to Water Code section 13301 if the all of the following conditions are met:
 - a. The cease and desist order specifies actions the discharger must take to correct the violations that would otherwise be subject to mandatory minimum penalties;
 - b. The discharger is unable to consistently comply with the effluent limitations for at least one of the following reasons:
 - i. The limitations are new, more stringent, or modified regulatory requirements, and new or modified control measures cannot be put into operation within 30 calendar days;
 - ii. New methods for detecting or measuring a pollutant demonstrate that new or modified control measures are necessary and cannot be put into operation within 30 calendar days;
 - iii. Unanticipated changes in the quality of the water supply available to the discharger cause unavoidable changes in the composition of the waste discharge, the changes in the composition of the waste discharge cause the inability to comply with the limitations, no alternative water supply is reasonably available, and new or modified measures to control the composition of the discharge cannot be designed, installed, and put into operation within 30 calendar days; or
 - iv. The discharger is a publicly owned treatment works located in Orange County that meets certain requirements;

- c. The Regional Water Board establishes a time schedule of no more than five years for bringing the discharge into compliance (The time schedule must be as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures necessary to comply with the effluent limitations. If the time schedule exceeds one year, it must include interim requirements and the dates for their achievement. The interim requirements must include effluent limitations for the pollutants of concern, and actions and milestones leading to compliance with the limitations.); and
 - d. The discharger is required to prepare and implement a pollution prevention plan pursuant to Water Code section 13263.3.
23. This Order meets the Water Code section 13301 and 13385 requirements necessary to set aside mandatory minimum penalties:
- a. Because the Discharger will violate or threatens to violate Permit discharge prohibitions and effluent limitations, this Order is necessary to ensure that the Discharger achieves compliance. This Order establishes tasks and time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.
 - b. The Discharger cannot immediately and consistently comply with established antimony effluent limitations. Unanticipated changes in Plant influent quality caused the past violations and threaten future violations. No alternative water supply is reasonably available to the Discharger, and new or modified measures to control the composition of the waste discharge cannot be designed, installed, and put into operation within 30 calendar days.
 - c. The time schedules in this Order are as short as possible, accounting for the considerable uncertainty in determining effective measures necessary to achieve compliance. This Order requires investigation of several approaches to achieving compliance, anticipating that some combination of measures will be required. The time schedules are based on reasonably expected times needed to test and select from among alternatives, implement alternatives, and construct upgrades. The Regional Water Board may revisit these assumptions as more information becomes available.
- The time schedules exceed one year but provide no more than five years to achieve compliance. This Order requires the Discharger to comply with interim requirements, including an interim effluent limitation, intended to ensure that the Discharger maintains at least its existing performance while completing all required tasks. The interim limitation is based on past performance. It is the 99th percentile of actual measured discharge concentrations.
- d. This Order requires the Discharger to prepare and implement a pollution prevention plan pursuant to Water Code section 13263.3.
24. This Order is an enforcement action and, as such, is exempt from the provisions of the California Environmental Quality Act (Pub. Res. Code § 21000 *et seq.*) in accordance with California Code of Regulations title 14, section 15321.

25. The Regional Water Board notified the Discharger and interested persons of its intent to consider adoption of this Order, and provided an opportunity to submit written comments and appear at a public hearing. The Regional Water Board, in a public hearing, heard and considered all comments.

IT IS HEREBY ORDERED, in accordance with Water Code section 13301, that the Discharger shall cease and desist from discharging and threatening to discharge wastes in violation of the Permit and Order No. R2-1996-0011 by complying with the following provisions:

1. **Interim Effluent Limitation and Requirements.** The Discharger shall comply with the following interim effluent limitation and requirements:
 - a. The Discharger shall comply with an interim antimony MDEL of 43 µg/L. Compliance shall be measured at Monitoring Locations EFF-001 and 002 when discharging directly to the Napa River, and at Monitoring Location EFF-003 when bypassing in accordance with provision 1.b, below. Monitoring Locations EFF-001 through 003 are described in Permit Attachment E.
 - b. If there is inadequate river flow for permitted discharge to the Napa River, the Discharger shall maximize use of available storage and may discharge excess tertiary-treated wastewater to the irrigation fields, Logvy Community Park, and Mount St. Helena Golf Course provided that no runoff occurs from Logvy Community Park or Mount St. Helena Golf Course. The Discharger shall provide notification to Regional Water Board staff when the Discharge becomes aware of the need for such a discharge and submit a report describing each discharge incident within five business days after commencement of the discharge.
 - c. The Discharger shall complete the prescribed actions listed in the tables below in accordance with the time schedules provided therein to achieve compliance with Permit and General Water Reuse Order requirements. The Discharger shall revise deliverables to incorporate any comments the Executive Officer may make to ensure that the deliverables are adequate and acceptably comply with the requirements of this Order. The Discharger shall implement all actions set forth for each deliverable.
 - d. If requested by the Discharger, the Executive Officer may modify the deadlines set forth in the tables below by no more than 6 months if good cause exists, such as factors outside the Discharger's control. Any requests for modifications must be in writing with necessary justification. Any approval must be in writing. To maintain the exception to mandatory minimum penalties described in finding 23, the final compliance date in Table 2, if revised, must be in accordance with Water Code section 13385(j)(3)(C).

Table 1
Time Schedule and Prescribed Actions to Comply with
Permit Discharge Prohibitions and Order No. R2-1996-0011 Prohibitions

Task	Compliance Date
a. Report on Actions to Comply with Prohibitions: Submit a report on progress implementing actions to eliminate the need for bypasses and meet discharge prohibitions. The report shall include the following actions, identified in the June 24, 2013, <i>Bypass Alternatives Investigation Report</i>, and discussed in the June 17, 2014, <i>Status Update Report</i>: 1. Constructing a new 15-20 MG tertiary-treated effluent storage pond; 2. Adding temporary storage capacity; 3. Increasing landscape irrigation; 4. Reducing geothermal inflows to the plant; 5. Identifying and reducing inflow and infiltration; and 6. Increasing effluent pumping capacity. The report shall also describe any additional actions necessary to comply with prohibitions.	March 31, 2015
b. Submit Preliminary Engineering Report and Schedule: Develop engineering plans to implement the actions in Task “a” (unless determined to be impracticable) and submit a Preliminary Engineering Report describing them. The Preliminary Engineering Report shall include preliminary design details, cost estimates, and schedules for each action. The schedules shall include dates for completion and descriptions of the following milestones at minimum: 1. Secure funding, if necessary; 2. Complete final designs or plans; 3. Commence construction or plan implementation; and, 4. Complete construction or plan implementation.	May 31, 2015
c. Implement Actions Described in Report Required in Task “b.”	As specified in schedules submitted in Task “b”
d. Fund, Complete Final Design, and Commence Construction of 15-20 MG Storage Basin:* 1. Provide documentation that full funding to construct the 15-20 MG storage basin is secured. 2. Complete and submit final design for constructing 15-20 MG storage basin. 3. Commence construction of 15-20 MG storage basin and submit documents confirming commencement.	June 30, 2015
e. Complete Construction of 15-20 MG Storage Basin: Complete construction of 15-20 MG storage basin, including all final testing and inspections, and submit documents confirming completion.	July 31, 2015
f. Report on Progress: Report progress toward completing all of the above actions, including those described in the report required in Task “b,” in each monthly self-monitoring report required by Permit Attachment E, section IX.B. Also, describe interim operations to prevent or minimize bypasses.	30 days after end of each calendar month until all actions are completed
g. Comply with Prohibitions: Submit documentation confirming complete implementation of actions scheduled in Task “b;” compliance with Permit Prohibitions A, B, and C; and with General Water Reuse Order Prohibitions A.2 and A.3.	January 31, 2018

* This project is already underway; therefore, this requirement does not dictate the manner of compliance.

Table 2
Time Schedule and Prescribed Actions to Comply with Permit Antimony Effluent Limitations

Task	Compliance Date
a. Submit Pollution Prevention Plan for Antimony: Submit a pollution prevention plan to identify and reduce antimony sources and comply with Permit antimony effluent limitations. The plan shall include dates for completion and a description of efforts to complete, at a minimum, the following: 1. Identification and estimation of the loading from sources and potential sources of antimony in Plant influent, including at a minimum sanitary sewer monitoring in commercial and industrial areas. 2. Analysis of methods to prevent antimony discharges from identified sources, including application of local limits to industrial or commercial dischargers, pollution prevention techniques, public education and outreach, and other innovative and alternative approaches. If geothermal waters are a substantial antimony source, the analysis shall consider metering, monitoring, and surcharging geothermal discharges from commercial and industrial facilities. These dischargers are within the Discharger's ability and authority to control. The analysis shall also identify sources, or potential sources, not within the Discharger's ability or authority to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides. The analysis shall estimate the magnitude of such sources to the extent feasible. 3. Estimation of potential load reductions attainable through the methods identified in Task "a.2". 4. Plan for evaluating the results of the pollution prevention program. 5. Description of the tasks, costs, and time required to investigate and implement the various elements of the pollution prevention plan. 6. Statement of pollution prevention goals and strategies, including priorities for short-term and long-term action, and description of pollution prevention activities for the immediate future. 7. Description of existing pollution prevention programs. 8. Analysis, to the extent feasible, of adverse environmental impacts, including cross media impacts or substitute chemicals, that may result from the implementation of the pollution prevention program. 9. Analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program. 10. Targeted commercial and light industrial facility inspections to ensure implementation of appropriate best management practices. 11. Public education and outreach.	March 31, 2015
b. Submit Antimony Source Inventory and Implement Antimony Control Plan: Submit an inventory of potential antimony sources and begin implementation of the plan developed in Task "a" to reduce antimony sources, including commencement of sanitary sewer monitoring in commercial and industrial areas.	May 15, 2015
c. Report on Progress: Continue to implement the plan described in Task "a" and submit annual status reports that evaluate its effectiveness and summarize planned changes. Reports shall determine whether the program has successfully brought the discharge into compliance with the Permit antimony effluent limitations. If not, the Discharger shall identify in its reports additional measures to further reduce antimony discharges and implement them.	February 28 each year, starting with the annual pollution prevention report due February 28, 2016
d. Additional Actions Plan: If by June 30, 2017, data continue to show violations or threatened violations of Permit antimony effluent limitations, submit a report identifying more aggressive actions to achieve compliance. These actions shall include, at minimum, upgrades to the treatment plant. The report shall include a schedule for investigating and implementing these actions.	August 31, 2017

Task	Compliance Date
e. Implement Additional Actions: Begin implementation of the plan required in Task “d,” and include updates on its status in the reports Task “c” requires.	September 30, 2017
f. Comply with Antimony Effluent Limitations: Submit documentation confirming complete implementation of the plans required by Tasks “a” and “d,” and comply with Permit antimony effluent limitations.	October 31, 2019

2. **Accelerated Monitoring.** If the interim effluent limitation in provision 1.a of this Order is exceeded, the Discharger shall increase its antimony sampling frequency to daily within 24 hours of receiving the results indicating the violation of this Order. The Discharger shall continue accelerated monitoring until two samples collected on consecutive days indicate compliance with the interim effluent limitation. As long as this Order is effective, accelerated monitoring is not required for exceedances of the Permit’s antimony effluent limitations if they do not also exceed the interim effluent limitation in provision 1.a of this Order.
3. **Consequences of Non-Compliance.** If the Discharger fails to comply with the provisions of this Order, the Executive Officer is authorized to take further enforcement action or to request that the Attorney General take appropriate actions against the Discharger in accordance with Water Code sections 13331, 13350, 13385, and 13386. Such actions may include injunctive and civil remedies, if appropriate, or the issuance of an Administrative Civil Liability Complaint for Regional Water Board consideration.
4. **Force Majeure.**[†] If the Discharger is delayed, interrupted, or prevented from meeting the provisions and time schedules of this Order due to a force majeure, the Discharger shall notify the Executive Officer in writing within ten days of the date that the Discharger first knows of the force majeure. The Discharger shall demonstrate that timely compliance with the Order or any affected deadlines will be actually and necessarily delayed, and that it has taken measures to avoid or mitigate the delay by exercising all reasonable precautions and efforts, whether before or after the occurrence of the force majeure.
5. **Mandatory Minimum Penalties.** Violations of the Permit’s antimony effluent limitations shall not be subject to the mandatory minimum penalties required by Water Code sections 13385(h) and (i) as long as the Discharger complies with the antimony requirements of this Order.

If the Discharger fails to comply with this Order, including, but not limited to, the numeric interim effluent limitation or any narrative antimony requirement, the Discharger shall be subject to mandatory minimum penalties for all Permit violations for the entire calendar month during which the non-compliance occurs. If the Discharger returns to compliance,

[†] A “force majeure” is an event that could not have been anticipated by and is beyond the control of the Discharger, including an act of God; earthquake, flood, or other natural disaster (not including the ongoing drought, which is a known condition and a factor leading to this Order); civil disturbance or strike; fire or explosion; declared war within the United States; embargo; or other event of similar import and character. “Force majeure” does not include delays caused by funding, contractor performance, equipment delivery and quality, weather, permitting, other construction-related issues, CEQA challenges, initiative litigation, adverse legislation, or legal matters (with the exception of an injunction issued by a court of law specifically preventing construction from occurring).

Permit violations shall again not be subject to mandatory minimum penalties as of the first day of the month following the return to full compliance.

6. **Effective Date.** This Order shall be effective immediately upon Regional Water Board adoption.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on _____, 2014.

BRUCE H. WOLFE
Executive Officer