

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

AMENDED CEASE AND DESIST ORDER NO. R6V-2004-0039-A01
WDID NO. 6B190107069

COUNTY SANITATION DISTRICT NO. 20 OF LOS ANGELES COUNTY
VIOLATIONS OF WASTE DISCHARGE REQUIREMENTS
BOARD ORDER NO. 6-00-057
FOR
PALMDALE WATER RECLAMATION PLANT

Los Angeles County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Cease and Desist Order

On October 13, 2004, the Water Board adopted Cease and Desist Order No. R6V-2004-0039 (original CDO) requiring County Sanitation District No. 20 of Los Angeles County (District 20 or Discharger) to cease and desist discharging waste in violation of its waste discharge requirements prescribed in Board Order No. 6-00-57 according to a compliance schedule. This Order amends Order No. R6V-2004-0039. All Findings of Order No. R6V-2004-0039 not inconsistent with the Findings and Requirements of this amended Order remain in effect.

2. Reasons for Action

The Discharger has taken actions to comply with the provisions of the original CDO. These actions have resulted in the Discharger achieving compliance with some of the provisions of the cease and desist order. However, the Discharger has failed to comply with other provisions. Additionally, the Discharger will not achieve final compliance with waste discharge requirements as required by the schedules in the original CDO.

The purpose of this amended cease and desist order is to establish revised compliance schedules by which the Water Board expects the Discharger to achieve compliance with waste discharge requirements and interim standards that the Discharger must achieve to minimize, to the maximum extent feasible, the impact of the discharge on ground water, until compliance with waste discharge requirements is achieved. This amended order does not relieve the Discharger from existing liability for violations of the original CDO or from violations of waste discharge requirements.

3. Description of Facilities Proposed by the Discharger

Since the adoption of original CDO the Discharger has adopted a plan (2025 Facilities Plan) for major upgrades and improvements to the Palmdale Water Reclamation Plant. In October 2005, the Discharger certified an environmental impact report analyzing the effects of this project. The 2025 Facilities Plan anticipates two stages of improvements to increase the level and capacity of the treatment facilities and to provide winter storage of the effluent that exceeds the agronomic needs of the crops in the effluent management site. The first of the two phases (Stage V) is the only one pertinent to this

Order. This stage involves upgrading and expanding the capacity of the existing plant by constructing: 1) conventional activated sludge treatment units; 2) nitrification and denitrification units; 3) tertiary treatment filters; and, 4) expanded solids processing facilities. Stage V treatment facilities will be constructed on land currently owned by the Discharger. Additionally, the Discharger will construct three synthetic-lined storage reservoirs and pump stations and force mains to move effluent from the treatment plant to the storage reservoirs. These reservoirs will contain wastewater that is treated during the winter season that exceeds the immediate irrigation needs of the crops being grown at the effluent management site.

4. Evaluation of the Time Needed by the Discharger to Construct New Facilities

The Water Board retained the services of a professional engineer to independently evaluate the schedules that District 20 requested be incorporated into this revised Order. These schedules are for the design and construction of the storage reservoirs, pump stations, force mains and upgrades to the wastewater treatment facility. The purpose of this analysis was to determine how District 20's schedule for implementing certain facilities compared to "industry standards" for implementing similar facilities.

Table 1 compares

- 1) The schedule that the Discharger is currently proposing;
- 2) The schedule that the Discharger originally proposed in 2004 (rejected by the Water Board);
- 3) The schedule that was adopted by the Water Board in the 2004 cease and desist order; and
- 4) The engineer's estimate of industry standards

Table 1 - Times to Complete New Facilities

Facility (Stage V)	Time to Complete (months) and Completion Date			
	Discharger's Current Proposal	Discharger's Proposal for the 2004 CDO	Schedule in Adopted 2004 CDO	Independent Engineer's Estimate
15 MGD Treatment Facility				
Design	24 10/30/07	24 7/31/07	24 7/31/07	23 – 33
Construct	39 7/25/11	23.5 10/15/09	24 10/31/09	32 – 43
Total	Total 63	Total 47.5	Total 48	Total 55 – 76
Storage Impoundments				
Design	24 12/31/07	Same as the time to design (7/31/07) treatment facilities		12.6
Construct First Impoundment	17.5 12/1/09	Same as the time to construct (10/15/09) treatment facilities	11.5 10/15/08	18.4
In –service	2/1/10		N/A	N/A
Construct Remaining Impoundments	6.5 6/18/10			N/A

Pump Station			
Design	12/31/07	Incorporated into the time to design (8/1/05) and construct (10/15/09) treatment facilities	N/A
Construct First	17.5		12
	12/1/09		
In –service	2/1/10		N/A
Construct Second	5.5		N/A
	5/20/10		
Force Main			
Design	12/31/07	Incorporated into the time to design (8/1/05) and construct (10/15/09) treatment facilities	N/A
Construct	17.5		12
	12/1/09		
In –service	2/1/10		N/A

This analysis indicates that schedules for design and construction of the treatment facilities initially proposed by the Discharger in 2004, and the schedule adopted by the Water Board in the existing cease and desist order were both shorter than the range of industry standards for this type of facility. The compliance schedule currently proposed by the Discharger is within the range of industry standard.

The completion of the first impoundment, pump station and force main are the critical facilities to reducing the amount of nitrogen that is applied at rates which exceed the agronomic rates of the crops at the effluent management site. The time allotted for construction of the first storage impoundment is less than industry standards. The Discharger's schedules for constructing the pump station and force main are longer than industry standards. However, the critical path for the three facilities is the schedule for construction of the first storage impoundment. The Discharger is already 15 months into the 24-month design period. Therefore, it is not reasonable to expect the Discharger to expedite this activity at this point in the process.

5. Basis for Changes to Interim Standards

a. Elimination of Interim Effluent Nitrogen Standard

The Discharger's existing treatment facility was not designed to reduce nitrogen in the influent. One of the interim standards required the Discharger to implement two operational changes that were intended to reduce effluent nitrogen concentrations. The changes did not achieve the expected results. In addition, influent nitrogen concentration levels have increased. As a result, the Discharger was unable to achieve the 28 mg/L interim effluent standard (Corrective Measure I.A.) and there is no basis for establishing a new interim effluent standard.

b. Modification of Interim Requirements Controlling the Amount of Nitrogen that is Allowed to Percolate Below the Root Zone

Interim limits are needed to control the amount of nitrogen that is applied to the effluent management site at rates that exceed the nitrogen agronomic rate to minimize the adverse effect on ground water. Interim limits are necessary to ensure

that the Discharger uses the available land at the effluent management site in a manner that maximizes nitrogen uptake by crops. Because of the higher than expected nitrogen concentration of the effluent, effluent applied at water agronomic rates to grain crops contains more nitrogen than the agronomic needs of this crop. Therefore, it is necessary to impose this interim limit on nitrogen applied over the entire effluent management site (the original CDO interim limits only applied to a portion of the site).

The interim requirements (see Table 2) are based on the loading predicted in the 2007 annual cropping plan with adjustments for more representative conditions. The plan assumed "best case" values for evapotranspiration, crop production, rainfall, and effluent nitrogen concentrations. The adjustments included in the values in Table 2 do not account for variations in rainfall or effluent nitrogen concentrations. This amendment provides for modification of the standard (either increases or decreases) if effluent quality varies from the estimated level or if the area experiences rainfall greater than that used to develop to the projected loading.

Additionally, the Discharger plans to construct storage facilities by February 1, 2010. After this date, the Discharger will be able to stop irrigating crops at rates that exceed the water agronomic needs of the crops. As part of normal crop rotation, the Discharger will be using winter grain on some fields. Winter grain does not have the ability to use all the nitrogen in the secondary effluent produced by the Discharger. Therefore, during 2010 there will still be some discharge of nitrogen above the nutrient needs of the crops; however, it will be lower than in prior years.

6. Modification of Date to Achieve Compliance with Waste Discharge Requirements

The original cease and desist order required the Discharger to cease discharges in violation of waste discharge requirements by October 15, 2008. This requirement was based on the projected time needed to complete the infrastructure to store all the effluent that exceeded the water agronomic application rate.

District 20 now predicts a June 18, 2010 completion date for the storage impoundments, pump stations and force main needed to eliminate the discharge of effluent at rates which exceed the water agronomic crop needs. In addition, District 20 intends to modify its farming practices to ensure that it does not irrigate at rates which exceed the nutrient needs of the crops between June 18, 2010 and August 2011, when the treatment plant upgrades are complete. During this period, District 20 will still be irrigating with secondary effluent. Additionally, due to the need to rotate fields out of alfalfa to maintain viable production rates, between 12% and 25% of the fields will be planted with a combination winter grain and spring sudan grass (or just a spring/summer sudan grass crop) rather than alfalfa. Winter grain crops are not able to use all the nitrogen in the effluent at higher effluent nitrogen concentrations. However, the spring sudan grass will use any residual nitrogen in the root zone provided that District 20 does not irrigate the winter grain crops at rates which, when combined with rainfall, exceed the water needs of the crops.

7. Timing to Obtain New or Amended Waste Discharge Requirements or other Approvals

It is unlikely that this Water Board will grant the Discharger additional time to comply with the provisions of this Order if the delays are attributed to the failure of the Discharger to apply for and secure necessary permits in sufficient time to design the necessary facilities to achieve compliance with permit conditions.

8. Submittal of Technical Reports

Pursuant to California Water Code (CWC) section 13267, subdivision (a), the Water Board may investigate the quality of any waters of the state within its region "in connection with any action relating to any plan or requirement authorized by this division." The need for a technical report pursuant to CWC section 13267, subdivision (b) must bear a reasonable relationship to the benefits to be obtained from the report. In compliance with CWC section 13267, subdivision (b), the Water Board is required to provide a written explanation with regard to the need for the report and shall identify the evidence that supports requiring the person to provide the report. In this case:

- a. The Discharger is in violation of its waste discharge requirements and the required information is needed to evaluate the Discharger's interim compliance efforts.
- b. The Discharger must evaluate possible changes to its disposal practices in 2010 and 2011 in order to determine the most effective method to minimize violations of its waste discharge requirements until final compliance is achieved. The Water Board needs this information to establish additional interim compliance standards.
- c. The Water Board needs periodic reports to track the progress of the Discharger in implementing facilities it needs to comply with waste discharge requirements.

9. California Environmental Quality Act

This enforcement action is being taken to enforce provisions of the California Water Code and, as such, it is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15308, Chapter 3, Division 6, Title 14, California Code of Regulations.

10. Notification of Interested Parties

The Water Board notified the Discharger and interested parties of a public hearing scheduled for the Regional Board meeting on March 14, 2007. During the public hearing conducted during this meeting, the Water Board heard and considered all comments related to the proposed Order.

11. Petitions

Any person adversely affected by this action of the Regional Board may petition the State Water Resources Control Board for review of this action. The State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, CA

95812-0100 must receive the petition within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED that, in accordance with Section 13301 of the California Water Code, the Discharger shall cease and desist from violating and threatening to violate Discharge Specifications described in Finding No. 2 of Order No. R6V-2004-0039, shall achieve compliance with waste discharge requirements according to the following schedule, and shall comply with interim requirements. Additionally, the Discharger shall, in accordance with Section 13267 of the California Water Code, submit technical reports as required.

I. Relationship of this Order with Order No. R6V-2004-0039

- A. Immediate Corrective Measure I.A. (achieve a running monthly annual average of 28 mg/L total effluent nitrogen concentration) is rescinded.
- B. Immediate Corrective Measures I.B – I.F. (annual reductions in the amount of excess nitrogen discharged) are rescinded.
- C. Immediate Corrective Measure I.G is rescinded.
- D. Final Compliance Section II is rescinded.
- E. Section IV.A (Reporting) is retained with the exception that the report submission dates are modified as indicated in Section IV.B.1. of this order and Section IV.A.3. is replaced by Section IV.B.2. of this Order.
- F. Time Extensions for Compliance Section V is rescinded.
- G. The remainder of Order No. R6V-2004-0039 remains in effect.

II. Interim Corrective Measures

- A. The Discharger must take actions to limit the amount of excess nitrogen that it discharges at the effluent management site to less than or equal to those amounts listed in Table 2 (below) of this Order. The Water Board intends to measure compliance with this excess nitrogen standard by comparing it to the amount of nitrogen applied to each field in the effluent management site (Sections 9 – southern half, 10, 14, 15 and 16) minus the amount of nitrogen taken up by the crops and minus the amount that is lost to the atmosphere.

Table 2: Allowable Excess Nitrogen

Calendar Year	Amount of Excess Nitrogen (tons)
2007	129.5
2008	129.5
2009	129.5
2010	117.5

The following adjustments are applied to the values in Table 2 based on the actual annual rainfall and the actual annual average effluent nitrogen concentration measured during the calendar year.

1. If the annual average effluent nitrogen concentration varies from 34 mg/L the excess nitrogen limit in the preceding table is modified and replaced (either increased or decreased) based on the following equation:

For calendar years 2007, 2008 and 2009:

$$129.5 \text{ (tons)} + [(N_c - 34) (F) (8.34)] / 2000$$

For calendar year 2010:

$$117.5 \text{ (tons)} + [(N_c - 34) (F) (8.34)] / 2000$$

Where:

N_c = annual average effluent total nitrogen concentration in mg/L

F = annual effluent flow (million gallons) that is applied to trees and crops other than alfalfa or sudan grass

2. If the annual precipitation in any calendar year exceeds 5.2 inches, as recorded by Department of Water Resources, California Irrigation Management Information System Station No. 197 (Palmdale), the allowable excess nitrogen shown in the preceding table is modified based on the following equations:

Table 3 – Allowable Increases to Table 2 Values

Rainfall	Increase in Table 2 values equals
Greater than 5.2 in. up to and including 7.14 in.	$[(15) (\text{actual rainfall} - 5.2 \text{ in.})] / 1.94 \text{ in.}$
Greater than 7.14 in. up to and including 11.29 in.	$15 + [(8) (\text{actual rainfall} - 7.14 \text{ in.})] / 4.15 \text{ in.}$
Greater than 11.29 in. up to and including 15.54 in.	$23 + [(9) (\text{actual rainfall} - 11.29 \text{ in.})] / 4.25 \text{ in.}$
Greater than 15.54 in.	32

- B. The Discharger may demonstrate compliance with the requirement in Section II.A. above by continued operation of agricultural practices in conformance with the annual cropping plans which are required to be submitted by the waste discharge requirements or by another method to ensure that agronomic crop irrigation practices are used in the reuse areas and effluent disposal is limited to the maximum extent practicable in the land application areas until facilities necessary to achieve full compliance are completed. In addition, the Discharger anticipates that it will have effluent storage facilities completed and in operation

by February 1, 2010 that will eliminate the need to irrigate crops at rates that exceed the water needs of the crops.

In the alternative, the Discharger may achieve compliance by another equally effective means. If the alternative involves initiating a new discharge of waste or significant change to an existing permitted discharge, the Discharger must submit a complete report of waste discharge at least 140 days in advance of initiating the new discharge or change in an existing discharge.

III. Final Compliance

The Discharger shall achieve final compliance with Order No. 6-00-57, as amended, (no discharges of nitrogen to ground water that creates a condition of pollution or that is in violation of Basin Plan water quality objectives including the non-degradation objective unless such degradation is authorized by the Water Board pursuant to State Water Resources Control Board Resolution 68-16), by June 18, 2010.

The Discharger may demonstrate compliance with this requirement by: a) irrigating crops at the effluent management site during the 2010 summer season at rates that do not exceed either the water or nutrient agronomic rates; and b) completing the storage impoundments, force main and pump stations as described in Findings No. 3 and 4 of this Order and operating these facilities in a manner that eliminates the need for the Discharger to irrigate crops in the effluent management area in excess of the water or nutrient agronomic needs of the crops.

In the alternative, the Discharger may achieve compliance by another equally effective means. If the alternative involves initiating a new discharge of waste or significant change to an existing permitted discharge, the Discharger must submit a complete report of waste discharge at least 140 days in advance of initiating the new discharge or change in an existing discharge.

IV. Time Extensions for Compliance

The compliance dates required in this Order reflect schedules that incorporate best case assumptions regarding funding, land acquisition, equipment delivery and quality, weather, permitting, and other related issues. The schedules do not account for delays reasonably outside the Discharger's control, or for unforeseen obstacles that might cause delays for the Discharger. Despite the Discharger's efforts to comply, a number of factors may affect the Discharger's ability to achieve compliance within the required schedule. Furthermore, actions reasonably outside the Discharger's control, or unforeseen obstacles, might also prevent the Discharger from complying with interim standards, even though those measures already account for varying rainfall and effluent nitrogen concentrations.

If the Discharger faces circumstances which are not reasonably within its control that will delay final compliance, the discharger may request from the Water Board additional time to achieve final compliance. Similarly, if the Discharger faces

circumstances which are not reasonably within its control that will interfere with the Discharger's compliance with the interim standards required in this Order, the Discharger may request partial or complete relief from compliance with interim standards. If additional time for compliance, or relief from interim standards is requested by the Discharger, the Water Board Executive Officer and the Discharger will meet and confer to discuss the Discharger's request. Thereafter, if requested by the Discharger, the Water Board Executive Officer will place the Discharger's request(s) on the agenda for the next regularly scheduled meeting in the southern portion of the region (or a later meeting if the Discharger agrees) for consideration by the Water Board. The Water Board will consider the Discharger's request(s) based, at a minimum, upon the facts contained in the request(s), and whether and to what extent the delay or other circumstance was reasonably outside the Discharger's control.

V. Reporting Requirements

Pursuant to Section 13267 of the California Water Code, the Discharger must submit quarterly status reports according to the following schedule and the reports must contain the following information:

A. Schedule for submittal of reports

Table 4: Quarterly Reports

Quarter	Period Covered	Due Date
First Quarter	January - March	April 30
Second Quarter	April - June	July 31
Third Quarter	July - September	October 31
Fourth Quarter	October - December	January 31

B. Cease And Desist Order No. R6V-2004-0039 Reporting Requirement IV.A.3 is replaced by the following:

Provide an analysis of the progress made to date towards completing the facilities described in Finding No. 4 of this order or alternative methods of compliance. The analysis must include a statement indicating whether or not the progress to date is sufficient to complete the facilities according by the dates listed in Finding No. 4 of this order and to comply with the tasks and compliance dates in Sections I, II, and III. of this order. If non-compliance is noted, the report must include the reasons for the actual or expected non-compliance, steps being implemented by the Discharger to minimize the period of non-compliance or to make-up the lost time, and an estimate of the additional time needed to achieve compliance and a detailed description of the reason(s) that this additional time is warranted; and,

C. Each second quarter report must include a statement as to whether the Discharger intends to comply with Section II.A. of this Order during the following calendar year by continuing agricultural practices in conformance with the annual cropping plan or by an alternative compliance method. The Water Board

intends to use these reports to evaluate the Discharger's plan to achieve compliance with Section II.A. of this Order.

If the Discharger proposes an alternate compliance method as provided for in Section II.B. of this Order, it must include in this report a detailed description of the alternate compliance method, documentation as to why it believes the alternate compliance method will comply with the interim standard, a listing of the approvals/permits that will be needed to implement this alternate compliance method and the timing to obtain such approvals/permits, the timing of any required California Environmental Quality Act compliance, and a time schedule for completing facilities necessary to implement this alternative compliance method.

Failure to comply with the terms or conditions of the Order may result in additional enforcement action by the Regional Board. The Executive Officer is authorized to initiate, as needed, referral of this matter to the Attorney General of the State of California for the imposition of Civil Liability for failure to comply with this Order, injunctive relief, or for any other legal action, as he may deem appropriate.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on xxxx, 2007.

HAROLD J. SINGER
EXECUTIVE OFFICER