

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. 98-020

NPDES NO. CA0055824

WASTE DISCHARGE REQUIREMENTS
for
CITY OF LOS ANGELES, DEPARTMENT OF WATER AND POWER
(Castaic Power Plant)

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. City of Los Angeles, Department of Water and Power (hereinafter Discharger), discharges wastes under waste discharge requirements contained in Order No. 93-012 (NPDES Permit No. CA0055824), adopted by this Board on April 5, 1993.
2. The Discharger has filed a report of waste discharge and has applied for renewal of its waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit.
3. The Discharger operates Castaic Power Plant, a hydroelectric generating station, located at 37700 Templin Highway (about 5 miles east of Interstate 5), Castaic, Los Angeles County, California. The facility discharges up to 13.2 million gallons per day (gpd) of wastewater to Elderberry Forebay, ultimately to Santa Clara River. The wastewater discharged consists of the following:

Generator and turbine cooling water (Units 1, 2, 3, 4, 5, and 6)	12,402,000 gpd
Cooling water (Unit 7)	94,300 gpd
Compressor cooling water	691,200 gpd
Mechanical turbine shaft seals water (Units 1, 2, 3, 4, 5, and 6)	37,200 gpd
Compressor and air compressor after cooler cooling water	3,500 gpd
Draft tubes dewatering sump water	4,000 gpd
Seal drain sump water	3,000 gpd
Gallery drain sump water	2,100 gpd
Industrial use water	2,200 gpd

The mechanical turbine shaft seals water and a portion of the industrial use water (total flow of 37,700 gpd) pass through an oil/water separator prior to discharge to Elderberry Forebay.

Approximately 2.6 billion gallons per day of water from Pyramid Lake is released to Elderberry Forebay for the production of electrical energy. About 1.1 billion gallons per

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day of water is pumped back from Elderberry Forebay to Pyramid Lake through Discharge Serial No. 001 (Latitude 34°38'49", Longitude 118°45'43") for on-peak utilization and 1.5 billion gallons per day of water from Elderberry Forebay is released to Castaic Lake through Discharge Serial No. 002 (Latitude 34°33'34", Longitude 118°37'53"). The attached map shows the location of the power plant and the discharge points.

Pyramid Lake is tributary to Santa Clara River via Piru Creek and Lake Piru. Castaic Lake is tributary to Santa Clara River via Castaic Creek.

4. Approximately 6,000 gallons per day of domestic sewage is disposed of by means of a subsurface disposal system (septic tanks/leach field). This discharge is regulated by requirements prescribed by this Board under separate requirements.
5. The Board adopted a revised Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) on June 13, 1994. The Basin Plan contains water quality objectives for the Santa Clara River Watershed. Due to the nature of the discharge, certain priority pollutants are not expected to be present in the discharge; therefore, no numerical effluent limitations for these constituents are needed to protect the receiving waters and the beneficial uses. Whole effluent toxicity limitations and narrative limitations to comply with all water quality objectives are provided in lieu of such numerical limitations.
6. The beneficial uses of the receiving waters are: (i) Elderberry Forebay - municipal and domestic water supply, industrial service and process supplies, agricultural supply, groundwater recharge, freshwater replenishment, hydropower generation, contact and non-contact water recreation, warm freshwater habitat, wildlife habitat, preservation of rare and endangered species, and spawning, reproduction and/or early development of fish; (ii) Castaic Lake - municipal and domestic water supply, industrial service and process supplies, agricultural supply, groundwater recharge, freshwater replenishment, hydropower generation, contact and non-contact water recreation, warm freshwater habitat, cold freshwater habitat (intermittently), wildlife habitat, preservation of rare and endangered species, and spawning, reproduction and/or early development of fish; and (iii) Pyramid Lake - municipal and domestic water supply, industrial service and process supplies, agricultural supply, groundwater recharge, freshwater replenishment (potentially), hydropower generation, contact and non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, and preservation of rare and endangered species.
7. The requirements contained in this Order are based on the Basin Plan, the existing permit, the doctrine of anti-backsliding, and best engineering judgements; and, as they are met, will be in conformance with the goals of the Basin Plan and will protect and maintain existing beneficial uses of the receiving waters.

8. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code in accordance with Water Code Section 13389.

The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public hearing heard and considered all comments pertaining to the discharge and to the tentative requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect at the end of ten days from the date of its adoption, provided the Regional Administrator of the Environmental Protection Agency, EPA, has no objections.

IT IS HEREBY ORDERED that the City of Los Angeles, Department of Water and Power, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

I. Effluent Limitations

1. Wastes discharged shall be limited to those described hereinabove only, as proposed.
2. The discharge of an effluent from Discharge Serial Nos. 001 and 002 in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations</u>	
		<u>30-Day Average</u>	<u>Daily Maximum</u>
Settleable solids ^{1/}	ml/L	0.1	0.3
Suspended solids ^{1/}	mg/L	50	150
Turbidity ^{1/}	NTU	5	25
Oil and grease ^{2/}	mg/L	10	15
BOD ₅ 20°C ^{2/}	mg/L	--	10

^{1/} Does not apply during periods of storm runoff.
^{2/} Applies only to the effluent from oil/water separator.

3. Pass-through or uncontrollable discharges of polychlorinated biphenyls (PCBs) shall not exceed daily average concentrations of 14 ng/L.
4. Toxicity Limitations:

The acute toxicity of the effluent shall be such that the average survival in undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

If the effluent consistently exceeds acute toxicity limitation, a toxicity identification evaluation (TIE) is required. The TIE shall include all reasonable steps to identify the source(s) of toxicity. Once the source of toxicity is identified, the Discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

II. Receiving Water Limitations

1. The waste discharged shall not cause the following to be present in the receiving waters:
 - a. The temperature at any time or place to be altered by more than 5°F above the natural temperature; but at no time be raised above 70°F as a result of waste discharged;
 - b. The pH to be depressed below 6.5 or raised above 8.5, and the ambient pH levels to be changed more than 0.5 units from natural conditions as a result of waste discharged;
 - c. The dissolved oxygen to be depressed below 7 mg/L as a result of waste discharged;
 - d. Toxic pollutants at concentrations that will bioaccumulate in aquatic life to levels that are harmful to aquatic life or human health;
 - e. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses;
 - f. Chemical substances in amounts that adversely affect any designated beneficial uses;
 - g. Visible floating materials, including solids, liquids, foams, and scum;

- h. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving waters or on objects in the water;
 - i. Suspended or settleable materials in concentrations that cause nuisance or adversely affect beneficial uses;
 - j. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses;
 - k. Turbidity increases to the extent that such increases cause nuisance or adversely affects beneficial uses;
 - l. Substances that result in increase of BOD₅20°C that adversely affect beneficial uses; and,
 - m. Concentrations of toxic substances that are toxic to, or cause detrimental physiological response in, human, animal, or aquatic life.
2. The waste discharged shall not alter the color, create a visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters.
 3. The waste discharged shall not degrade surface water communities and population including vertebrate, invertebrate, and plant species.
 4. The waste discharged shall not damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities, nor overload their design capacity.
 5. The waste discharged shall not cause problems associated with breeding of mosquitos, gnats, black flies, midges, or other pests.

III. Requirements and Provisions

1. Discharge of wastes to any point other than those specifically described in this Order is prohibited and constitutes a violation thereof.
2. This Order includes the attached "Standard Provisions and General Monitoring and Reporting Requirements. If there is any conflict between provisions stated hereinbefore and attached "Standard Provisions", those provisions stated hereinbefore prevail.

3. This Order includes the attached Monitoring and Reporting Program. If there is conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the former prevail.
4. This Order may be modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR Part 122.44, 122.62, 122.63, 122.64, 125.62, and 125.64.

IV. Expiration Date

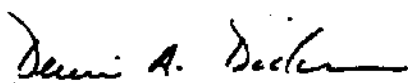
This Order expires on February 10, 2003.

The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

V. Rescission

Order No. 93-017, adopted by this Board on April 5, 1993, is hereby rescinded.

I, Dennis A. Dickerson, 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, Los Angeles Region, on March 2, 1998.



DENNIS A. DICKERSON
Executive Officer

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM NO. 6112
for
CITY OF LOS ANGELES, DEPARTMENT OF WATER AND POWER
(Castaic Power Plant)
(CA0055824)**

I. REPORTING REQUIREMENTS

The Discharger shall implement this monitoring program from the effective date of this Order. The first monitoring report under this program is due by July 15, 1998.

Monitoring reports shall be submitted by the dates in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
January - March	April 15
April - June	July 15
July - September	October 15
October - December	January 15
Annual Report	March 1

If there is no discharge, the report shall so state.

II. EFFLUENT MONITORING REQUIREMENTS

1. A sampling station shall be established for each point of discharge and shall be located where representative samples of that effluent can be obtained.
2. The detection limits employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the discharger can demonstrate that a particular detection limit is not attainable and obtains approval for a higher detection limit from the Executive Officer. At least once a year, the discharger shall submit a list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures.
3. This Regional Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

January 5, 1998
Revised February 20, 1998

4. Effluent Monitoring Program

The following shall constitute the effluent monitoring program:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total waste flow	gpd	—	monthly
Temperature	°F	grab	quarterly
pH	pH units	grab	quarterly
Settleable solids	mL/L	grab	quarterly
Suspended solids	mg/L	grab	quarterly
Turbidity	NTU	grab	quarterly
Oil and grease ^{1/}	mg/L	grab	quarterly
BOD ₅ 20°C ^{1/}	mg/L	grab	quarterly
Polychlorinated biphenyls (PCBs) ^{2/}	µg/L	grab	annually
Acute toxicity ^{3/}	% survival	grab	annually ^{4/}

^{1/} Applies only to the effluent from oil/water separator.

^{2/} A statement that no PCBs were used and/or stored in the facility may be submitted in lieu of the analyses.

^{3/} By the method specified in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms"- March 1985 (EPA/600/4-85/013). Submission of bioassay results should include the information noted on pages 45-49 of the "Methods". The fathead minnow (Pimephales Promelas) shall be used as the test species.

^{4/} If the annual toxicity test yields a result in non-compliance with the limitations, then the frequency of analysis shall increase to monthly until at least three consecutive test results have been obtained and full compliance with Effluent Limitations 1 - 4 have been demonstrated, after which the frequency of analysis shall revert to annually. Results of toxicity tests shall be included in the first monitoring report following sampling. This test may be discontinued if two consecutive results are in compliance with the limitations.

Results of quarterly and annual analyses shall be reported in the appropriate quarterly monitoring report.

Ordered by: Dennis A. Dickerson
 DENNIS A. DICKERSON
 Executive Officer

Date: March 2, 1998