

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

FACT SHEET
APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND
WASTE DISCHARGE REQUIREMENTS
TO DISCHARGE TO STATE WATERS

Permittee Name: Coachella Sanitary District Public Notice No.: 7-00-11
NPDES Permit Number: CA0104493 Board Order No.: 00-032
Mailing Address: City of Coachella
1515 6th Street
Coachella, CA 92236
Location 87-075 Avenue 54
Coachella, CA 92236
Contact Person: Byron Woosley, City Manager
Telephone: (760) 398-3502

I. Status of Permit

On March 9, 2000, Coachella Sanitary District, owner/operator (hereinafter referred to as the discharger), submitted an application to update its waste discharge requirements and to renew its permit to discharge wastewater under the National Pollutant Discharge Elimination System (NPDES). This permit will combine two NPDES permits (CA0105031 and CA0104493) into one permit CA0104493. NPDES permit number CA0105031 will be terminated for the wastewater treatment facility located at the address mentioned above.

II. Facility Description

The discharger owns and operates a wastewater collection and disposal system and provides a sewerage service to the City of Coachella. Annual average flow to the facility is around 1.4 million-gallons-day (MGD). Annual average discharge to the receiving waters is 1.0 mgd. The present design capacity is 2.4 mgd. Treated wastewater is discharged into the Coachella Valley Storm Water Channel located in the NW ¼ of Section 15, T6S, R8E, SBB&M, as shown on the attached site map.

Raw sewage is first collected in a holding tank and later passed through a comminutor to break up the solid particles. Wastewater is then pumped either to the activated sludge process train or the oxidation pond process train.

The activated sludge treatment capacity is 1.5 MGD and consists of two process units. Each unit consists of an aeration, secondary clarifier, reaeration and aerobic digestion section and is designed for 0.75 MGD. Wastewater is pumped into the aeration section and then flows into the secondary clarifier. Clarified effluent is measured at the Parshall flume,

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located in between the two activated sludge tanks, prior to being treated with chlorine for disinfection in a chlorine contact chamber. At the end of this tank, dechlorination is conducted using sodium meta-bisulfite solution. Treated and disinfected effluent is then released into the Coachella Valley Storm Water Channel.

Sludge is pumped from the secondary clarifier into the reaeration section, which then flows into the aeration section. A portion of the sludge in the reaeration basin is wasted into the aerobic digester section. From the aerated digester section, the sludge is pumped to eight sludge drying beds for drying. The total area of the drying beds is about five acres. Each bed is two feet deep and separated from the adjacent bed by six feet. The usual practice at the plant is to allow the sludge to dry for one year. After complete drying, the sludge is disposed of at the facility by incorporating it into the on-site soil. All sludge disposal at the facility shall comply with the Federal Regulations 40 CFR Part 503.

The oxidation pond process consists of two ponds and the designed treatment capacity is 0.9 mgd. Each pond is equipped with five aerators. Wastewater is pumped into the first pond and then flows into the second pond for additional treatment. The effluent is measured at a parshall flume and then enters a chlorine contact chamber for disinfection. After disinfection, sodium meta-bisulfite is used for dechlorination prior to discharge into the stormwater channel.

The discharger periodically discharges treated wastewater to irrigate pasture land located in the NE ¼ of Section 16, T6S, R8E, SBB&M. This discharge is presently regulated under Board Order No. 90-033.

III. Description of Discharge

All wastewater discharged at this facility is discharged either through Outfall 001 to the Coachella Valley Storm Water Channel or to irrigate on-site pasture lands. The discharge consists primarily of secondary and equivalent to secondary treated domestic wastewater.

IV. Receiving Water

The receiving water for Outfall 001 is the Coachella Valley Storm Water Channel. Downstream of the facility, the Coachella Valley Storm Water Channel conveys flows to the Salton Sea.

The beneficial uses of waters in the Coachella Valley Storm Water Channel are:

- a. Fresh Water Replenishment for Salton Sea (FRSH)
- b. Water Contact Recreation (REC I) ¹
- c. Non-Contact Water Recreation (REC II)¹
- d. Warm Water Habitat (WARM)
- e. Wildlife Habitat (WILD)
- f. Preservation of Rare, Endangered or Threatened Species (RARE)²

¹ Unauthorized Use

² Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway (s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Game on its own initiative and/or at

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V. Description of Discharge

a. Permit Application Summary

The following table summarizes the discharge characteristics (activated sludge effluent) of Outfall 001 as reported in the NPDES application dated March 9, 2000.

Lowest Monthly Average pH	6.73
Highest Monthly Average pH	6.77
Annual Average Value BOD	14.6 mg/L
Lowest Monthly Average Value BOD	12.0 mg/L
Annual Average Value TSS	7.18 mg/L
Highest Monthly Average Value TSS	8.2 mg/L
Settleable Matter Annual Average Value	.01 ml/L
Settleable Matter Lowest Monthly Average Value	.01 ml/L
Settleable Matter Highest Monthly Average Value	.01 ml/L

b. Discharge Monitoring Report (DMR) Data

A summary of DMR data is given in Table 1. This data was taken from February 1999 through January 2000.

VI. Proposed Technology-Based Effluent Limitations

Regulations promulgated at 40 CFR §125.3(a)(1)(ii) require technology-based effluent limits for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards. In addition, 40 CFR §133.105 describes the minimum level of effluent quality attainable by facilities eligible for treatment equivalent to secondary treatment.

Limits were developed for Coachella Sanitary District based on evaluation of the permit application, discharge monitoring reports, basin plan and technology based limits. Technology based limits for secondary and equivalent to secondary treatment were set for the two process trains used at this facility.

the request of the Regional Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Board

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a. Secondary Treatment Standards

The activated sludge process provides a level of effluent quality attainable by secondary treatment standards.

<u>Constituents</u>	<u>Unit</u>	30-Day ³ <u>Arithmetic Mean Discharge Rate</u>	7-Day ⁴ <u>Arithmetic Mean Discharge Rate</u>
20° C BOD ₅ ⁵	mg/L	30	45
Suspended Solids	mg/L	30	45

The 30-day average percent removal of the pollutant parameters BOD₅ and suspended solids shall not be less than 85 percent.

The hydrogen ion (pH) of the effluent shall be maintained within the limits of 6.0 to 9.0

b. Equivalent to Secondary Treatment Standards

The oxidation pond process provides a level of effluent quality attainable by equivalent to secondary treatment standards.

<u>Constituents</u>	<u>Unit</u>	30-Day <u>Arithmetic Mean Discharge Rate</u>	7-Day <u>Arithmetic Mean Discharge Rate</u>
20° C BOD ₅	mg/L	45	65
Suspended Solids	mg/L	45	65

The 30-day average percent removal of the pollutant parameters BOD₅ and suspended solids shall not be less than 65 percent.

The hydrogen ion (pH) of the effluent shall be maintained within the limits of 6.0 to 9.0

VII. Proposed Water Quality-Based Effluent Limitations

Effluent discharged from this facility could contain pollutants in sufficient quantities to affect receiving water quality. Pursuant to Section 13263, Article 4, Chapter 4 of the Porter

³ 30-Day Mean – The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days as specified in the Monitoring and Reporting Program.

⁴ 7-Day Mean – The arithmetic mean of pollutant parameter values of samples collected in a period of 7 consecutive days as specified in the Monitoring and Reporting Program.

⁵ Biochemical Oxygen Demand

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Cologne Water Quality Control Act, the Regional Boards are required to issue Waste Discharge Requirements for discharges that could affect the quality of the State's waters. Furthermore, Federal Regulation 40 CFR 122.1 requires the issuance of NPDES permits for pollutants discharged from a point source to the waters of the United States. The draft discharge requirements contain specific discharge limitations for selected pollutants.

<u>Constituents</u>	<u>Basis for Limitations</u>
Biochemical Oxygen Demand (BOD)	Discharge is to waters that support aquatic life, which is dependent on oxygen. Organic matter in the discharge may consume oxygen as it breaks down.
Total Suspended Solids (TSS)	High levels of suspended solids can adversely impact aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of suspended solids.
Settleable Matter	High levels of settleable matter can have an adverse effect on aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of settleable matter.
Hydrogen Ion (pH)	pH is a measure of Hydrogen Ion concentration in the water. A range specified between 6.0 to 9.0 ensures suitability of biological life. This limitation has been adopted in the Basin Plan of the Region
Toxicity	Toxicity testing ensures that the effluent does not contain metals, chemicals, pesticides or other constituents in concentration toxic to aquatic life.
Fecal Coliform	These limits are required by the Basin Plan for waters designated for water contact recreation (REC1).
Flow	The present design capacity is 2.4 mgd.
Chlorine	High levels of chlorine are harmful to aquatic life.

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VIII. Proposed Effluent Limitations

Table 2 summarizes the proposed effluent limitations for Outfall 001. Proposed effluent limitations are based on secondary and equivalent to secondary treatment standards and Colorado River Basin Plan water quality standards.

IX. Monitoring Requirements

Monitoring for those pollutants expected to be present in the Outfall 001 will be required as shown on the proposed monitoring and reporting program and as required in the "*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*" adopted March 2, 2000

X. Special Conditions

Coachella Sanitary District will be required to prepare Best Management Practices (BMP) plan on the chlorination and dechlorination processes to address the potential for toxicity in the effluent.

XI. Information Sources

While developing effluent limitations and receiving water limitations, monitoring requirements, and special conditions for the draft permit, the following information sources were used:

- (1) EPA NPDES Application Forms 1 and A dated March 9, 2000.
- (2) State Water Resources Control Board Form 200 Appendix.
- (3) 40 CFR Parts 117, 122, 123, 124, 136, 302, 403, and 503.
- (4) Water Quality Control Plan (Colorado River Basin – Region 7) dated 1994.
- (5) Regional Board files related to Coachella Sanitary District NPDES permits CA0104493 and CA0105031.
- (6) Porter-Cologne Water Quality Control Act with additions and amendments effective January 1, 2000.
- (7) California Toxics Rule, published May 18, 2000 by U.S. EPA
- (8) National Toxics Rule (NTR), adopted by U.S. EPA on February 5, 1993.

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Written Comments

Interested parties and agencies are invited to submit written comments on the proposed waste discharge requirements and the Regional Board's Executive Officer's proposed determinations. Comments should be submitted in writing not later than June 20, 2000 to:

Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

The application number shall appear on the first page of any submitted comments. All comments received by the above date will be considered in the formulation of the final determinations.

Public Hearing

The Waste Discharge Requirements will be considered by the Regional Board at a public hearing to be held at the City of La Quinta City Council Chambers, 78495 Calle Tampico, La Quinta on June 28, 2000.

Waste Discharge Requirements Appeals

Any person may petition the State Board to review the decision of the Regional Board regarding waste discharge requirements. A petition must be made within 30 days of the Regional Board's hearing.

Additional Information

Persons wishing further information may write to the following address:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

or call the Regional Board at (760) 346-7491

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TABLE 1
 DISCHARGE MONITORING REPORT
 COACHELLA SANITARY DISTRICT

DATE	INFLUENT DATA		EFFLUENT DATA	
	BOD (MG/L)	SS (MG/L)	BOD (MG/L)	SS (MG/L)
February 1999	221	224	15.4	6.8
March 1999	227.5	225.8	14.5	6.6
April 1999	231.4	226	15.4	6.56
May 1999	230	213	12	6.85
June 1999	233.4	218	14.3	7.23
July 1999	232.4	224	14.61	7.46
August 1999	222.8	219	14.6	7.5
September 1999	230	220.3	13.2	7.24
October 1999	227	219	14.5	7.35
November 1999	227	229	15.2	7.2
December 1999	225.2	203.5	13.6	8.2
January 2000	272.5	201.0	10.4	11.4

DATE	EFFLUENT DATA	
	TOTAL DISSOLVED SOLIDS (MG/L)	FLOW TO CHANNEL (MGD)
February 1999	1860	1.6
March 1999	1786	1.6
April 1999	1600	1.6
May 1999	1780	1.6
June 1999	1800	1.2
July 1999	1958	1.2
August 1999	1800	1.6
September 1999	1665	1.2
October 1999	1740	1.2
November 1999	1870	1.2
December 1999	1880	1.2
January 2000	1940	1.2

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TABLE 1 (CONT.)
DISCHARGE MONITORING REPORT
COACHELLA SANITARY DISTRICT

DATE	EFFLUENT DATA		
	BIOASSAY ⁶ ACUTE	BIOASSAY ⁷ CHRONIC	COLIFORM MPN/100 ML
February 1999			11.4
March 1999	0% / 0%		12.1
April 1999			11.0
May 1999			13.9
June 1999	100% / 92.5%	< 1 / < 1	8.8
July 1999			11.4
August 1999			10.6
September 1999	90% / 97.5%	2 / 2	12.7
October 1999			10.6
November 1999	0% / 97.5%	4 / < 1	12.3
December 1999			
January 2000			

DATE	EFFLUENT DATA	RECEIVING WATER DATA		
	SETTLABLE MATTER (ML/L)	DISSOLVED OXYGEN (MG/L)	CHLORINE RESIDUAL (MG/L)	pH
February 1999	.01	7.8	0.01	7.32
March 1999	.01	7.65	.01	7.41
April 1999	.01	7.75	.01	7.58
May 1999	.01	7.95	.01	7.4
June 1999	.01	8.2	.01	7.63
July 1999	.01	8.3	.01	6.82
August 1999	.01	8.3	.01	6.89
September 1999	.01	8.11	.01	7.5
October 1999	.01	8.15	.01	6.78
November 1999	.01	8.4	.01	7.27
December 1999	.01	8.8	.01	7.74
January 2000	.01	8.8	.01	7.72

⁶ Bioassay Acute is measured in % survival in 100% effluent (C. dubia / P. promelas) at the end of 96 hours.

⁷ Bioassay Chronic is measured in chronic toxicity units (C. dubia / P. promelas) at the end of 7 days.

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TABLE 2
PROPOSED EFFLUENT AND RECEIVING WATER LIMITATIONS
COACHELLA SANITARY DISTRICT

EFFLUENT LIMITATIONS

1. Representative samples of wastewater discharged to Coachella Valley Storm Water Channel from the treatment systems shall not contain constituents in excess of the limits indicated below. Each treatment system discharging to the Coachella Valley Storm Water Channel shall be monitored separately at locations which are acceptable by the Regional Board's Executive Officer or his designee:

a. Secondary Treatment Standards (Activated Sludge Process)

<u>Constituents</u>	<u>Unit</u>	30-Day Arithmetic Mean <u>Discharge Rate</u>	7-Day Arithmetic Mean <u>Discharge Rate</u>
20° C BOD ₅	mg/L	30	45
Suspended Solids	mg/L	30	45
Settleable Matter	ml/L	0.3	0.5

The 30-day average percent removal of the pollutant parameters BOD₅ and suspended solids shall not be less than 85 percent.

The hydrogen ion (pH) of the effluent shall be maintained within the limits of 6.0 to 9.0

The twenty-four (24) hour hydraulic flow rate for this system shall not exceed 1.5 MGD.

b. Equivalent to Secondary Treatment Standards (Oxidation Pond Process)

<u>Constituents</u>	<u>Unit</u>	30-Day Arithmetic Mean <u>Discharge Rate</u>	7-Day Arithmetic Mean <u>Discharge Rate</u>
20° C BOD ₅	mg/L	45	65
Suspended Solids	mg/L	45	65
Settleable Matter	ml/L	0.3	0.5

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The 30-day average percent removal of the pollutant parameters BOD₅ and suspended solids shall not be less than 65 percent.

The hydrogen ion (pH) of the effluent shall be maintained within the limits of 6.0 to 9.0.

The discharge flow rate for this system to the Coachella Valley Storm Water Channel shall not exceed 0.9 MGD.

2. The effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to aquatic life.
3. No waste discharge shall exceed limitations for Group 1 or Group 2 pollutants. Exceedence for a Group 1 pollutant by 40 percent or a Group 2 pollutant by 20 percent or more is a serious violation. Group 1 and Group 2 pollutants are defined in 40 CFR Section 123.45.
4. Wastewater effluent discharged to Coachella Valley Storm Water Channel shall not have a fecal coliform concentration in excess of a log mean of Most Probable Number (MPN) of 200 MPN per 100 milliliters (based on a minimum of not less than five samples for any 30-day period) nor shall more than ten percent of total samples during any 30-day period, exceed 400 MPN per 100 milliliters. The compliance point for this effluent limitation shall be at a location acceptable to the Regional Board's Executive Officer or his designee.
5. Wastewater discharged to Coachella Valley Storm Water Channel shall not contain a total chlorine residual greater than 0.02 mg/L as an instantaneous maximum and 0.01 mg/L as a monthly average. Compliance for this effluent limitation shall be at a location acceptable to the Regional Board's Executive Officer or his designee.
6. There shall be no acute toxicity in the treatment plant effluent nor chronic toxicity in the receiving water. Compliance with this objective will be determined by use of indicator organisms, analyses of species of diversity, population density, growth anomalies, or bioassays of appropriate duration or other appropriate methods specified by the Regional Board.
7. Discharge of wastewater shall not cause concentration of total dissolved solids (TDS) in surface water to exceed and annual average of 2,000 mg/L or a maximum daily of 2,500 mg/L.

RECEIVING WATER LIMITATIONS

1. Receiving Water Limitations are based upon water quality objectives contained in the Basin Plan. As such, they are a required part of this permit. The discharge shall not cause the following in the Coachella Valley Storm Water Channel:
 - a. Depress the concentration of dissolved oxygen below 5.0 mg/L. When dissolved oxygen in receiving water is already below 5.0 mg/L, the discharge shall not cause any further depression.

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- b. The presence of oil, grease, floating material (liquids, solids, foam and scum) or suspended material in amounts that create a nuisance or adversely affect beneficial uses.
 - c. Result in the deposition of pesticides or combination of pesticides to be detected in concentration that adversely affect beneficial uses.
 - d. Aesthetically undesirable discoloration or odors in the receiving water.
 - e. An increase in fungi, slime, or other objectionable growth.
 - f. The turbidity to increase by more than 10 percent over background levels.
 - g. The normal ambient pH to fall below 6.0 or exceed 9.0 units.
 - h. Result in the deposition of material that causes nuisance or adversely affects beneficial uses.
 - i. The normal ambient receiving water temperature to be altered more than 5° F.
 - j. The chemical constituents to exceed concentrations that adversely affect beneficial uses or create nuisance.
 - k. Toxic pollutants to be present in the water column, sediments or biota in concentrations that adversely affect beneficial uses or that produce detrimental physiological responses in human, plant, animal, or aquatic life.
 - l. Taste or odor-producing substances to impart undesirable tastes or odors to the water or fish flesh or other edible products of aquatic origin or to cause or otherwise adversely affect beneficial uses.
2. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board as required by the Federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Regional Board will revise and modify this Permit in accordance with such more stringent standards.