

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: City of Brawley Public Notice No.: 7-00-13  
NPDES Permit Number: CA0104523 Board Order No.: 00-087  
Mailing Address: City of Brawley  
400 Main Street  
Brawley, CA 92227  
Location 5015 Best Road  
Brawley, CA 92227  
Contact Person: Stephen Moore, Chief Operator  
Telephone: (760) 344-5800, Ext. 11

I. Status of Permit

On November 22, 1999, City of Brawley, 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). The application is 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 Brawley. Annual average discharge to the receiving waters is 3.58 MGD. The present design capacity is 3.9 MGD. Wastewater is discharged into the New River located in the SW ¼ of Section 15, T13S, R14E, SBB&M, as shown on the attached site map. Discharged water flows through the New River to the Salton Sea.

The wastewater collection system consists of separate storm and combined sewer systems. The current collection system length is 71.5 miles. Wastewater conveyed to the treatment flows through manual rake bar screens. Wastewater then flows through an aerated grit chamber, two primary clarifiers operated in parallel, two parallel aeration ponds, and three stabilization ponds operated in series before being discharged to the New River.

Sludge removed from the primary clarifiers is treated in two anaerobic digesters. Digested sludge is dried in drying beds. Final sludge disposal is by land application.

The discharger is currently under Time Schedule Order No. 99-054. The Time Schedule Order was adopted as a result of the facility consistently receiving flow volumes in excess of 80% of its design capacity. The Time Schedule Order lists the complete construction date as March 1, 2002.

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III. Description of Discharge

All wastewater discharged at this facility is discharged through Outfall 001 to the New River. The discharge consists of domestic wastewater and stormwater, which receives treatment equivalent to secondary treatment.

IV. Receiving Water

The receiving water for Outfall 001 is the New River. Water discharged from the facility flows into the New River. The New River discharges into the Salton Sea.

The designated beneficial uses of water in the New River are:

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

V. Description of Discharge

a. Permit Application Summary

The following table summarizes the discharge characteristics of Outfall 001 as reported in the NPDES application dated September 15, 1999.

<u>Constituent/Parameter</u>	<u>Value</u>	<u>Units</u>
Lowest Monthly Average pH	7.5	---
Highest Monthly Average pH	7.9	---
Annual Average Value BOD	38	mg/L
Highest Monthly Average Value BOD	49	mg/L
Annual Average Value TSS	39	mg/L
Highest Monthly Average Value TSS	57	mg/L
Settleable Matter Annual Average Value	< 0.1	ml/L
Settleable Matter Lowest Monthly Average Value	< 0.1	ml/L
Settleable Matter Highest Monthly Average Value	0.1	ml/L

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<sup>1</sup> Although some fishing occurs in the downstream reaches, the presently contaminated water in the river makes it unfit for any recreational use. An advisory has been issued by the Imperial County Health Department warning against the consumption of any fish caught from the river and the river has been posted with advisories against any body contact with the water.

<sup>2</sup> 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 the request of the Regional Board; and such substantiation must be provided with a reasonable time frame as approved by the Regional Board

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b. Discharge Monitoring Report (DMR) Data

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

VI. Proposed Technology-Based Effluent Limitations

Regulations promulgated at 40 CFR §125.3(a)(1) require technology-based effluent limits for municipal dischargers to be placed in NPDES permits based on Secondary or Equivalent to Secondary Treatment Standards.

a. Treatment Equivalent to Secondary Treatment Standards

<u>Constituents</u>	<u>Unit</u>	<u>30-Day<sup>3</sup> Arithmetic Mean Discharge Rate</u>	<u>7-Day<sup>4</sup> Arithmetic Mean Discharge Rate</u>
20° BOD <sub>5</sub> <sup>5</sup>	mg/L	45	65
Total Suspended Solids	mg/L	95	--
Settleable Matter	ml/L <sup>6</sup>	0.3	0.5

The 30-day average percent removal of the pollutant parameters BOD<sub>5</sub> 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

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<sup>3</sup> 30-Day Mean – The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

<sup>4</sup> 7-Day Mean – The arithmetic mean of pollutant parameter values of samples collected in a period of 7 consecutive days.

<sup>5</sup> Biochemical Oxygen Demand

<sup>6</sup> ml/L – milliliters per Liter

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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 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 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)	Hydrogen Ion (pH) is a measure of Hydrogen Ion concentration in the water. A range specified between 6 to 9 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 water recreation (REC1).
Flow	The current design capacity of the treatment plant is 3.9 MGD. The treatment plant is being expanded to a design capacity of 5.9 MGD. The expansion is scheduled for completion March 1, 2002.

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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 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.*"

X. 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 November 17, 1999 and September 15, 1999 respectively.
- (2) 40 CFR Parts 117, 122, 123, 124, 136, 302, 403, and 503
- (3) Water Quality Control Plan (Colorado River Basin – Region 7) dated 1994
- (4) Regional Board files related to City of Brawley NPDES permit CA0104523
- (5) Porter-Cologne Water Quality Control Act with additions and amendments effective January 1, 2000
- (6) Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, adopted March 2, 2000.
- (7) California Toxics Rule, published by May 18, 2000 by U.S. EPA.
- (8) National Toxics Rule (NTR) adopted by U.S. EPA on February 5, 1993.

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 21, 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.

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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  
CITY OF BRAWLEY

DATE	INFLUENT DATA		EFFLUENT DATA	
	BOD (MG/L)	SS (MG/L)	BOD (MG/L)	SS (MG/L)
January 1999	118	160	42	37
February 1999	121	134	46	38
March 1999	137	146	49	47
April 1999	150	127	46	35
May 1999	136	118	44	57
June 1999	106	112	31	50
July 1999	96	105	26	31
August 1999	63	78	17	22
September 1999	86	88	33	26
October 1999	101	94	35	35
November 1999	106	94	38	45
December 1999	116	111	46	36

DATE	EFFLUENT DATA		
	SETTLABLE MATTER (ML/L)	FLOW TO CHANNEL (MGD)	PH
January 1999	< 0.1	3.70	7.5
February 1999	< 0.1	3.64	7.5
March 1999	< 0.1	3.25	7.5
April 1999	< 0.1	3.12	7.6
May 1999	< 0.1	3.21	7.9
June 1999	0.1	3.25	7.9
July 1999	0.1	3.15	7.7
August 1999	< 0.1	3.18	7.7
September 1999	< 0.1	3.43	7.6
October 1999	< 0.1	3.30	7.7
November 1999	< 0.1	3.32	7.6
December 1999	< 0.1	3.40	7.5

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TABLE 1 (CONT.)  
DISCHARGE MONITORING REPORT  
CITY OF BRAWLEY

DATE	EFFLUENT DATA				
	BIOASSAY <sup>7</sup> ACUTE		BIOASSAY <sup>8</sup> CHRONIC		TPH <sup>9</sup> mg/L
	Ceriodaphnia dubia	Pimephales promelas	Ceriodaphnia dubia	Pimephales promelas	
January 1999					ND <sup>10</sup>
February 1999					ND
March 1999	100	0	1.0	3.13	1.1
April 1999					ND
May 1999					ND
June 1999	80	0	1.79	3.13	ND
July 1999					ND
August 1999					ND
September 1999	100	92.5	< 1.0	< 1.0	ND
October 1999					ND
November 1999					ND
December 1999	100	80	< 1.0	< 1.0	1.3

DATE	RECEIVING WATER DATA					
	DISSOLVED OXYGEN (MG/L)		HARDNESS		Ph	
	UP <sup>11</sup>	DOWN <sup>12</sup>	UP <sup>11</sup>	DOWN <sup>12</sup>	UP <sup>11</sup>	DOWN <sup>12</sup>
January 1999	10.1	9.7	932	924	7.7	7.7
February 1999	8.9	9.2	908	892	7.7	7.7
March 1999	7.5	8.0	872	792	7.6	7.6
April 1999	8.8	8.6	772	764	7.8	7.8
May 1999	9.0	9.1	848	840	7.6	7.6
June 1999	7.4	7.6	748	756	8.0	8.0
July 1999	6.0	6.6	840	844	7.9	7.9
August 1999	6.0	6.5	848	756	7.6	7.6
September 1999	3.9	2.7	776	776	7.8	7.9
October 1999	6.8	6.7	256	248	7.5	7.5
November 1999	7.6	8.3	744	780	7.5	7.6
December 1999	16.1	16.6	848	820	7.6	7.6

<sup>7</sup> Bioassay Acute is measured in % survival in 100% effluent (C. dubia / P. promelas) at the end of 96 hours.  
<sup>8</sup> Bioassay Chronic survival is measured in chronic toxicity units (C. dubia / P. promelas) at the end of 7 days.  
<sup>9</sup> TPH - Total Petroleum Hydrocarbons.  
<sup>10</sup> ND - Non Detectable  
<sup>11</sup> Upstream of the discharge point.  
<sup>12</sup> Downstream of the discharge point.

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TABLE 2  
 PROPOSED EFFLUENT AND RECEIVING WATER LIMITATIONS  
 NPDES PERMIT NO. CA0104523  
 BOARD ORDER NO. 00-087  
 CITY OF BRAWLEY

EFFLUENT LIMITATIONS

1. Effluent discharged to the New River shall not contain constituents in excess of the following limits:

<u>Constituent</u> <u>Unit</u>	30-Day <sup>13</sup> <u>Arithmetic Mean</u> <u>Discharge Rate</u>	7-Day <sup>14</sup> <u>Arithmetic Mean</u> <u>Discharge Rate</u>
20°C BOD <sub>5</sub>	mg/L	45
Total Suspended Solids	mg/L	95
Settleable Matter	ml/L <sup>15</sup>	0.3

2. The 30-day average percent removal of the pollutant parameters BOD<sub>5</sub> and suspended solids shall not be less than 65 percent.
3. The hydrogen ion (pH) of the effluent shall be maintained within the limits of 6.0 to 9.0.
4. The twenty-four (24) hour hydraulic flow rate for this system shall not exceed 3.9 MGD for the current facility. Construction to be completed by March 1, 2002 will increase the twenty-four (24) hour hydraulic flow rate to 5.9 MGD.
5. The effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentration toxic to aquatic life.
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 diversity, population density, growth anomalies, or bioassays of appropriate duration or other appropriate methods specified by the Regional Board.

Effluent discharged to New River 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. To allow for the financing, design and construction of disinfection facilities, the fecal coliform limitations will become effective on March 1, 2002

<sup>13</sup> 30-Day Mean – The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

<sup>14</sup> 7-Day Mean – The arithmetic mean of pollutant parameter values of samples collected in a period of 7 consecutive days.

<sup>15</sup> ml/L – milliliter per Liter

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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 New River:
  - a. Depress the concentration of dissolved oxygen to fall 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.
  - 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. A significant 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 maximum electrical conductivity to exceed background levels.
  - k. The chemical constituents to exceed concentrations that adversely affect beneficial uses or create nuisance.
  - l. 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.
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.