



# ENCINA WASTEWATER AUTHORITY

A Public Agency

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March 3, 2011

Ref: EC 11-0045

Mr. David Gibson  
Executive Officer  
California Regional Water Quality Control Board, San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123-4340

**Subject: Comments on Tentative Order R9-2011-0019 (NPDES CA0107395)  
Waste Discharge Requirements for the Encina Wastewater Authority**

Dear Mr. Gibson:

This letter presents the Encina Wastewater Authority's (EWA's) comments on Tentative Order No. R9-2011-0019 (NPDES CA0107395), which would renew NPDES requirements for the Encina Ocean Outfall (EOO).

**Receiving Water REC-1 Compliance.** Special Provision VI.C.7 of the Tentative Order would establish a compliance time schedule requiring EWA to analyze, finance, construct, and implement alternatives to ensure compliance with California Ocean Plan receiving water bacteriological standards for body contact recreation (REC-1). The following paragraph on page F-47 of the NPDES Fact Sheet presents the Regional Board staff justification for including the compliance time schedule.

*From 2006-2010, according to the Discharger's near shore and offshore receiving water monitoring results, there were only two exceedance of the 30-day geometric mean limit for enterococcus. There, however, is insufficient information to reach a conclusion regarding the contribution, if any, that Encina's discharge is having on the bacteria levels in the near and off shore. In order to ensure that the Discharger is not causing, or contributing to, excursions of the Bacterial Characteristics Water contact Standards contained in the Ocean Plan, this Order requires the discharge to comply with a time schedule to ensure compliance with the standards.*

EWA believes that sufficient information exists to reach a conclusion regarding compliance of the EOO with REC-1 body contact standards. Table 1 (attached) summarizes receiving water data collected during 2006-2010 during the effective period of the prior NPDES permit (Order No. R9-2005-0219). Offshore receiving water data collected as part of Monitoring and Reporting Program No. R9-2005-0219 included 960 total coliform samples, 960 fecal coliform samples, and 960 enterococcus samples. The offshore monitoring included two stations (Z1 and Z2) that are only 150 feet from the EOO diffuser at the immediate edge of the Zone of Initial Dilution (ZID).

As shown in Table 1, all EOO offshore stations demonstrated 100 percent compliance with the Ocean Plan single sample maximum limits for total coliform, fecal coliform, and enterococcus during 2006-2010. Additionally, the data demonstrate that grab samples collected during 2006-2010 achieved compliance with Ocean Plan 30-day geometric mean limits for total coliform and fecal coliform, as follows:

- 960 out of 960 grab samples contained total coliform concentrations less than the REC-1 30-day geometric mean limit of 1000 per 100 ml, and
- 960 out of 960 grab samples contained fecal coliform concentrations less than the REC-1 30-day geometric mean limit of 200 per 100 ml.

The EOO discharge also complied with REC-1 30-day geometric mean limits for enterococcus. During 2006-2010, all enterococcus grab samples collected at stations immediately adjacent to the ZID were within the REC-1 30-day geometric mean limit.

At more distant stations, only two grab samples collected during 2006-2010 contained enterococcus concentrations in excess of the 35 per 100 ml REC-1 30-day geometric mean limit, and neither of these exceedances were related to the outfall discharge. One exceedance occurred at a near shore station during a February 2009 storm event, and is attributed to surface water runoff from shore sources. Confirming that storm runoff was the cause of this anomaly, above-average concentrations of total coliform, fecal coliform, and enterococcus occurred during this time at shore stations. Concentrations in offshore stations near the outfall, on the other hand, remained low during this time.

The second anomaly occurred in a surface water sample collected during October 2010, where a kelp bed grab sample (Station K-2) contained an enterococcus concentration of 39 per 100 ml (slightly in excess of the 35 per 100 ml 30-day geometric mean limit). Evidence indicates that this kelp bed surface water result was not related to the EOO discharge. First, ocean temperature stratification effects are at maximum during October, and the EOO plume is trapped well below the ocean surface. Second, the exceedance occurred at a distance from the EOO, while stations nearer the EOO ZID demonstrated low pathogen indicator concentrations both at mid-depth and at the surface. As a result of these factors, it is highly improbable that the outfall discharge is associated with this October 2010 surface sample anomaly. Instead, it is more probable that the surface sample result was caused by birds, marine mammals, recreation, or fishing activities.

It should be noted that neither of these grab sample results would have resulted in exceedance of the Ocean Plan REC-1 standards, had these standards been established within Order No. R9-2005-0219. If the REC-1 standards had been in effect at the time, EWA would have been able to demonstrate compliance with the 30-day geometric mean limit by collecting a second grab sample during the month. Based on data from 2006-2010, the probability is zero that the geometric mean from two consecutive samples would exceed the Ocean Plan REC-1 30-day geometric mean limit.



To ensure compliance with REC-1 receiving water standards established in Order No. R9-2011-0019, EWA will:

- collect receiving water total coliform, fecal coliform, and enterococcus samples early in the month;
- expedite testing of the samples; and
- in the rare event a grab sample exceeds the 30-day geometric mean, collect a second grab sample during the month.

On the basis of this documented compliance with the Ocean Plan REC-1 standards, it is requested that Special Provision VI.C.7 be eliminated within Order No. R9-2011-0019 (pages 36 and 37 of the Tentative Order) and within the accompanying Fact Sheet (pages F-47 and F-48). To document that no further compliance or time schedule tasks are required to achieve REC-1 compliance, it is recommended that the following text be inserted in the Fact Sheet (page F-47) under Section VI.C.6, Other Special Provisions:

***VI.C.6. Other Special Provisions - Not Applicable***

*Prior to this Order, the San Diego Water Board has interpreted the Bacterial Characteristics Water-contact Standards of the California Ocean Plan (Receiving Water Limitations Section VI.A.1) to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot-depth contour, whichever is further from the shoreline, and within kelp beds. The 2005 Ocean Plan also requires that these standards apply in areas outside this zone used for water contact sports, as determined by the Regional Boards (i.e. waters designated as REC-1). Because the San Diego Water Board has not completed a process to designate specific areas where the water-contact standards apply, Ocean Plan Bacterial Standards apply throughout all waters in the San Diego Region. This interpretation has been confirmed by USEPA.*

*The Discharger's receiving water monitoring data demonstrates that the discharge consistently complies with Receiving Water Limitations for Bacterial Characteristics contained in Section V.A.1 of this Order in all receiving waters outside the designated Zone of Initial Dilution. As a result of this record of compliance, this Order does not establish any additional requirements or implementation schedules related to compliance with the Bacterial Characteristics contained in Section V.A.1.*

**Initial Dilution.** Appendix H of the Tentative Order documents the criteria under which the minimum month initial dilution of 144 to 1 is assigned. The Appendix indicates that initial dilution computations were performed for two scenarios:

- Scenario 1 assigns all EOO diffuser ports to the same side of the outfall, and assumes that all of the outfall flow is directed out this side of the outfall.
- Scenario 2 assumes that half of the outfall flow is discharged to diffuser ports on a given side of the outfall.



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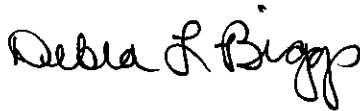
Appendix H notes that the initial dilution results were "approximately the same" for the two scenarios, but the appendix does not quantify the Scenario 2 results. EWA requests that Appendix H be revised to present the results from both scenarios, and indicate why the Scenario 1 results are used for assigning the EOO minimum month initial dilution.

**Collection System.** EWA's member agencies own and operate collection facilities that convey wastewater to the Encina Water Pollution Control Facility. Because EWA does not own or operate wastewater collection facilities, the second paragraph of Provision C.5.e (page 35 of the Tentative Order) should either be eliminated, or revised as follows:

*Regardless of the coverage obtained under Order No. 2006-0003, EWA's member agencies' collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, ~~the Discharger~~ EWA's member agencies must properly operate and maintain ~~its~~ their respective collection systems [40 CFR 122.41(e)], report any non-compliance [40 CFR 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR 122.41(d)].*

Please contact me if you have any questions. Thank you for the opportunity for comment on Tentative Order No. R9-2011-0019.

Sincerely,



Debra L. Biggs  
Director of Environmental Compliance

DLB:dib

Attachment



Serving North  
San Diego County

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**Table 1**  
**Summary of Receiving Water Compliance with Ocean Plan REC-1 Standards**  
**Encina Ocean Outfall, Jan 2006 through Dec 2010<sup>1</sup>**

Station	Depth	Total Number of Samples <sup>2</sup>	Total Coliform			Fecal Coliform			Enterococcus		
			Maximum Observed Value CFU/100 ml	Percent Compliance with Single Sample Max. Limit <sup>3</sup>	Percent Compliance with 30-day Geometric Mean Limit <sup>4</sup>	Maximum Observed Value CFU/100 ml	Percent Compliance with Single Sample Max. Limit <sup>5</sup>	Percent Compliance with 30-day Geometric Mean Limit <sup>6</sup>	Maximum Observed Value CFU/100 ml	Percent Compliance with Single Sample Max. Limit <sup>7</sup>	Percent Compliance with 30-day Geometric Mean Limit <sup>8</sup>
G1 <sup>9</sup>	surface	60	14	100%	100%	8	100%	100%	21	100%	100%
	mid-depth	60	198	100%	100%	65	100%	100%	27	100%	100%
G2 <sup>9</sup>	surface	60	53	100%	100%	14	100%	100%	12	100%	100%
	mid-depth	60	66	100%	100%	26	100%	100%	5	100%	100%
R1 <sup>11</sup>	surface	60	19	100%	100%	28	100%	100%	28	100%	100%
	mid-depth	60	148	100%	100%	48	100%	100%	7	100%	100%
Z1 <sup>12</sup>	surface	60	121	100%	100%	19	100%	100%	11	100%	100%
	mid-depth	60	214	100%	100%	132	100%	100%	14	100%	100%
Z2 <sup>13</sup>	surface	60	97	100%	100%	28	100%	100%	26	100%	100%
	mid-depth	60	145	100%	100%	83	100%	100%	8	100%	100%
K1 <sup>13</sup>	surface	60	126	100%	100%	87	100%	100%	8	100%	100%
	mid-depth	12	109	100%	100%	2	100%	100%	1	100%	100%
K2 <sup>14</sup>	surface	60	55	100%	100%	52	100%	100%	39 <sup>15</sup>	100%	100% <sup>17</sup>
	mid-depth	12	4	100%	100%	1	100%	100%	1	100%	100% <sup>17</sup>
N2a <sup>14</sup>	surface	60	17	100%	100%	20	100%	100%	91 <sup>16</sup>	100%	100% <sup>17</sup>
	mid-depth	12	20	100%	100%	2	100%	100%	1	100%	100%
N8 <sup>14</sup>	surface	60	13	100%	100%	26	100%	100%	7	100%	100%
	mid-depth	12	20	100%	100%	2	100%	100%	1	100%	100%
N4 <sup>14</sup>	surface	60	49	100%	100%	42	100%	100%	38	100%	100%
	mid-depth	12	4	100%	100%	1	100%	100%	0	100%	100%

1 Order No. R9-2005-0219 became effective January 1, 2006. The data period January 2006 through December 2010 represents the effective period of Order No. R9-2005-0219.

2 Total number of samples collected at the station per Monitoring and Reporting Program No. R9-2005-0219. This monitoring includes an intensive monitoring period for July 2008 through June 2009.

3 Single sample maximum limit for total coliform is 10,000 per 100 ml, or 1000 per ml when the fecal to total coliform ratio exceeds 10 percent.

4 30-day geometric mean limit for total coliform is 1000 per 100 ml.

5 Since only one grab sample was collected per month, the grab sample is compared to both the single sample maximum limit and the 30-day geometric mean limit.

6 Single sample maximum limit for fecal coliform is 400 per 100 ml.

7 30-day geometric mean limit for fecal coliform is 200 per 100 ml.

8 Single sample maximum limit for enterococcus is 104 per 100 ml.

9 30-day geometric mean limit for enterococcus is 35 per 100 ml.

10 "G" stations located at 150-foot-depth contour. Station G1 is 1000 feet downcoast from the EOO diffuser. Station G2 is 1000 feet upcoast from the diffuser.

11 Reference station located at 150-foot-depth contour. Station Z1 is 150 feet downcoast from the diffuser and Station Z2 is 150 feet upcoast from the diffuser.

12 "Z" stations are located immediately at the Zone of Initial Dilution boundary at the 150-foot-depth contour. Station Z1 is 150 feet downcoast from the EOO diffuser and Station Z2 is 150 feet upcoast from the EOO diffuser.

13 "K" stations are located at the edge of the kelp bed. Station K1 is located downcoast from the EOO diffuser and Station K2 is located upcoast from the EOO diffuser.

14 "N" stations are located at the 30-foot-depth contour. Station N2a is located 2500 feet south of the outfall, Station N3 is located along the outfall, and Station N4 is located 3000 feet north of the outfall.

15 An enterococcus value at the ocean surface of 39 per 100 ml was observed for an October 2010 grab sample collected at Station K2. This exceedance is not attributed to the EOO discharge, as thermal stratification is strongest during October and the EOO plume would be maintained below the ocean surface. It is possible that this exceedance was caused by birds, marine mammals, fishing, or recreational activities. An overwhelming probability exists that a second sample collected during the month would have reduced the 30-day geometric mean value to less than 35 per 100 ml. The second highest observed enterococcus concentration at Station K2 during 2006-2010 was 13 per 100 ml.

16 An enterococcus concentration of 91 per 100 ml was observed at Station N2a during February 2009, but this exceedance occurred during a period of storm runoff, and is not attributed to the outfall discharge. As a result, this 91 per 100 ml outlying value is discounted. The second highest observed enterococcus concentration at Station N2a during 2006-2010 was 5 per 100 ml.

17 The single grab sample that exceeded the 30-day geometric mean limit is not attributed to the EOO discharge. Additionally, if Ocean Plan REC-1 standards had been in effect at the time, EWA could have demonstrated compliance with the 30-day geometric mean limit by collecting a second grab sample during the month. For these reasons, a 100 percent compliance value is assigned.