

**California Regional Water Quality Control Board  
Santa Ana Region**

**Monitoring and Reporting Program No. 00-101**

For

**The County of Orange, Orange County Flood Control District, and the Cities of  
Santa Ana, Costa Mesa, Newport Beach, Orange, Lake Forest, Irvine and Tustin  
(hereinafter "discharger")**

**Monitoring and Reporting for Compliance with the Total Maximum Daily Load for  
Fecal Coliform in Newport Bay**

**A. Fecal Coliform Monitoring Program**

The discharger shall collect at least five (5) samples/30 days at the stations specified below. At a minimum, the samples shall be analyzed for total and fecal coliform and enterococci. Sample collection and analysis shall be in accordance with the procedures and analytical protocols employed by the Orange County Health Care Agency.

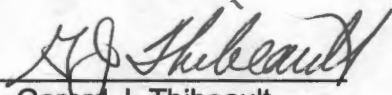
Station Locations

Ski Zone	33rd Street	Park Avenue
Vaughns Launch	Rhine Channel	Via Genoa
Northstar Beach	De Anza	Alvarado/Bay Is.
Abalone Avenue	Promontory Pt.	10th Street
Dunes East	Bayshore Beach	15th Street
Dunes Middle	Onyx Avenue	19th Street
Dunes West	Garnet Avenue	Lido Island Yacht Club
Dunes North	Ruby Avenue	Harbor Patrol
43rd Street	Sapphire Avenue	N Street Beach
38th Street	Newport Blvd. Bridge	Rocky Point
San Diego Creek @ Campus Dr.	Santa Ana Delhi Channel	Big Canyon Wash
Backbay Dr. Drain		

**B. REPORTING REQUIREMENTS:**

- a. By the 15<sup>th</sup> of each month, the analytical results of samples collected during the previous month shall be submitted to the Regional Board office. (The Orange County Health Care Agency currently submits the results of their routine bacterial quality monitoring on a weekly basis. This is acceptable in lieu of the monthly report.)
- b. An annual report summarizing the data collected for the year (reporting period: April 1 through March 31) and evaluating compliance with the water quality objectives shall be submitted by September 1 of each year.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a monitoring and reporting program adopted by the California Regional Water Quality Control Board, Santa Ana Region, on November 17, 2000.

  
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Gerard J. Thibeault  
Executive Officer

California Regional Water Quality Control Board  
Santa Ana Region

November 17, 2000

ITEM: 16

SUBJECT: Consideration of Monitoring and Reporting Program No. 00-101,  
Fecal Coliform Monitoring in Newport Bay and Certain Tributaries

DISCUSSION:

On April 9, 1998, the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) adopted Resolution No. 99-10, which amended the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) to establish a Total Maximum Daily Load (TMDL) for fecal coliform in Newport Bay.

Section 3.a.ii.a of that TMDL specifies that:

"By January 30, 2000, the County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest and Newport Beach, and the agricultural operators in the Newport Bay watershed shall propose a plan for routine monitoring to determine compliance with the bacterial quality objectives in the Bay. At a minimum, the proposed plan shall include the collection of five (5) samples/30-days at the stations specified in Table 5-9h and shown in Figure 5-1 and analysis of the samples for total and fecal coliform and enterococci. Reports of the collected data shall be submitted monthly. An annual report summarizing the data collected for the year and evaluating compliance with the water quality objectives shall be submitted by September 1 of each year.

In lieu of this coordinated, regional monitoring plan, one or more of the parties identified in the preceding paragraph may submit an individual or group plan to conduct routine monitoring in areas solely within their jurisdiction to determine compliance with the bacterial objectives in the Bay (if appropriate). Any such individual or group plans shall also be submitted by January 30, 2000. Reports of the data collected pursuant to approved individual/group plan(s) shall be submitted monthly and an annual report summarizing the data and evaluating compliance with water quality objectives shall be submitted by September 1 of each year.

The monitoring plan(s) shall be implemented upon Regional Board approval."

In a January 7, 2000 letter to the parties identified above, the Regional Board's Executive Officer formally requested the submittal of the proposed monitoring plan(s), pursuant to Water Code Section 13267. That letter indicated Board staff's belief that the current routine monitoring program conducted by the

Orange County Health Care Agency (OCHCA) would be generally acceptable to comply with the routine monitoring requirement of the TMDL. Weekly samples are collected by OCHCA at various Bay and tributary sites, and analyzed for total coliform, *E. coli* and enterococci. The concern we identified was that OCHCA analyzes the samples for *E. coli*, rather than fecal coliform. Since the Basin Plan objectives and the TMDL specifically address fecal coliform, monitoring for fecal coliform must be conducted. However, staff's January 7, 2000 letter acknowledged that *E. coli* monitoring could be used as a surrogate for fecal coliform, provided that a relationship between the two could be demonstrated in Newport Bay waters. This was based on the fact that *E. coli* bacteria typically constitute the majority of the fecal coliforms measured by the fecal coliform test method, and that the *E. coli* test method employed by the OCHCA offers substantial time and resource savings. The January 7, 2000 letter advised the responsible parties that if they wished to use the OCHCA's monitoring program to satisfy the TMDL monitoring requirement, then a plan to demonstrate the relationship between *E. coli* and fecal coliform should also be submitted.

In a January 28, 2000 letter responding to staff's January 7, 2000 letter, the Orange County Public Facilities and Resources Department, on behalf of the responsible parties, proposed that the OCHCA monitoring program be used to comply with the TMDL requirements. OCPF&RD also proposed an additional investigation to demonstrate an *E. coli*/fecal coliform relationship. Board staff discussed this proposal with staff of the OCPF&RD and the laboratory director of the OCHCA. We indicated our concern that the proposed additional investigation would be too limited to demonstrate a reliable relationship. It was agreed that existing data would be collected and assessed to determine whether it could be used to support a relationship. No information that the existing data are adequate for this purpose was provided. OCPF&RD subsequently revised the additional investigation proposal, however, staff remains concerned that it is too limited. Further, and perhaps more important, for the duration of such an investigation, only limited fecal coliform data would be collected, limiting the ability to assess compliance with bacterial objectives and the TMDL. Staff remains open to the use of *E. coli*, when and if a reliable relationship to fecal coliform can be demonstrated. In the interim, however, we believe that fecal coliform monitoring must be conducted on a routine basis, as required by the TMDL. The proposed Monitoring and Reporting Program No. 00-101 would implement the TMDL monitoring requirements. It should be noted that this Program is subject to change, based on the results of additional investigations conducted to demonstrate an *E. coli*/fecal coliform relationship.

**RECOMMENDATION:**

Adopted Monitoring and Reporting Program No. 00-101, as presented.