

State of California
California Regional Water Quality Control Board, Los Angeles Region

RESOLUTION NO. R12-005

Approving the City of Los Angeles' Proposed Special Study for the
Terminal Island Water Reclamation Plant

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region (hereinafter Regional Water Board), finds that:

1. The Regional Water Board adopted Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit (Order No. R4-2010-0071) for the Terminal Island Water Reclamation Plant on May 6, 2010.
2. The NPDES permit contains a requirement for the City of Los Angeles (City) to consult annually with the Regional Water Board to determine the need for special studies. Detailed scopes of work for proposals shall be presented to obtain Regional Water Board approval and to inform the public. Special studies are focused on refined questions regarding specific effects or development of monitoring techniques and are anticipated to be of short duration and/or small scale, although multiyear studies also may be needed. Questions regarding effluent or receiving water quality, discharge impacts, ocean processes in the area of the discharge, or development of techniques for monitoring the same, arising out of the results of core or regional monitoring, may be pursued through special studies.
3. On December 20, 2011, representatives from the City met with Regional Water Board staff to discuss the following proposed special study for 2012: Evaluation of Microbiological Monitoring Effort in Los Angeles Harbor Receiving Waters.
4. Regional Water Board staff believe that the proposed special study fulfills the requirements of the NPDES permit and recommend that it be approved by the Regional Water Board.

THEREFORE, BE IT RESOLVED THAT:

1. The Regional Water Board believes that the following proposed special study for 2012: Evaluation of Microbiological Monitoring Effort in Los Angeles Harbor Receiving Waters merits approval.

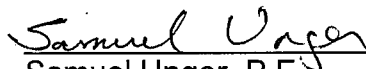
April 5, 2012

Resolution No. R012-005

Approving the City of Los Angeles' Proposed Special Study for the Terminal Island Water Reclamation Plant

2. The Regional Water Board hereby approves the City of Los Angeles' special study proposal.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region, on April 5, 2012.



Samuel Unger, P.E.
Executive Officer

City of Los Angeles
Bureau of Sanitation
Terminal Island Water Reclamation Plant (TIWRP)

Special Study Proposal
*Microbiological Water Quality Assessment in Los Angeles Harbor Relative to the
Terminal Island Water Reclamation Plant Discharge: 1996-2011*

Introduction:

The microbiological impact of the Terminal Island Wastewater Treatment Plant (TIWRP) discharge to the Los Angeles Harbor receiving waters and Inner Cabrillo Beach shoreline has been studied through many years of monitoring. Via annual and biennial assessments of fecal indicator bacteria data for LA Harbor receiving water, Inner Cabrillo Beach shoreline, and two water quality studies conducted in 1999 by the Environmental Monitoring Division of the Bureau of Sanitation, City of Los Angeles (CLAEMD), it has been determined that TIWRP effluent, has exhibited no detectable microbiological impact to the Cabrillo Beach shoreline.

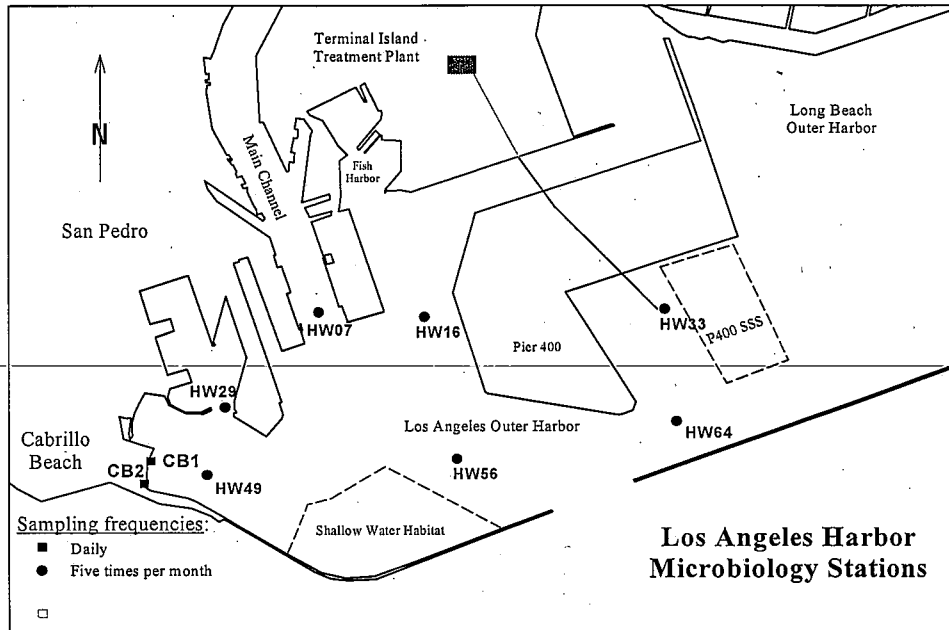
TIWRP was originally built in 1935 with a treatment process comprised of preliminary and primary treatments with the effluent discharged into the Harbor. TIWRP was upgraded from primary to secondary treatment using an activated sludge process in 1977, and was further upgraded to tertiary treatment in 1996. TIWRP treatment processes include wastewater and advanced wastewater processing with microfiltration and reverse osmosis; the startup of the new process began in January 1997. In addition to the upgrade in treatment processes, the TIWRP outfall was relocated due to the construction of Pier 400 in 1996. The goal of this study is to assess the microbiological impact of the discharge on the receiving waters through a surfeit of data ranging from 1996 through 2011 and to determine whether bacteriological water quality conditions have deteriorated, remained stagnant, or improved since the start up of tertiary treatment in 1996 and re-location of the outfall.

TIWRP NPDES sites targeted for the study are listed and mapped below, along with their coordinates.

LA Harbor weekly microbiological monitoring sites

Station Number	Latitude	Longitude
HW07	33° 43' 21" N	118° 16' 12" W
HW16	33° 43' 20" N	118° 15' 42" W
HW29	33° 42' 57" N	118° 16' 38" W
HW33	33° 43' 19.6" N	118° 14' 36.2" W
HW49	33° 42' 40" N	118° 16' 43" W
HW56	33° 42' 44" N	118° 15' 32.7" W
HW64	33° 42' 53.5" N	118° 14' 30.7" W

TIWRP outfall in the Los Angeles Harbor



Objectives:

The City has historically produced LA Harbor microbiology assessment reports based on data from annual and biennial periods, but has never assessed or searched for trends from data covering a fifteen-year span. The purpose of this study is to assess and present data, ranging from 1996 to 2011, to confirm whether bacteriological water quality conditions have improved, remained stagnant, or deteriorated since the startup of tertiary treatment process, the addition of Pier 400, and the re-location of the TIWRP outfall.

Benefits:

Although it would be ideal to assess data from the start of microbiological monitoring in LA Harbor receiving waters, data from earlier monitoring periods (pre-1996) has either been lost or is not electronically available and would be difficult to impossible to input and organize.

The benefit of assessing available data is the determination of improvement, or lack of, in bacteriological water quality conditions in the Harbor receiving waters since the

aforementioned changes. To our knowledge, an assessment of this magnitude has never been done in this area.

Approach:

An assessment of more than 15 years of CLAEMD, LA Harbor receiving-water microbiological data ranging from January 1996 to December 2011 is proposed. Data will include geometric mean densities of fecal indicator bacteria targets [total and fecal coliform (including *E. coli*) and enterococcus] from two methods of organism detection (membrane filtration and chromogenic substrate). Assessment of geometric mean and bacterial-standards exceedances data will be summarized in a CLAEMD Special Study report.

Project Duration:

This study will take approximately one year to complete with a start date of May 15, 2012 and anticipated completion by May 15, 2013.

Deliverables:

Progress reports will be submitted quarterly, with the first report to be submitted August 15, 2012. A final assessment report with the results of the study and a summary of geometric-mean concentrations and bacterial-standards exceedances of target organisms from 1996 to 2011 will be submitted to the CLAEMD project manager for submission to the Regional Water Quality Control Board by May 15, 2013.

Collaborators:

None