CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 96-105
NPDES PERMIT NO. CA0037869

AMENDING WASTE DISCHARGE REQUIREMENTS FOR:

EAST BAY DISCHARGERS AUTHORITY,
CITY OF HAYWARD,
CITY OF SAN LEANDRO,
ORO LOMA/CASTRO VALLEY SANITARY DISTRICT,
UNION SANITARY DISTRICT, AND
LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY
ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. On June 15, 1994, the Board adopted waste discharge requirements for the East Bay Dischargers Authority (EBDA) and its member agency listed above to discharge wastewater to the waters of the State and the United States through common outfall under the National Pollutant Discharge Elimination System (NPDES) in Order No. 94-072.

2. Both EBDA and the Livermore Amador Valley Water Management Agency (LAVWMA) are Joint Exercise of Powers Agencies (JEPA), the members of which separately own and operate collection and treatment facilities for domestic, commercial, and industrial wastewater. EBDA, and its member agencies, and LAVWMA are hereinafter collectively and individually referred to as dischargers. LAVWMA transports effluent from its member agencies to the EBDA system. By contractual agreement, EBDA transports LAVWMA treated wastewater jointly with the treated wastewater from its member agencies to its dechlorination station near the San Leandro Marina (Marina Dechlorination Facility) and thence to its deepwater outfall in Lower San Francisco Bay west of the Oakland Airport at longitude 122° 17' 42" W, latitude 37° 41' 40" N. The outfall's diffuser is located 37,000 feet from shore; it discharges 23.5 feet below the surface (MLLW); and it is designed to provide minimum initial dilution of greater than 10:1 at all times, and about 45:1 for 45% of the time.

3. The treated effluent from Hayward, San Leandro, Oro Loma Sanitary District, and Union Sanitary District is combined and then dechlorinated by sulfonation prior to discharge via deepwater outfall to San Francisco Bay.

4. EBDA's JEPA delegates the authority and responsibility to EBDA to assure compliance with all effluent waste discharge requirements. It is the intent of the EBDA JEPA to allow determination of compliance with waste discharge requirements by considering

EBDA as a total system, to permit the most effective operation of all EBDA and member agency treatment facilities. The EBDA JEPA empowers that Joint Agency to monitor each member agency's discharge and the combined discharge and prescribes that the Joint Agency may, if necessary, undertake modifications to any member agency's treatment facilities to secure compliance with effluent discharge requirements.

Since LAVWMA and its tributary agencies are not signatories to the EBDA JEPA, the EBDA-LAVWMA agreement empowers EBDA to monitor discharges by LAVWMA into the EBDA system and requires LAVWMA, as a condition of continuing service, to comply with all requirements prescribed by the Board, except residual chlorine, for which EBDA will be responsible.

The LAVWMA is responsible for transporting effluent from its member agencies to the EBDA system. It is not empowered to take actions to secure member agency compliance with requirements.

5. From July 1994 through June 1995, the dischargers studied the effect of reduced chlorine residual on fecal coliform numbers in the effluent and receiving waters. The information contained in their report, "Justification for Fecal Coliform Effluent Limitation," indicated that there are no negative impacts on the receiving waters due to the reduction of chlorine residual and subsequent increase in the fecal coliform numbers in the effluent. The report concluded that the receiving waters in the vicinity of the EBDA outfall are not used for water-contact recreation and that the five day log mean fecal coliform density up to 500 MPN/100 ml, and 90th percentile fecal coliform value of up to 1100 MPN/100 ml in the effluent will be protective of the beneficial uses of the receiving waters. Receiving water monitoring data showed that the fecal coliform density in receiving water was generally less than 2.0 MPN/100ml when the effluent was discharged with a fecal coliform density of 500 MPN/100 ml. Therefore, the dischargers have requested a revision of the Effluent Limitation B.3. to reflect this situation.

   In 1990, the California Department of Health Services (DHS) provided clarification of beneficial use definitions of waters of the State as related to bacteriological standards. DHS recommended median fecal coliform densities of 500 MPN/100 ml, and 90th percentile fecal coliform value of up to 1100 MPN/100 ml as a criterion for limited water contact recreation. However, the receiving water monitoring data show that these densities in the effluent are protective of water contact recreation uses in the receiving waters.

6. Above mentioned report provides new information not available at the time the permit was issued which justifies application of a different coliform limit. This new information demonstrates that the proposed effluent limit will not result in a violation of water quality standards. Therefore, this proposed effluent limit does not violate the backsliding provision of sections 402(o)(1)-(3) and 303(d)(4) of the Clean Water Act.

7. The amendment of an NPDES permit is exempt from the provisions of Chapter 3 (commencing with Section 2100 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the Water Code.

8. The dischargers and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity to submit their written views and recommendations.

9. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that:

A. Section B.3. under "EFFLUENT LIMITATIONS" of Order No. 94-072 shall be amended to read as follows:

   Fecal Coliform Bacteria:

   The treated wastewater, at some place in the treatment process prior to discharge, shall meet the following limits of bacteriological quality: The five day log mean fecal coliform density shall not exceed 500 MPN/100 ml, and the ninetieth percentile value shall not exceed 1100 MPN/100 ml.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 17, 1996.

Michael P. Carlin /for

LORETTA K. BARSAMIAN
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

EAST BAY DISCHARGERS AUTHORITY
CITY OF HAYWARD
CITY OF SAN LEANDRO
ORO LOMA/CASTRO VALLEY SANITARY DISTRICT
UNION SANITARY DISTRICT

AND

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY

NPDES NO. CAOO37869
ORDER NO. 96-105

CONSISTING OF
PART A, DATED AUGUST 1993
AND PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT (ALL EBDA TREATMENT PLANTS)

Station	Description
A-1	At any point in the individual treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment or sidestream.

B. EFFLUENT (ALL EBDA TREATMENT PLANTS AND OUTFALL)

Station	Description
E-1	At any point in the EBDA common outfall at which all waste tributary to that outfall is present.
E-2	At any point in the individual treatment plant facilities at which adequate disinfection has taken place and just prior to where the individual facility transfers control of its effluent to EBDA facilities. Upon approval of the Executive Officer may be the same as E-1.

C. RECEIVING WATERS (SAN FRANCISCO BAY)

Station	Description
C1, C2, C4	Located per station 1, 2, and 4 respectively as shown in Figure 1.
C-R (C3)	Reference station located at station 3 as shown on Figure 1.

D. LAND OBSERVATIONS (ALL EBDA TREATMENT PLANTS AND DECHLORINATION FACILITY)

Station	Description
P-1 through P-n	Located at the corners and midpoints of the perimeter fenceline surrounding the individual and EBDA facilities (A sketch showing the locations of these stations will accompany each report).

E. OVERFLOWS AND BYPASSES (ALL EBDA TREATMENT PLANTS, COLLECTION SYSTEMS, INTERCEPTOR AND OUTFALL)

Station	Description
O-1 through O-n	Bypass or overflows from manholes, pump stations, interceptors, or collection system.

NOTE:

1. A map and description of each known or observed overflow or bypass location shall accompany each monthly report. A summary of these occurrences and their locations shall be included with the Annual Report for each calendar year.

II. CHRONIC TOXICITY MONITORING REQUIREMENT

A. Test Species and Frequency: The discharger shall collect a 24-hour composite sample of the treatment plant effluent at the station E-1 or E-2, for critical life stage toxicity testing in accordance with the attached Table 1. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

B. Methodology: Sample collection, handling and preservation shall be in accordance with EPA protocols. The test methodology used shall be in accordance with the references cited in Order No. 92-104, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

C. Dilution Series: The discharger shall conduct tests at 50%, 40%, 25%, and 15%. The "%" represents percent effluent as discharged.

III. CHRONIC TOXICITY REPORTING REQUIREMENTS

A. Routine Reporting: Toxicity test results for the current reporting period shall include at a minimum, for each test

1. sample date(s)
2. test initiation date
3. test species
4. end point values for each dilution (e.g. number of young, growth rate, percent survival)
5. NOEC value(s) in percent effluent
6. IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25} ... etc.) in percent effluent
7. TUc values (100/NOEC, $100/IC_{25}$, and $100/EC_{25}$)
8. Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)

9. NOEC and LOEC values for reference toxicant test(s)
10. IC_{50} or EC_{50} value(s) for reference toxicant test(s)
11. Available water quality measurements for each test (e.g. pH, D.O, temperature, conductivity, hardness, salinity, ammonia)

B. Compliance Summary: Each self-monitoring report shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include the items listed above under Section A item numbers 1, 3, 5, 6(IC_{25} or EC_{25}), 7, and 8.

C. Reporting Raw Data in Electronic Format: On a quarterly basis, by February 15, May 15, August 15, and December 15 of each year, the discharger shall report all chronic toxicity data for the previous calendar quarter in the format specified by the Statewide Chronic Toxicity Database Management System.

IV. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

The schedule of sampling, analysis and observation shall be that given in Table 1.

V. REPORTING REQUIREMENTS

1. General Reporting Requirements are described in Section C of this Board's "Standard Provisions and Reporting Requirements", dated August 1993.

2. Self-Monitoring Reports for each calendar month shall be submitted monthly, by the twenty second day of the following month. The required contents of these reports are described in Section F.4. of Part A.

3. An Annual Report for each calendar year shall be submitted to the Board by February 15th of the following year. The required contents of the annual report are described in Section F.5. of Part A.

4. Any overflow and/or bypass of wastewater in excess of 1,000 gallons, or significant non-compliance incident that may endanger health or the environment, shall be reported according to the Sections F.1 and F.2 of Part A.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 96-105.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be authorized by the Executive Officer.

3. Is effective on the date shown below.

Michael P. Carlin /for

LORETTA K. BARSAMIAN
Executive Officer

Effective Date: July 17, 1996

Attachment:
A. Table 1

ATTACHMENT A

TABLE 1
SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS (1,4,7)
East Bay Dischargers Authority

SAMPLING STATION	A-1	E-1			E-2			All P Sta.	All C Sta.
TYPE OF SAMPLE	C-24	G(3)	C-24	Cont.	G(3)	C-24	Cont.	O	G(3)
Flow Rate (mgd)	D			D			D		
CBOD, 5-day, 20°C (mg/l & Kg/day) (2)	W		W			W			
Total Suspended Solids (mg/l & Kg/day)	W		W			W			
Chlorine Residual & Dosage (mg/l & Kg/day) (5)		H or Cont.			H or Cont.				
Settleable Matter (ml/hr. & Kg/day)		W							
Coliform (total & fecal) (MPN/100 ml)		W			W				Q
Enterococci (Colonies/100 ml)									Q
Acute Toxicity - 96 hr. (% survival)				2/M			2/M		
Chronic Toxicity			M						
Dissolved Oxygen (mg/l & % saturation)									Q
Sulfides (mg/l if DO<5.0 mg/l)									Q
pH (Units)		D							Q
Ammonia Nitrogen (mg/l & Kg/day)			2/M						Q
Temperature (°C)		M							Q
Arsenic (ug/l & Kg/day)	Q		2/M			M			
Cadmium (ug/l & Kg/day)	Q		2/M			M			
Chromium (ug/l & Kg/day)	Q		2/M			M			
Copper (ug/l & Kg/day)	Q		2/M			M			
Cyanide (ug/l & Kg/day)	Q		2/M			M			
Lead (ug/l & Kg/day)	Q		2/M			M			
Mercury (ug/l & Kg/day)	Q		2/M			M			

TABLE 1 (Continued)
SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS (1,4,7)
East Bay Dischargers Authority

SAMPLING STATION	A-1	E-1			E-2			All P Sta.	All C Sta.
TYPE OF SAMPLE	C-24	G(3)	C-24	Cont.	G (3)	C-24	Cont.	O	G(3)
Nickel (µg/l & Kg/day)	Q		2/M			M			
Selenium (µg/l & Kg/day)	Q		2/M			M			
Silver (µg/l & Kg/day)	Q		2/M			M			
Zinc (µg/l & Kg/day)	Q		2/M			M			
Phenolic Compounds (µg/l & Kg/day)	Q		M			M			
PAHs (µg/l & Kg/day)	Q		2/M			M			
All applicable Standard Observations								W	
Organic Priority Pollutants (µg/l & Kg/day) (6)			Y				Y		
Un-ionized Ammonia (mg/l)									2/M

LEGEND

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample (24-hour)
Cont. = continuous sampling
O = observation

TYPES OF STATIONS

E = waste effluent stations
C = receiving water stations
L = basin and/or pond levee stations

FREQUENCY OF SAMPLING

E = each occurrence
H= once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = twice per year
Q = quarterly, once each in Mar., June, Sept., & Dec.

2H = every 2 hours
2D = every two days
2W = every two weeks
2M = every two months
Cont. = continuous

NOTES FOR TABLE 1:

(1) During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analysis:

a. Composite sample for BOD and Total Suspended Solids.

b. Grab samples for Total Coliform, Settleable Matter, and Oil and Grease.

c. Continuous monitoring of flow.

d. Continuous or every two hour monitoring of chlorine residual.

(2) Percent removal (effluent vs. influent) shall also be reported.

(3) Grab samples shall be taken on day(s) of composite sampling.

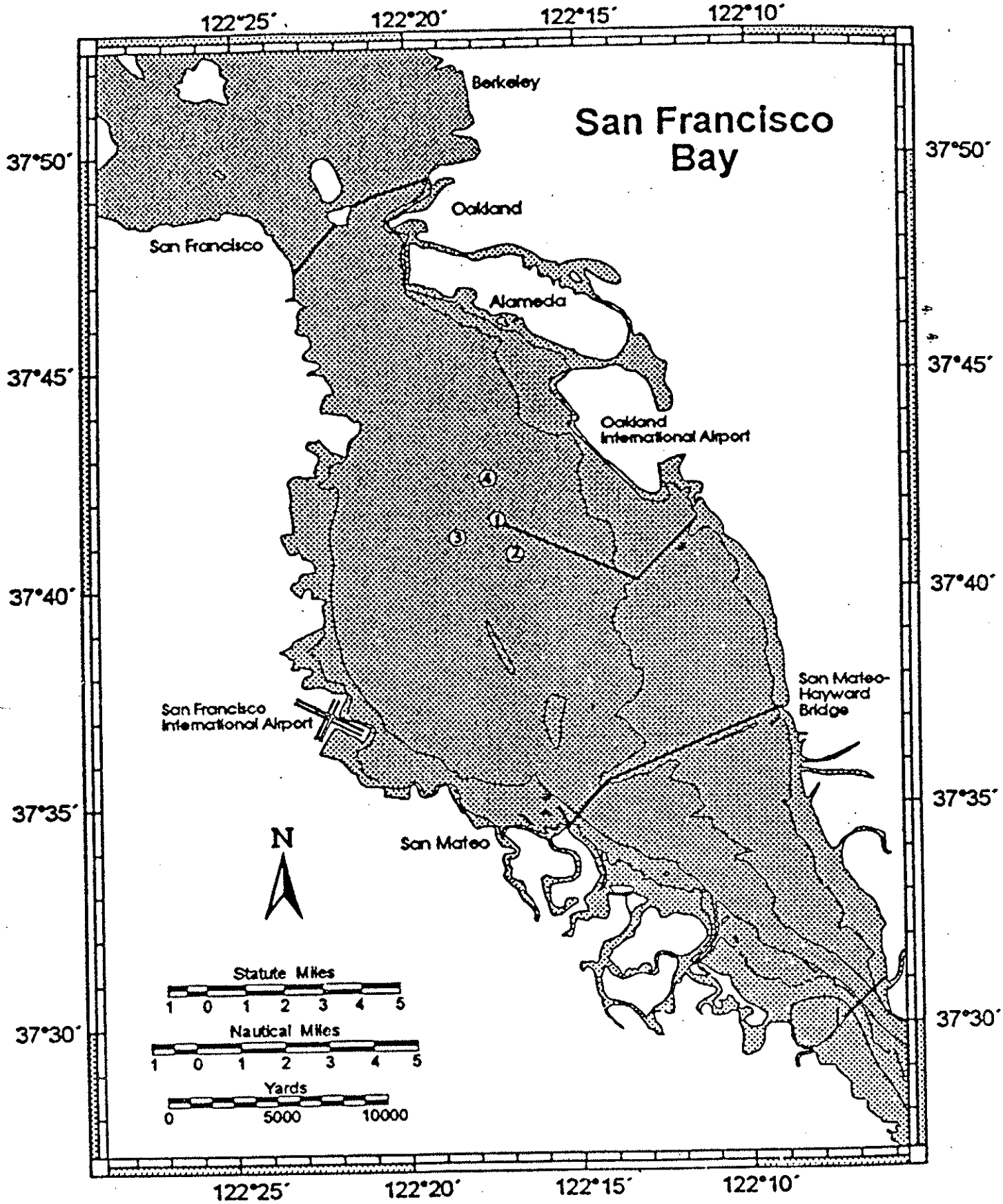
(4) If any effluent sample is in violation of limits, except those for metals, cyanide, and organics, sampling shall be increased for that parameter to at least daily or grater until compliance is demonstrated in two successive samples. Receiving water violations shall be reported in the monthly report; increased receiving water monitoring may be required. Compliance measurements represent compliance status for the time period between measurements.

(5) Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

(6) Organic priority pollutants and other constituents of the September 16, 1992 Basin Plan amendments must be monitored on a monthly basis for three months pursuant to Provision D.6. of this permit (i.e. three months wet season) to determine whether any of these constituents are present in excess of their corresponding effluent limits. The frequency of sampling will revert to once per year, as indicated in Table 1, for constituents that are determined to be non-detectable, with the exception of TCDD equivalents, for which the frequency of sampling will revert to once per permit reissuance. If the three months of monitoring show that concentrations of a specific pollutant are near or above its effluent limit, the Board may require sampling frequencies grater than once per year.

(7) Monthly sampling dates and approximate times shall coincide with receiving water monitoring conducted by EBDA.

(8) Sludge disposal shall be reported monthly. Daily records shall be kept of the quantity (cu. yds. or cu. ft.) and solids content (%) of dewatered sludge disposed of and the location of disposal.



Fugure 1
Receiving Water
Monitoring Stations