

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-67

NPDES PERMIT NO. CA0038610

WASTE DISCHARGE REQUIREMENTS FOR:

CITY AND COUNTY OF SAN FRANCISCO
NORTH POINT AND SOUTHEAST SEWERAGE ZONES
WET WEATHER DIVERSION STRUCTURES

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

1. The City and County of San Francisco, hereinafter called the discharger, presently discharges untreated domestic and industrial wastewater mixed with storm water runoff, all containing pollutants, into San Francisco Bay, a water of the United States through any of twenty (20) wet weather diversion structures in the North Point Sewerage zone (Numbers 9 through 28) and fifteen wet weather diversion structures in the Southeast Sewerage zone (Number 29 through 43). These discharges occur only when rainfall exceeds 0.02 inches per hour.
2. These diversion structures are described below:

DISCHARGE Number	DISCHARGE Name	OUTFALL SIZE Width X Height or Diameter	Elevation of Crown re MLLW (b)	PEAK FLOW		DISCHARGE LOCATION
				During 5 yr. Storm (c)	-MGD (d)	
						190' offshore of
9	Baker St.	9'	-8.34	137		Marina Beach
10	Pierce St.	7'	+5.00	331		Muni. Marina
11	Laguna St.	6'	+10.67	330		Muni. Marina
12	Hyde St.	2'	+4.42	abandoned		Aquatic Park
13	Beach St.	7'x6'	+6.67	315		Pier 39
14	Grant St.	3'	+1.75	abandoned		Pier 37
15	Sansome St.	2 (a) - (5'6"x6'6")	+7.67	218		Pier 31
16	Greenwich St.	6'	+7.67	65		Pier 23
17	Jackson St.	8'x9'6"	+8.17	263		Pier 3
18	Howard St.	7'	+6.75	175		Pier 14
19	Brannan St.	7'6"x6'	+5.67	129		Pier 32
20	Townsend St.	2'x3'	+4.67	17		Pier 38
21	Berry St.	1'3"	+5.92	4		Pier 42
22	Third St.	2'6"x3'9"	+4.42	19		Channel St.
23	Fourth St. No.	6'6"	+7.67	61		Channel St.
24	Fifth St.	9'x7'	+6.67	273		Channel St.
25	Sixth St. No.	6'	+6.17	149		Channel St.
26	Seventh St.	4- (9'6"x8'3")	+12.42	1750		Channel St.
27	Sixth St. So.	3'6"x5'3"	+9.42	40		Channel St.
28	Fourth St. So.	2'6"x3'9"	+4.42	13		Channel St.

29	Mariposa St	6'	+8.27'	193	Central Basin
30	Twentieth St.	2'	+2.67'	Negl.	Central Basin
31	No. Third St.	3.5x5.25'	+5.47'	84	Islais Creek
32	Marin St.	10'x8'	+7.67'	710	Islais Creek
33	Selby St.	3 ^(a) -(10'x7.5')	+9.17'	1740	Islais Creek
34	Rankin St.	5'	+9.64'	52	Islais Creek
35	So. Third St.	4.5'	+3.67'	65	Islais Creek
36	Mendell Ave.	4'	abandoned	-	India Basin
37	Evans Ave.	6'	+11.40'	102	India Basin
38	Hudson St.	2.5'	+12.17'	55	India Basin
39	Griffith St. N.	1.75'		16	India Basin
40	Griffith St. S.	5.5'	+7.22'	150	South Basin
41	Yosemite Ave.	9'x7.25' & 11.5'x6.5'	+7.42	590	South Basin
42	Fitch St.	6.75'	+6.38'	102	South Basin
43	Sunnydale Ave.	6.5'	+6.17'	334	Candlestick Cove

(a) Number of barrels

(b) Mean Lower Low Water

(c) These flows result for a short period from a peak rainfall intensity of 1.5 inches per hour

(d) Million Gallons per Day

3. The discharger's long-range plans are to construct facilities to store, transport and treat the combined wastewater from the entire City for discharge to the Ocean in the vicinity of Lake Merced (Southwest Plant). This plan, hereinafter called the Master Plan, was approved in concept by the San Francisco Board of Supervisors on January 27, 1975.
4. The Master Plan would reduce the frequency of discharge of untreated wastewater from a present average of 82 times per year to a range of eight per year to one in five years depending upon the capacity of storage and treatment provided.
5. The Board, on April 8, 1975, adopted a Water Quality Control Plan for the San Francisco Bay Basin. That plan contains a prohibition against the discharge of untreated sewage, water quality objectives for San Francisco Bay and a recommended approach for regulating the discharge from wet weather diversion structures which recommends that exceptions to compliance be allowed provided that beneficial uses are not adversely affected.
6. The combined sewer collection system of San Francisco, designed to transport both sanitary and storm flows, presents a unique problem regarding total compliance with the Basin Plan prohibition against the discharge of untreated waste. The Basin Plan recommends that exceptions to compliance be allowed for wet weather discharges, provided that beneficial uses are not adversely affected; however, a specific exception clause was not included. It is clear that the intent of the Basin Plan is to allow exceptions and this Board will consider inclusion of a specific exception clause during the next Basin Plan updating.

7. The beneficial uses of San Francisco Bay in the vicinity of these diversion structures are:

Navigation

Water contact recreation

Non-water contact recreation

Ocean commercial and sport fishing

Marine Habitat

Fish spawning

Shellfish harvesting (in the vicinity of diversion structures 40, 41, 42, 43 only)

Wildlife habitat

Fish migration

8. The Regional Board adopted Order Nos. 76-22 and 76-24 on March 16, 1976, prescribing waste discharge requirements for these diversion structures.
9. Order No. 76-24 required the discharger to reduce the frequency of discharge for diversion structures No. 9 through 17 to an average of one overflow event per year, and to reduce the frequency of discharge for diversion structures No. 18 through 28 to an average of four overflow events per year. Order No. 76-22 required the discharger to reduce the frequency of discharge for two diversion structures (Numbers 34 and 35) to an average of 4 overflow events per year. Both Orders required the City to undertake a citywide overflow control study to better define the cost and water quality benefits of facilities designed to achieve various overflow frequencies.
10. The discharger did submit an overflow control study for diversion structures No. 9 through 17 (Northshore outfall consolidation) in November, 1978. The Board adopted Order No. 78-102 on **November 21, 1978**, which amended Order No. 76-24 and contained the following finding:

"Based upon the presently available planning information contained in these findings and evidence presented at the public meeting concerning the cost differences of facilities necessary to achieve specific overflow frequencies and the water quality benefits derived from construction of those facilities and considering the location and intensity of existing beneficial uses; a long term average of 4 overflows per year for diversion structures No. 9 through 17, will provide adequate overall protection of beneficial uses; provided however that further study to comply with discharge prohibitions No. A.2 and A.3 is required by the discharger where existing discharge points are located in confined areas which do not have adequate exchange with bay water and may not provide adequate protection of adjacent nearshore beneficial uses. Further mitigation may be required in the future, after facilities are placed in operation, if it is determined that beneficial uses are not adequately protected."

This represents the Board's position with respect to diversion structures No. 9 through 17.

11. In a letter dated February 14, 1979, the Environmental Protection Agency objected to Order No. 78-102 and advised that it shall not be effective.
12. The discharger has submitted an overflow control study for diversion structures No. 18 through 43 in May, 1979 and has requested the Regional Board to consider an increase in the number of allowable overflows.
13. The following table provides a comparison of improvement obtainable by reducing the average number of overflows from diversion structures No. 18 through 43 to eight (8), four (4) and one (1) overflows per year compared to the existing average of 46. Data was derived from the discharger's predictive computer model and are therefore approximations.

Average Number of Overflows Per Year (Diversion Structures 18-43)	Existing 46	8	4	1
Minimum/maximum number of overflows per year	17/77	1/20	0/12	0/3
% of annual combined wastewater treated (avg.)	85	98	99	99.7
% of annual combined wastewater which overflows (avg.)	15	2	1	0.3
Volume of overflow (Million gallons/ year, avg.)	4,220	615	292	81
Total hours of overflow per year (avg)	381	31	14	4
Minimum/maximum hours of overflow per year	157/671	2/76	0/42	0/24
Average duration of overflow (hours)	8.3	3.9	3.5	4
Composition of overflows (avg)				
% sewage	23	13	13	12
% storm water	77	87	87	88
% reduction in BOD ₅ and Suspended Solids discharged from existing overflows (avg)	Base	85	93	98
Average number of days nearshore water adjacent to discharge points exceed coliform standards for body contact recreation				
days greater than 1,000 MPN/100 ml	104	24	13	3
days greater than 10,000 MPN/100 ml	60	11	6	1
Cost of facilities (millions of dollars)				
Capital cost	Base	293	369	465
Annual cost	Base	23.3	29.4	36.4

14. Overflows will occur from storage structures which will be designed to provide for additional removal of settleable and floatable solids. Removal of these solids will provide further mitigation of the aesthetic and public health impacts over and above the mitigation provided by reduction in the frequency of overflows.
15. The overflows from diversion structures No. 36 through 43 discharge to locations proposed to be developed as major water oriented recreation areas and at which significant shellfish resources exist. These areas require a greater degree of protection from the effects of overflows.
16. The difference in capital cost of facilities for diversion structures No. 36 through 43 sized for 8 overflows per year and 1 overflow per year is about \$35 million. This additional cost to achieve greater protection in critical areas can be reduced to about \$12 million by increasing the allowable overflows from 8 to 10 per year for the remaining bayside structures (No. 18-35). This would increase the total volume of discharges on the bayside by 15-20% above that resulting from a uniform limitation of 8 overflows per year.
17. The discharger completed a final EIR/EIS for the Wastewater Master Plan in May 1974. The discharger completed a final EIR for the Northshore Outfall Consolidation Project in December 1975 which addressed overflows from diversion structures No. 9 through 17. This EIR identified potential adverse water quality impacts from this project related to seismic activity and the project has been modified to mitigate this potential impact. The discharger completed a Final EIR for the Channel Outfalls Consolidation (diversion structures No. 18-28) in May 1976. The EIR did not identify any substantial adverse effects on water resources. An administrative amendment to the EIR was completed in January, 1979 and identifies no additional adverse water quality impacts. The discharger will undertake additional EIR's for facilities to be constructed for diversion structures No. 29 through 43 and this Board will review any adverse water quality impacts identified, and if necessary, make appropriate revisions of this Order. The issuance of waste discharge requirements for this project is exempt from the provisions of Chapter 3 (commencing with Section 21000) of Division 13 of the California Public Resources Code (CEQA) in accordance with Water Code Section 13389.
18. The Board has notified the discharger and interested agencies and persons of its intent to revise waste discharge requirements for these discharges and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

20. Based upon presently available planning information contained in these findings and evidence presented at the public meeting concerning the cost differences of facilities necessary to achieve specific overflow frequencies and the water quality benefits derived from construction of those facilities and considering the location and intensity of existing beneficial uses; a long term average of 10 overflows per year for diversion structures No. 18 through 35 and an average of **1 overflow per year for diversion** structures No. 36 through 43 will provide adequate overall protection of beneficial uses; provided however that further study to comply with discharge prohibitions No. A.2 and A.3 is required by the discharger where existing discharge points are located in confined areas which do not have adequate exchange with bay water and may not provide adequate protection of adjacent nearshore beneficial uses. Further mitigation may be required in the future, after facilities are placed in operation, if it is determined that beneficial uses are not adequately protected.
21. The Federal Water Pollution Control Act and amendments thereto require that point source discharges comply with appropriate standards by July 1, 1977. The Board will consider an appropriate enforcement order which will include a time schedule for compliance with this Order within 90 days of the date of this Order.
22. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator, U. S. Environmental Protection Agency, has no objections.

IT IS HEREBY ORDERED, that the City and County of San Francisco in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of untreated waste to waters of the State is prohibited with the exception of allowable overflows as defined below. The City shall design and construct facilities for diversion structures No. 9-17 to achieve a long term average of 4 overflows per year from these facilities, to design and construct facilities for diversion structures No. 18-35 to achieve a long term average of 10 overflows per year, and to design and construct facilities for diversion structures No. 36 through 43 to achieve a long term average of **1 overflow per year**. These long term overflow frequencies shall not be used to determine compliance or noncompliance with the exception. Allowable overflows from these facilities are defined as those discharges which occur when all of the following criteria are met:

- a. All storage capacity within a storage facility is fully utilized; and
- b. Maximum installed pumping capacity or some lower rate based on limits of downstream transport or treatment capabilities is being utilized to withdraw flows from the storage facility; and,
- c. All citywide treatment facilities, excluding the Golden Gate Park reclamation facility, are being operated at capacity or at some lower rate consistent with the maximum withdrawal and transport rates; and,
- d. Overflow occurs from a facility employing baffles or other equivalent means to reduce the discharge of floatables.

Overflows which occur when criteria a, b, c, and d are not being met shall be considered violations of this discharge prohibitions.

- 2. Discharge of waste into dead-end sloughs or similar confined water areas or their tributaries is prohibited.
- 3. Discharge of waste at any point where it does not receive a minimum initial dilution of at least 10:1 is prohibited.
- 4. Discharge of dry weather waste from wet weather diversion structures is prohibited.

Exceptions to prohibitions 2 and 3 will be considered where an inordinate financial burden would be placed on the discharger relative to beneficial uses protected and when an equivalent level of environmental protection can be achieved by alternate means.

B. Provisions

- 1. 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 Water Pollution Control Act and regulations adopted thereunder. If revised applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such standards.
- 2. The discharge of pollutants shall not create a nuisance as defined in the California Water Code.
- 3. Pursuant to Finding No. 21 the discharger shall comply with the following time schedules to assure compliance with the discharge prohibitions and provisions of this Order:

<u>Task</u>	<u>Completion Date</u>
Full compliance	July 1, 1977

4. The long term average overflow frequency prescribed in this Order is based on information available at the time of adoption of this Order. If the Board finds that changes in the location, intensity or importance of affected beneficial uses or demonstrated unacceptable adverse impacts as a result of operation of the constructed facilities have occurred they may modify the long-term average overflow frequency. Such action could require the modification of constructed facilities. The modification of the operation of constructed facilities or the construction of additional facilities.
5. The City and County of San Francisco shall perform a self-monitoring program in accordance with the specifications prescribed by the Executive Officer of the Regional Board. The City's and County's Health Department is requested to post warning signs on all beaches and shellfish areas, when designated by the Regional Board, affected by the wet weather overflows for a period of time commencing with the day of overflow or at 8:00 a.m. The following day if overflow occurs after 4:00 p.m. and continuing until the water analyses indicate the water quality of the affected areas have recovered and are meeting bacteriological standards for water contact sport recreations in the beach areas or bacteriological standards for shellfish harvesting in shellfish areas, whichever is longer.
6. The City and County of San Francisco is required to submit to the Regional Board by the first day of every month a report, under penalty of perjury, on progress towards compliance with this Order. Said report shall include the status of progress made toward compliance with all tasks of this Order. If noncompliance or threatened noncompliance is reported the reasons for noncompliance and an estimated completion date shall be provided.
7. This Board's Order Nos. 76-22, 76-24 and 78-102 are hereby rescinded (NPDES Nos. CA 0038423 and CA0038407).
8. This Order includes items 1, 4, and 5 of the attached "Reporting Requirements," dated August 8, 1973.
9. This Order includes all items of the attached "Standard Provisions", dated August 8, 1973.
10. This Order expires on June 1, 1984, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.
11. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to this Board.

I, Fred H. Dierker, Executive Officer, do hereby certify 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 June 19, 1979.

FRED H. DIERKER
Executive Officer

Attachments:

Reporting Requirements 8/8/73
Standard Provisions 8/8/73