San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Wastewater Enterprise
Collection System Division

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www.sfwater.org

May 18, 2012

Batch Wastewater Discharge Permit Application Instructions

1.0 Introduction

The following requirements for batch wastewater discharge permits have been established pursuant to the provisions of San Francisco Public Works Code, Article 4.1 (hereinafter referred to as the Sewer Use Ordinance, or "SUO"). This document specifies the pollutant limitations that apply, and the information that must be included in applications for permission to discharge wastewater into the City and County of San Francisco's sewerage collection system, on a temporary basis.

Such temporary, or "batch" discharges may result from dewatering of construction sites, wells drilled to investigate or mitigate a contaminated site, water used for cleaning or hydrostatic testing of pipes or tanks, or any other activity that generates wastewater, other than from routine commercial or industrial processes.

All permit applicants shall submit analytical results for pollutants listed in Appendix 1.0 of these instructions.

For sources suspected of petroleum or hazardous waste contamination, applicants shall submit analytical results for suspected pollutants listed in Appendices 2.0, 2.1, 2.2, and/or 2.3, as appropriate.

Permitted dischargers may be subject to payment of Sewer Service charges in accordance with SUO §118(ff), as explained in Section 13.0, below. Billable discharges (i.e., discharges subject to Sewer Service charges) also require analytical results for the conventional pollutants listed in Appendix 1.1.

Permits are provided by San Francisco Public Utilities Commission, Wastewater Enterprise, Collection System Division (SFPUC-WWE/CSD).

2.0 The Application

These instructions and the **Batch Wastewater Discharge Permit Application** form are available at SFPUC's website:
http://sfwater.org/index.aspx?page=498

A completed permit application should be submitted at least **seven (7) days prior** to the proposed commencement of the discharge, and must include the following information:

Edwin M. Lee
Mayor

Anson Moran
President

Art Torres
Vice President

Ann Moller Caen
Commissioner

Francesca Vietor
Commissioner

Vince Courtney
Commissioner

Ed Harrington
General Manager

- Business contact information (permit application form, questions 1 to 5);
- The source, i.e., the activity and location where the wastewater is generated (questions 6 and 7);
- The total estimated volume (or volume flow rate) and duration of the proposed discharge (questions 8 and 9);
- The proposed discharge location(s) and sewer opening, such as: side sewers, catch basins, storm drains, or manholes (questions 10 and 11);
- Answers to a series of declarations (questions 12 to 17);
- A description of any proposed wastewater pretreatment before discharge (questions 18 and 19);
- A **site plan** showing the source of the wastewater, the sampling location(s) or monitoring well(s), and the proposed discharge location(s) (question 20);
- A copy of applicable analytical results (with chain-of-custody documentation) from a representative sample of water to be discharged (question 21); and
- A signed certification statement, including the name and title of the permit applicant (question 22).

SFPUC has adopted a policy to streamline our record keeping practices, reduce paper use, and save both physical and electronic storage space. **Consequently ALL permit applications should be submitted as e-mail attachments. Supporting documentation (e.g., site plan, lab reports) should also be submitted as e-mail attachments. Applicants should send the completed permit application and supporting documents to one of the following staff members:**

John Gregson	jgregson@sfwater.org	(415) 695-7358
Brian Kuhn	bkuhn@sfwater.org	(415) 695-7360
Bruce Seale	bseale@sfwater.org	(415) 695-7310

If you have any questions or wish further explanation, you may call one of the staff members noted above, or the Wastewater Enterprise/Collection System Division main line: (415) 695-7310.

3.0 Sampling and Analysis

Because the proposed discharge will be from a non-flowing body of water, all sampling shall be performed by grab sampling. A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. In many situations, stratification results in a heterogeneous body of wastewater. Therefore special care (sometimes including some type of

random sampling) should be taken to accurately characterize the wastewater. The diversity of wastewater storage facilities (e.g., tanks, pits, underground sumps or reservoirs, etc.) precludes a detailed consideration of specific sampling plans. However, the applicant is referred to the following publication for a comprehensive discussion of wastewater sampling:

> *Handbook for Sampling and Sample Preservation of Water and Wastewater*. (EPA-600/4-82-029). U.S. Environmental Protection Agency, September 1982. (NTIS Order No. PB83-124503)

4.0 Chain-of-Custody Documentation

An essential part of any sampling/analytical scheme is ensuring the integrity of the sample from collection to data reporting. The possession and handling of samples should be traceable from the time of collection through analysis and final disposition. This documentation of the history of the sample is referred to as chain of custody. **A copy of the chain-of custody documentation must accompany the submittal of applicable analytical results**. A chain-of-custody record should contain, minimally, the following information:

1. Sample number;
2. Signature of collector;
3. Date and time of collection;
4. Place and address of collection;
5. Sampling location;
6. Signature of persons involved in the chain of possession; and
7. Inclusive dates of possession.

5.0 State-certified Laboratories

All sampling and analysis shall be performed in accordance with techniques and procedures approved by the U.S. Environmental Protection Agency (EPA) and/or the State of California.

These procedures must be performed by a laboratory certified in the appropriate field of testing by the California Dept. of Health Services Environmental Laboratory Accreditation Program (ELAP), or ELAP-approved accrediting agency (such as NELAC).

The laboratory report must be supported by QA/QC required in the analytical method, and must accompany the analytical report. Method detection limits must be sufficiently sensitive to demonstrate compliance with the applicable regulatory limits.

Applicants should submit the laboratory report(s) in electronic form (such as PDF). Summary data tables are not necessary or desirable, and are not an adequate substitute for the laboratory report.

6.0 Analytical Results

Analytical results for the pollutants listed in **Appendix 1.0** are required for **ALL proposed wastewater discharges**, and must satisfy the indicated regulatory limits. For billable discharges, analytical results are also required for TSS, COD, and O&G (**Appendix 1.1**).

In addition to the analyses listed in Appendix 1.0, wastewater that may have been exposed to petroleum or hazardous waste contamination (22 CCR 66261.20, et seq.) must also satisfy the State regulatory limits (and some additional San Francisco local limits), shown in **Appendices 2.0, 2.1, 2.2 and/or 2.3**, as applicable.

For each pollutant or pollutant property the most stringent limit must be satisfied. **Appendix 3 – Required Analyses for Batch Wastewater Discharges** shows a flow chart of the analyses required, depending upon the source and exposure of the wastewater.

For those situations where wastewater discharges are anticipated to continue over a period of several weeks or longer, the submittal of additional analyses at specified intervals may be included as a condition of the permit to discharge.

7.0 Wastewater Treatment or Off-site Disposal

Appropriate wastewater pretreatment or off-site disposal will be required in those situations where the initial sampling and analysis reveal noncompliance with the applicable regulatory limits. If pretreatment is employed, a copy of applicable analytical results from a representative sample of the treated wastewater must be submitted before a permit can be issued. If off-site disposal is selected, a copy of the manifest from the shipment must be submitted.

8.0 Construction Dewatering

For storm water that has collected in excavations associated with construction activities, and has not been exposed to hazardous waste or petroleum contamination, test results must be submitted for the analytes in **Appendix 1.0**, only.

9.0 Petroleum Contamination

For wastewater that may have been exposed to petroleum contamination only, analyses must be submitted for the following:

1. All analytes listed in **Appendix 1.0**;
2. Total Petroleum Hydrocarbons (TPH) by EPA Method 8015m (**Appendix 2.0**); and
3. Volatile Organic Compounds (VOC) by EPA Method 8260 (**Appendix 2.0**).

10.0 Hazardous Waste Contamination

For wastewater that may have been exposed to hazardous waste contamination other than petroleum contamination, analyses must be submitted for the following:

1. All analytes listed in **Appendix 1.0**; and
2. Pollutants listed in **Appendix 2.1, 2.2, and/or 2.3**, depending on the nature of the suspected contamination.

11.0 Groundwater from Specific Reclaimed Area

San Francisco Public Works Code, Article 20 specifies requirements for analyzing the soil where hazardous wastes may be present ("Maher Ordinance"). Section 1001(a)2(A) of this Article defines a specific reclaimed area of the City (corresponding generally to the historic high tide line) for which the requirements apply. Accordingly, groundwater from this area must be tested for the following pollutants:

1. All the analytes in **Appendix 1.0**;
2. Dissolved sulfides (**Appendix 2.1**);
3. Volatile organic compounds (VOC) by EPA Method 8260B; and
4. Semi-volatile organic compounds (SVOC) by EPA Method 8270.

Copies of maps showing the specific reclaimed area are provided at the end of these instructions.

12.0 The Permit

Upon the receipt of a completed permit application and supporting documents, and the determination that the proposed discharge satisfies the applicable pollutant limitations, a batch wastewater discharge permit will be issued and transmitted by e-mail, within three (3) working days. The permit may require that the permittee give prior notification to this office of the date(s) and time(s) of discharge. WWE/CSD reserves the right to observe and sample the wastewater discharge. Certain other conditions of discharge (such as requiring the installation of flow measuring devices, installation of sediment control devices, or protections against vandalism or public entry) may also be included in the permit.

13.0 Sewer Service Charges (billable discharges)

San Francisco Public Works Code, Article 4.2 establishes procedures for setting sewer service charges. Such charges are based on the cost of collecting, transporting, treating, removing and disposing conventional pollutants discharged to the sewerage collection system. The sewer service charges are calculated as wastewater volume multiplied by its strength (i.e., pollutant load).

The wastewater strength is determined using the following conventional pollutants (also called "fee constituents"): total suspended solids (TSS), total chemical oxygen demand (COD), and total recoverable oil and grease (O&G; also called Fats, Oil and Grease, or "FOG").

On June 9, 2009 the San Francisco Public Utilities Commission approved schedules of sewer service charges, which included the following parameter costs (as Schedule B, effective July 1, 2009):

Parameter	Effective 07/01/2011	Effective 07/01/2012	Effective 07/01/2013
Volume of wastewater discharged in accordance with the rules and regulations of the Wastewater Enterprise per 100 cubic feet	$6.5548	$6.5548	$6.6203
PLUS			
Suspended solids discharged per lb.	$0.8819	$0.8819	$0.8907
PLUS			
Oil/Grease discharged per lb.	$1.1035	$1.1035	$1.1145
PLUS			
Chemical Oxygen Demand discharged per lb.	$0.2156	$0.2156	$0.2178

Based upon these unit costs, the sewer service charge rate for a batch wastewater discharge of minimal strength is indicated in the example illustrated in **Appendix 4 – Sewer Service Charge for Batch Wastewater Discharges**.

For those situations where wastewater discharges are anticipated to continue over a period of several weeks or longer, the installation of an appropriate flow measuring device may be included as a condition of the permit to discharge. The owner of record of the property, where batch wastewater discharges are generated, is ultimately responsible for the payment of associated sewer service charges.

Storm water discharges are not subject to sewer service charges.

For more information on wastewater discharges billable and non-billable, or any questions not answered in these instructions, contact one of the staff members listed in Section 2.0, above.

Appendix 1.0 – Analytical Requirements for Batch Wastewater Discharges: All Sources (San Francisco local limits)

Pollutant/Pollutant Property	**Analytical Method[1]**	**Regulatory Limit[2, 3] (mg/L)**
pH	150.1 / 9040	6.0 min.; 9.5 max.
Arsenic (Total)	200.7 / 6010B / 7061A	4.0
Cadmium (Total)	200.7 / 6010B / 7130	0.5
Chromium (Total)	200.7 / 6010B / 7190	5.0
Copper (Total)	200.7 / 6010B / 7210	4.0
Lead (Total)	200.7 / 6010B / 7420	1.5
Mercury (Total)	245.1 / 7470A	0.05
Nickel (Total)	200.7 / 6010B / 7520	2.0
Silver (Total)	200.7 / 6010B / 7760A	0.6
Zinc (Total)	200.7 / 6010B / 7950	7.0

Appendix 1.1 – Analytical Requirements for Batch Wastewater Discharges: Billable Sources (Sewer Service Charge[4])

Pollutant/Pollutant Property	**Analytical Method[1]**	**Regulatory Limit[2] (mg/L)**
Total suspended solids (TSS)	Std. Methods[5] 2540D	NA
Chemical oxygen demand (COD, Total)	Std. Methods[5] 5220D	NA
Total recoverable oil and grease (O&G)	EPA 1664	300

Appendix 2.0 – Analytical Requirements for Batch Wastewater Discharges: Sources Suspected of Petroleum Contamination (San Francisco local limits)

Pollutant	**Analytical Method[1]**	**Regulatory Limit[2] (mg/L)**
Hydrocarbon oil and grease (Total petroleum hydrocarbons, TPH)	EPA 8015m	100
Volatile organic compounds (VOC)	EPA 8260	(See below)

Appendix 2.1 – Analytical Requirements for Batch Wastewater Discharges: Sources Suspected of Other Specific Contamination (San Francisco local limits)

Pollutant	**Analytical Method[1]**	**Regulatory Limit[2, 3] (mg/L)**
Dissolved sulfides	376.2 / Std. Methods[5] 4500-$S^{=}$ D	0.5
Phenols	420.1 / 8270D	23.0
Cyanide (Total)	335.3 / 9010B	1.0

Appendix 2.2 – Analytical Requirements for Batch Wastewater Discharges: Sources Suspected of Hazardous Waste Contamination (California limits)

Contaminant	**Analytical Method[1]**	**Regulatory Level (mg/kg)[6]**
Flashpoint (^{o}C, ^{o}F)	1010 / 1020A / ASTM D93	≧ 60°C (140°F)[7]
Benzene	8260C	0.5
Carbon tetrachloride	8260C	0.5
Chlordane	8081A / 8270D	0.03
Chlorobenzene	8260C	100.0
Chloroform	8260C	6.0
o-Cresol	8270D	200.0[8]
m-Cresol	8270D	200.0[8]
p-Cresol	8270D	200.0[8]
Cresol	8270D	200.0[8]
2,4-D	8151A	10.0
1,4-Dichlorobenzene	8270D	7.5
1,2-Dichloroethane	8260C	0.5

Appendix 2.2 (Cont'd)

Contaminant	Analytical Method[1]	Regulatory Level (mg/kg)[6]
1,1-Dichloroethylene	8260C	0.7
2,4-Dinitrotoluene	8270D	0.13
Endrin	8081A / 8270D	0.02
Heptachlor (and Heptachlor epoxide)	8081A / 8270D	0.008
Hexachlorobenzene	8270D	0.13
Hexachlorobutadiene	8270D	0.5
Hexachloroethane	8260C	3.0
Lindane	8081A / 8270D	0.4
Methoxychlor	8081A / 8270D	10.0
Methyl ethyl ketone	8260C	200.0
Nitrobenzene	8270D	2.0
Pentachlorophenol	8270D	100.0
Pyridine	8270D	5.0
Tetrachloroethylene	8260C	0.7

Appendix 2.2 (Cont'd)

Contaminant	Analytical Method[1]	Regulatory Level (mg/kg)[6]
Toxaphene	8081A / 8270D	0.5
Trichloroethylene	8260C	0.5
2,4,5-Trichlorophenol	8270D	400.0
2,4,6-Trichlorophenol	8270D	2.0
2,4,5-TP (Silvex)	8151A	1.0
Vinyl chloride	8260C	0.2

Appendix 2.3 – Analytical Requirements for Batch Wastewater Discharges: Sources Suspected of Hazardous Waste Contamination (California limits)

Substance	Analytical Method[1]	Regulatory Level[9]	
		STLC[10] (mg/L)	TTLC[11] Wet Weight (mg/kg)
Antimony and/or antimony compounds	200.7 / 6010B / 7041	15	500
Arsenic and/or arsenic compounds	200.7 / 6010B / 7061A	5.0	500
Asbestos	600/M4-82-020[12]	NA	1.0 (percent)
Barium and/or barium compounds (excluding barite)	200.7 / 6010B / 7080A	100	10,000[13]
Beryllium and/or beryllium compounds	200.7 / 6010B / 7090	0.75	75
Cadmium and/or cadmium compounds	200.7 / 6010B / 7130	1.0	100
Chromium (VI) compounds	7195 / 7196A / 7197	5	500
Chromium and/or chromium (III) compounds	200.7 / 6010B / 7190	5	2,500
Cobalt and/or cobalt compounds	200.7 / 6010B / 7200	80	8,000
Copper and/or copper compounds	200.7 / 6010B / 7210	25	2,500
Fluoride salts	300 / 340.2	180	18,000
Lead and/or lead compounds	200.7 / 6010B / 7420	5.0	1,000

Appendix 2.3 (Cont'd)

Substance	Analytical Method[1]	Regulatory Level[9] STLC[10] (mg/L)	TTLC[11] Wet Weight (mg/kg)
Mercury and/or mercury compounds	245.1 / 7470A	0.2	20
Molybdenum and/or molybdenum compounds	200.7 / 6010B / 7480	350	3, 500[14]
Nickel and/or nickel compounds	200.7 / 6010B / 7520	20	2,000
Selenium and/or selenium compounds	200.7 / 6010B / 7742	1.0	100
Silver and/or silver compounds	200.7 / 6010B / 7760A	5	500
Thallium and/or thallium compounds	200.7 / 6010B / 7840	7.0	700
Vanadium and/or vanadium compounds	200.7 / 6010B / 7910	24	2,400
Zinc and/or zinc compounds	200.7 / 6010B / 7950	250	5,000
Aldrin	8081A / 8270D	0.14	1.4
Chlordane	8081A / 8270D	0.25	2.5
4,4’-DDT, 4,4’-DDE, 4,4’-DDD	8081A / 8270D	0.1	1.0
2,4-Dichlorophenoxyacetic acid	8151A	10	100
Dieldrin	8081A / 8270D	0.8	8.0

Appendix 2.3 (Cont'd)

Substance	Analytical Method[1]	Regulatory Level[9] STLC[10] (mg/L)	TTLC[11] Wet Weight (mg/kg)
Dioxin (2,3,7,8-TCDD)	8290 / 1613	0.001	0.01
Endrin	8081A / 8270D	0.02	0.2
Heptachlor	8081A / 8270D	0.47	4.7
Kepone	8270D	2.1	21
Lead compounds, organic	Appendix XI[15]	NA	13
Lindane	8081A / 8270D	0.4	4.0
Methoxychlor	8081A / 8270D	10	100
Mirex	8081A / 8270D	2.1	21
Pentachlorophenol	8270D	1.7	17
Polychlorinated biphenyls (PCBs)	8082 / 8270D	5.0	50
Toxaphene	8081A / 8270D	0.5	5
Trichloroethylene	8260C	204	2,040
2,4,5-Trichlorophenoxypropionic acid	8151A	1.0	10

Footnotes:

[1] EPA Method unless otherwise noted. These methods are recommended. Equivalent, newer, updated, or comparable methods may also be used.

[2] San Francisco Public Works Code, Article 4.1, Section 123

[3] City and County of San Francisco, Department of Public Works, Order No. 158170 (Dec. 18, 1991)

[4] S.F. Public Works Code, Article 4.1, Section 118(ff)

[5] *Standards Methods for the Examination of Water and Wastewater* (20th ed.) Eaton, Andrew D., et al., American Public Health Association (Washington, D.C.), 1998, as amended

[6] California Code of Regulations, Title 22, Section 66261.24(a)(1)(B)

[7] California Code of Regulations, Title 22, Section 66261.21(a)(1)

[8] If *o*-, *m*-, and *p*-cresol concentrations cannot be differentiated, the total cresol concentration is used. The regulatory level of total cresol is 200 mg/L.

[9] California Code of Regulations, Title 22, Section 66261.24(a)(2)(A)

[10] Soluble Threshold Limit Concentration (STLC)

[11] Total Threshold Limit Concentration (TTLC)

[12] "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", EPA-600/M4-82-020 (Dec. 1982)

[13]Excluding barium sulfate ($BaSO_4$)

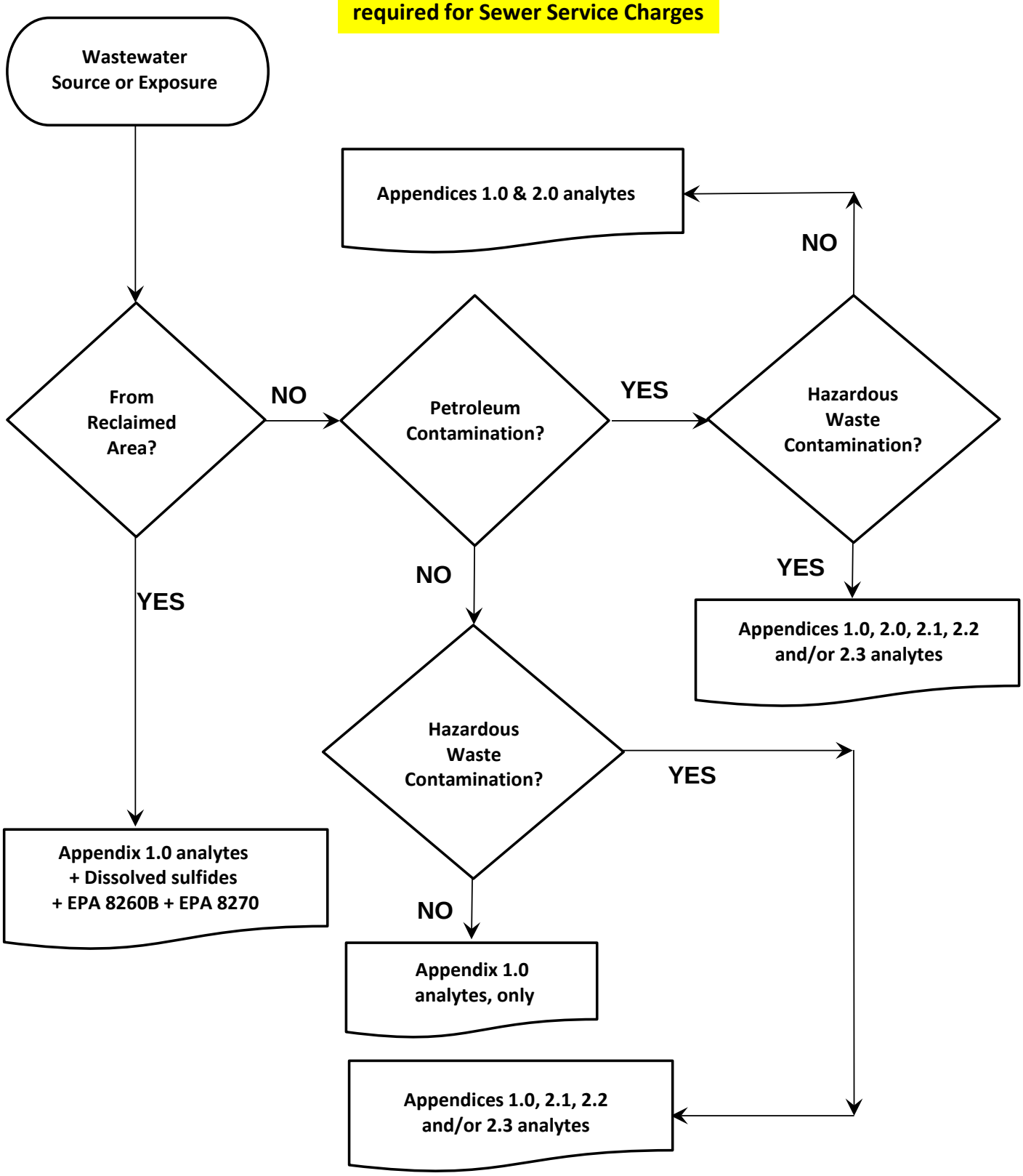
[14] Excluding molybdenum sulfide (MoS_2)

[15]California Code of Regulations, Title 22, Division 4.5, Chapter 11, Appendix XI, "Organic Lead Test Method", as amended

Appendix 3

Required Analyses for Batch Wastewater Discharges

NOTE: Appendix 1.1 analytes required for Sewer Service Charges



Appendix 4

Sewer Service Charge
for
Batch Wastewater Discharges

Source: **(e.g. Groundwater)**

Flow / Concentration Data:

Discharge Date	Discharge Volume	Discharge Volume	Pollutant Concentration		
			Tot. O&G	Tot. Susp. Solids	COD
	(gallons)	(units)*	(mg/L)	(mg/L)	(mg/L)
07/01/13	**748**	1.0	5	6	6
				(MDL concentrations)	

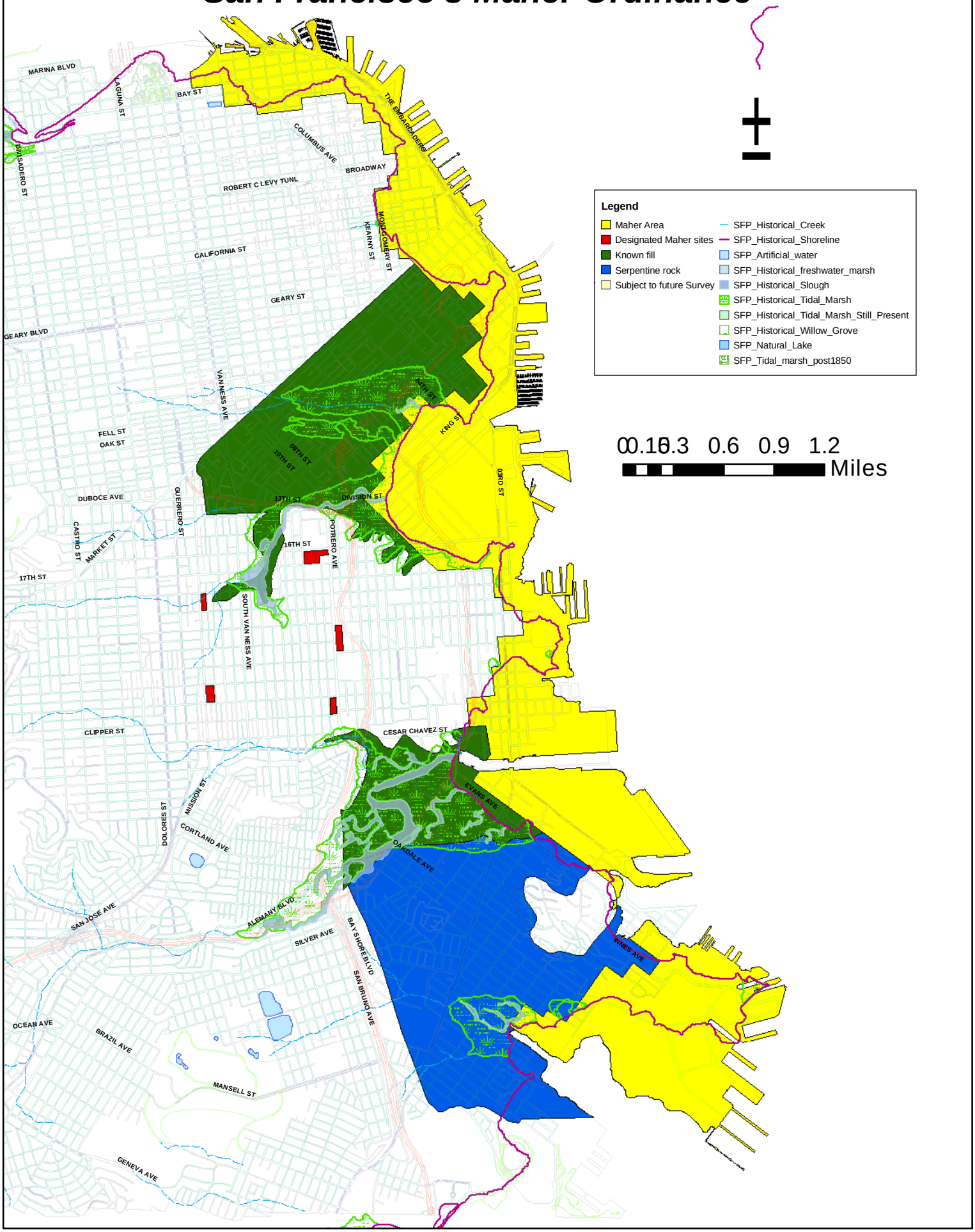
Sewer Service Charge: (using FY 2013/14 rates)

	Concentration (mg/L)	Concentration (lbs/unit)	Cost ($/lb)	Cost ($/unit)
Total Oil & Grease	5	0.031	1.1145	0.0345
Total Suspended Solids	6	0.037	0.8907	0.0330
Chemical Oxygen Demand	6	0.037	0.2178	0.0081
Flow ($/unit)				6.6203
Sewer Service Charge Rate ($/unit):				***$6.6959***

Total Sewer Service Charge = *$6.6959* *x* *1.0* ***$6.70***

* 1 Unit = 100 cubic feet = 748 gallons

San Francisco's Maher Ordinance

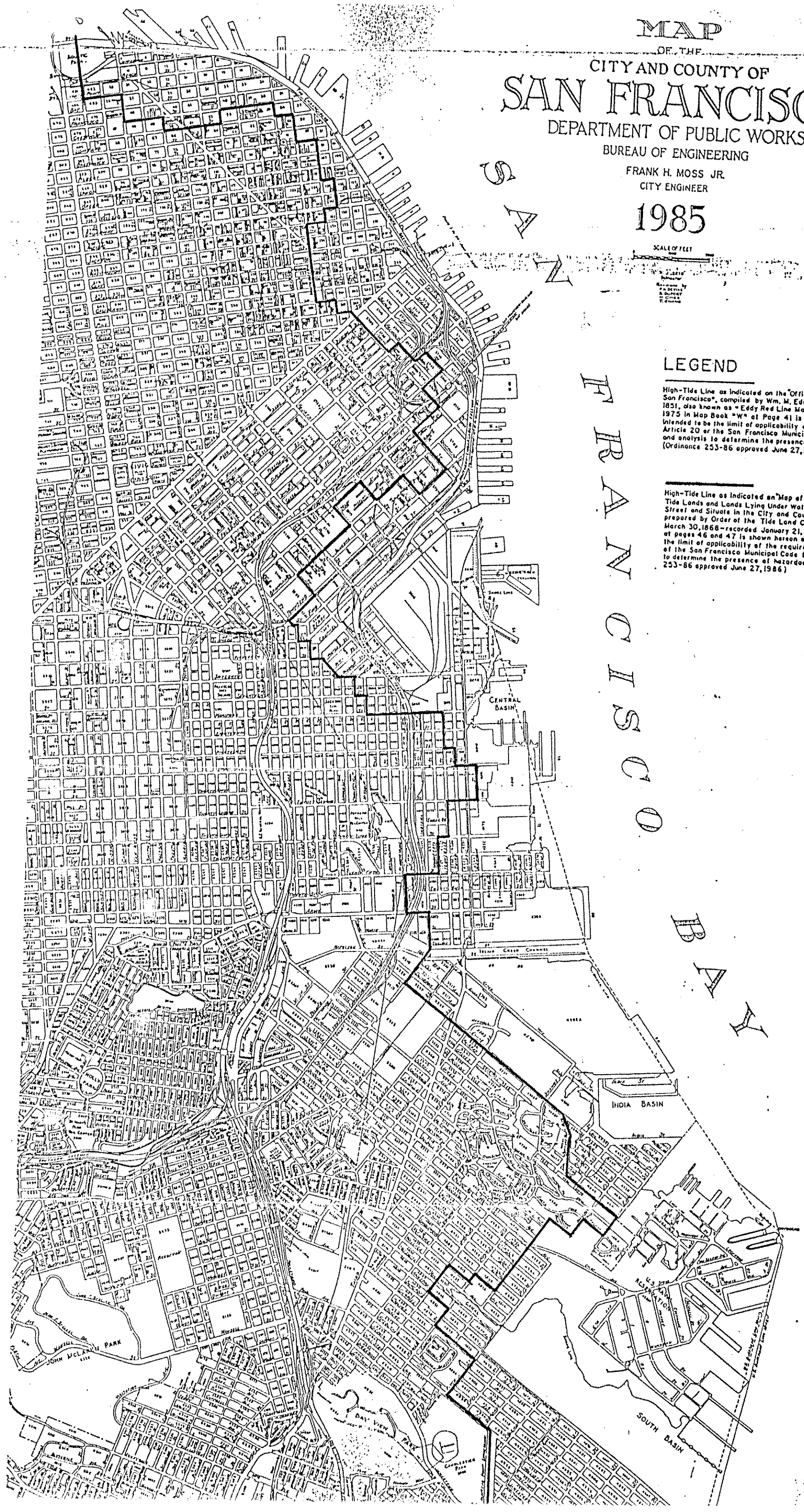


MAP
OF THE
CITY AND COUNTY OF
SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING

FRANK H. MOSS JR.
CITY ENGINEER

1985

SCALE OF FEET



LEGEND

High-Tide Line as indicated on the "Official Map of the City of San Francisco", compiled by Wm. M. Eddy, City Surveyor, Jan. 15, 1851, also known as "Eddy Red Line Map"—recorded Jan. 21, 1975 in Map Book "W" at Page 41 is shown hereon and is intended to be the limit of applicability of the requirements of Article 20 of the San Francisco Municipal Code for soil sampling and analysis to determine the presence of hazardous wastes. (Ordinance 253-86 approved June 27, 1986)

High-Tide Line as indicated on "Map of the Salt Marsh and Tide Lands and Lands Lying Under Water south of Second Street and Situate in the City and County of San Francisco," prepared by Order of the Tide Land Commissioners, approved March 30, 1868—recorded January 21, 1975 in Map Book "W" at pages 46 and 47 is shown hereon and is intended to be the limit of applicability of the requirements of Article 20 of the San Francisco Municipal Code for sampling and analysis to determine the presence of hazardous wastes. (Ordinance 253-86 approved June 27, 1986)