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

**Wastewater Enterprise**
**Collection System Division**

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# 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 industrial processes.

All permit applicants shall submit analytical results for pollutants listed in Appendix 1.0, 1.1, and 1.2 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 §119 (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 must include the following information:

- 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:**

| | | |
|---|---|---|
| Audie Ilejay | ailejay@sfwater.org | (415) 695-7339 |
| Linda Candelaria | lcandelaria@sfwater.org | (415) 695-7358 |

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. Special care (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)

### 4.1 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 **Appendices 1.0, 1.1** and **1.2** are required for **ALL proposed wastewater discharges**, and must satisfy the San Francisco Public Works Code, Article 4.1, Section 123, Limitations and Prohibitions. For billable discharges, analytical results from Appendix 1.1 are used to determine the sewer service charge.

In addition to the analyses listed in Appendices 1.0, 1.1, and 1.2, 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 construction wastewater that has collected in excavations associated with construction activities, and has not been exposed to hazardous waste or petroleum contamination, test results may be submitted for the analytes in **Appendices 1.0**, **1.1, and 1.2**.

## 9.1 Petroleum Contamination

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

1. Pollutant/Pollutant Property listed in **Appendices 1.0**, **1.1, and 1.2**.
2. Pollutants listed in **Appendices 2.0. 2.1**

## 10.1 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. Pollutant/Pollutant Property listed in **Appendices 1.0, 1.1, and 1.2.**
2. Pollutants listed in **Appendices 2.0, 2.1, 2.2, and/or 2.3**, depending on the nature

of the suspected contamination.

### 11.1 Groundwater from Specific Reclaimed Area

The San Francisco Public Health Code, Article 22A, known as the Maher Ordinance, requires characterization and mitigation of hazardous materials in groundwater (and soil). The Maher Ordinance specifies requirements for analyzing the groundwater or soil where hazardous wastes may be present.

1. Pollutant/Pollutant Property listed in **Appendices 1.0, 1.1, and 1.2.**
2. Pollutants listed in **Appendices 2.0, 2.1, 2.2, and/or 2.3**, depending on the nature of the suspected contamination.

To determine if a location is controlled under the Maher Ordinance, refer to the **San Francisco Property Information Map** located at this website; http://propertymap.sfplanning.org/ . **Type in the property address > Zoning tab > Other Information link.**

**Copies of maps showing the specific reclaimed area are provided at the end of these instructions, and can be found at**:
http://www.sf-planning.org/ftp/files/publications_reports/library_of_cartography/Maher%20Map.pdf

## 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 sent via USPS and email. Posting of a fifteen (15) day public hearing notice at the City Hall is required for all permits. The SFPUC - WWE/CSD reserves the right to observe and sample the wastewater discharge.

## 13.0 Sewer Service Charges (billable discharges)

San Francisco Public Works Code, Article 4.1 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 (TROG**).

The San Francisco Public Utilities Commission approved schedules of sewer service charges, which included the following parameter cost (as Schedule B, effective July 1, 2018):

## SCHEDULE B: Non-Residential Wastewater

Users other than Residential wastewater users charged under Schedule A of this Resolution (i.e. Non-Residential), shall be charged the cost for each parameter according to the following:

| Non-Residential | FY 2018-19 Effective 7/1/18 | FY 2019-20 Effective 7/1/19 | FY 2020-21 Effective 7/1/20 | FY 2021-22 Effective 7/1/21 |
|---|---|---|---|---|
| Monthly Service Charge | $0.98 | $2.19 | $3.60 | $5.21 |
| Volume per Discharge Unit[1] PLUS | $7.84 | $8.29 | $8.86 | $9.46 |
| Chemical Oxygen Demand (COD) per Pound PLUS | $0.519 | $0.555 | $0.599 | $0.647 |
| Total Suspended Solids (TSS) per Pound PLUS | $1.320 | $1.412 | $1.525 | $1.647 |
| Oil and Grease (O/G) per Pound | $1.331 | $1.424 | $1.538 | $1.661 |
| [1] 1 Discharge Unit = 1 Ccf of Wastewater = 748 Gallons | | | | |

A discharge unit shall be based on the customer's metered water use multiplied by the customer's flow factor representing the quantity of metered water use returned to the sewage system as wastewater (e.g. a commercial customer using 10 units of water and having a flow factor of 90% shall be billed for 9 discharge units).

Users whose parameter loadings are not based on periodic sampling shall be charged based on standard parameter loadings established by the General Manager for each Standard Industrial Classification (SIC) code in accordance with applicable state and federal laws and regulations.

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.

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 1.2 – Analytical Requirements for Batch Wastewater Discharges:

| **Pollutant/Pollutant Property** | **Analytical Method[1]** | **Regulatory Limit[2] (mg/L)** |
|---|---|---|
| Chlorides ($Cl^-$) | Std. Methods[5] 4500 ($Cl^-$) | N/A |
| | or EPA 300 or as appropriate | |

## 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$^{o}$C (140$^{o}$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) | Regulatory Level[9] 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) | Regulatory Level[9] 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 119 (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)

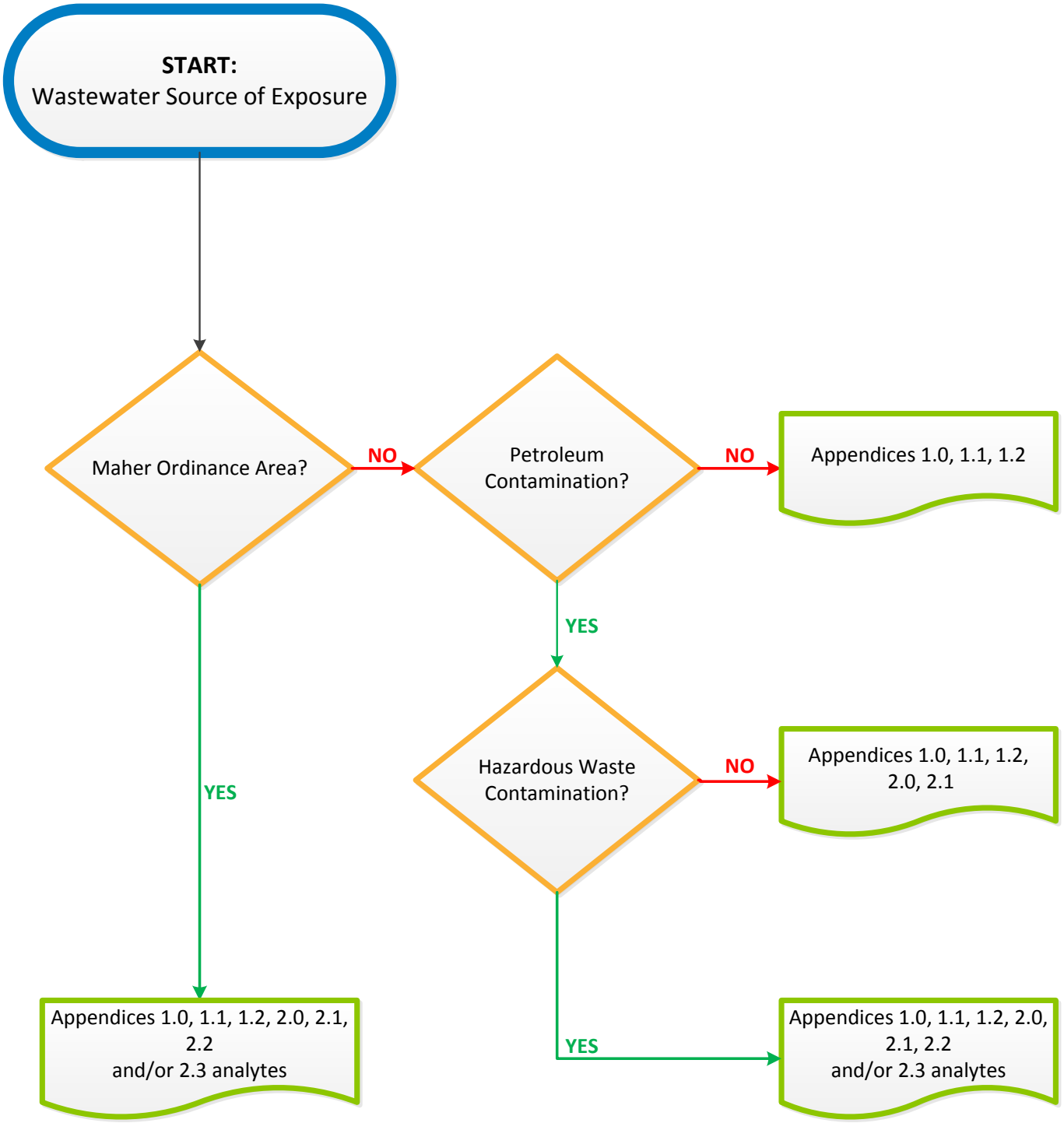
[12] "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", EPA-600/M4-82-020 (Dec. 1982)

[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**



**Appendix 4**

# Sewer Service Charge
# for
# Batch Wastewater Discharges

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

**Flow / Concentration Data:**

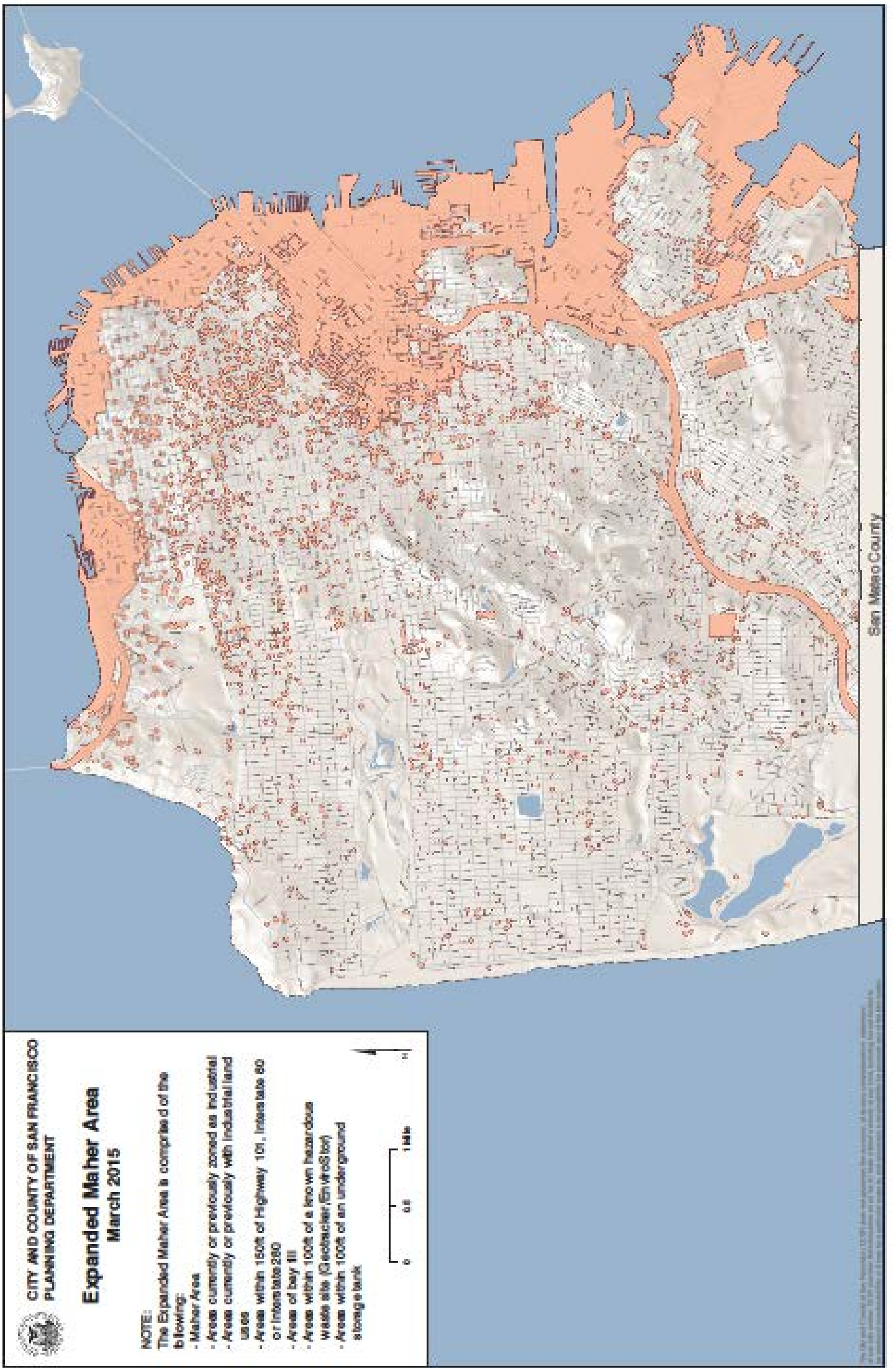
| Discharge Date | Discharge Volume | Discharge Volume | Pollutant Concentration | | |
|---|---|---|---|---|---|
| | | | Tot. O&G | Tot. Susp. Solids | COD |
| | (gallons) | (units)* | (mg/L) | (mg/L) | (mg/L) |
| 07/01/17 | **748** | 1.0 | 5 | 6 (MDL concentrations) | 6 |

**Sewer Service Charge:** (using 2017 rates)

| | Concentration (mg/L) | Concentration (lbs/unit) | Cost ($/lb) | Cost ($/unit) |
|---|---|---|---|---|
| Total Oil & Grease | 5 | 0.031 | 1.082 | 0.03 |
| Total Suspended Solids | 6 | 0.037 | 1.033 | 0.04 |
| Chemical Oxygen Demand | 6 | 0.037 | 0.548 | 0.02 |
| Flow ($/unit) | | | | 7.664 |
| ***Sewer Service Charge Rate ($/unit):*** | | | | ***$7.754*** |

***Total Sewer Service Charge =*** *$7.756* *x* *1.0* ***$7.76***

* 1 Unit = 100 cubic feet = 748 gallons




Copy of the map showing the specific reclaimed area can be found at:
http://www.sf-planning.org/ftp/files/publications_reports/library_of_cartography/Maher%20Map.pdf