

Sewer System Management Plan



PORT OF OAKLAND

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Port of Oakland
530 Water Street
Oakland, CA 94607

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INTRODUCTION

Regulatory Background

The Sewer System Management Plan (“SSMP”) 2023 Update has been prepared in compliance with the Statewide General Waste Discharge Requirements (“WDR”) for Sanitary Sewer Systems Water Quality Order No. 2006-0003, adopted by the State Water Resources Control Board (“State Water Board”) on May 2, 2006 and amended by Order No. WQ 2013-0058-EXEC on September 9, 2013.

This volume consists of the Port’s adopted 2020 SSMP, with updated Element 6 (Spill Emergency Response Plan) as required by Order WQ 2022-0103-DWQ.

Organization of SSMP

The structure of this document follows the section numbering and nomenclature specified in the WDR. The SSMP includes eleven elements or sections, as follows:

- 1) Goals
- 2) Organization
- 3) Legal Authority
- 4) Operation and Maintenance Program
- 5) Design and Performance Provisions
- 6) Spill Emergency Response Plan
- 7) Fats, Oils and Grease (FOG) Control Program
- 8) System Evaluation and Capacity Assurance Plan
- 9) Monitoring, Measurement, and Program Modifications
- 10) SSMP Audits
- 11) Communication Program

Port of Oakland Overview

The Port of Oakland (“Port”) was established in 1927 by Section 701 of the Charter of the City of Oakland (“City”) as a fully autonomous department of the City. Under the City Charter, exclusive control and management of the Port is vested in the Board of Port Commissioners (“Board”), consisting of seven members nominated by the Mayor of Oakland and appointed by the Oakland City Council. All Port of Oakland lands and assets are held in a public trust, commonly known as the Tidelands Trust. Property owned by the Port is shown in **Appendix 1**.

The Port operates three major revenue divisions: Aviation, Maritime, and Commercial Real Estate (“CRE”) Area. The Aviation Division is responsible for managing, developing, and operating all activities at the Oakland International Airport (“OIA”) in support of commercial airlines services, air cargo operations, and general aviation. The Maritime Division is responsible for managing, promoting, developing, and maintaining the seaport facilities on the Oakland Outer Harbor, Middle Harbor, and Inner Harbor, which consist of marine container terminals, intermodal rail

terminals, logistical warehouses, and other ancillary maritime support services. The Commercial Real Estate Division is responsible for managing, promoting, and overseeing roughly 837 acres of land along the Oakland Estuary. The centerpiece of the CRE is Jack London Square, which consist of hotels, restaurants, offices, retail shops, public parking, marinas, as well as public open space. The CRE portfolio also includes the Airport Business Park located near the OIA.

Sewer System Overview

The Port owns and operates a sanitary sewer collection system that serves the airport, seaport, and commercial properties. The Port’s collection system consists of approximately 36.8 miles of sewer mains and laterals and 26 lift stations. All of Port’s sewer facilities ultimately discharge to the East Bay Municipal Utility District’s (“EBMUD”) large-diameter interceptor systems, either directly at the airport or via the City’s collection system. Sewage is then treated at the EBMUD Main Wastewater Treatment Plant located in West Oakland. Sanitary Sewer System Overview Map is included in **Appendix 2** for reference.

The table below provides a summary of the sanitary sewer facilities in each area. The Port continues to update the sanitary sewer asset data as new information become available through developments and improvements projects.

Port of Oakland Sanitary Sewer Collection System Summary				
Mains and Laterals	Aviation	Maritime	Commercial Real Estate	Total
Approximate Length (miles) ⁽¹⁾	12.7	19.4	4.7	36.8
No. of Lift Stations ⁽²⁾	12	14	0	26
Notes: (1) Includes sewers owned and maintained by the Port and Port tenants. Sewers owned by City of Oakland within the Port Area are not included. (2) Port owned and maintained only. Not included are lift stations AP926P owned and maintained by College of Alameda Aviation Facility; AP881P owned and maintained by Chevron (Hangar 10/Building L-881); small grinder pump stations at OFFC and FedEx facilities; EBMUD owned and maintained pump stations “G” (Airport), “K” and “L” (seaport)				

ELEMENT 1 – GOALS

The Port is committed to the following goals to provide the essential sanitary sewer collection infrastructure and services to its tenants and customers at the airport, seaport, and commercial real estate areas:

- 1) Provide a plan to effectively manage, operate, and maintain the Port’s sanitary sewer collection system;
- 2) Provide adequate capacity to convey peak flows and reduce infiltration and inflow (I/I) into the system;
- 3) Develop capital improvement projects (CIP) to rehabilitate and maintain the existing sewer infrastructure facilities, to improve system reliability, and to provide adequate capacity to accommodate future flows;
- 4) Reduce the frequency of sanitary sewer spills (previously known as sanitary sewer overflows (“SSOs”));
- 5) Minimize the impacts of spills;
- 6) Prevent public health hazards and damages to public and private properties caused by spills;
- 7) Develop capital improvement projects (CIP) to rehabilitate and maintain the existing sewer infrastructure facilities, to improve system reliability, and to provide adequate capacity to accommodate future flows.

ELEMENT 2 – ORGANIZATION

This section identifies Port staff responsible for implementing the SSMP. This section also includes the designation of the authorized representative to meet State Water Board requirements for completing and certifying spill reports.

2.1. Legally Responsible Official

The Port Executive Director has designated the following position classifications to serve as the Legally Responsible Officials (“LRO”) (i.e. authorized representatives) for the implementation and certification of all provisions set forth in the WDR and this SSMP:

- Chief Operating Officer
- Port Principal Engineer
- Harbor Facilities Maintenance Manager
- Commercial Real Estate Manager
- Director of Environmental Programs and Planning
- Environmental Health & Safety Specialist
- Water Systems Engineer

These LROs are authorized to submit and certify electronic spill reports and all other reports required in compliance with the WDR and any local regulations placed on the Port sewer system by local regulatory agencies. They are also authorized to submit all other required reports to other applicable agencies as required or directed by those agencies. The LROs are also authorized to appoint Data Submitters for purposes of entering spill data into the State of California Integrated Water Quality System (“CIWQS”) and for contact with the California Office of Emergency Services (“Cal OES”).

2.2. Responsibility for SSMP Implementation and Update

The Office of the Chief Operating Officer’s Engineering Division has the ultimate responsibility for development, implementation, and maintenance of all elements of the Port’s SSMP. The responsibility for day to day implementation of each of the Port’s SSMP elements described in Section 2.3 below. The Chief Operating Officer oversees Engineering Division for Port-wide operations and compliance with government regulations and Board policies.

The Engineering Division provides scoping, design, project management, construction management, cost estimating, scheduling, facility inspections/assessments, inspection of tenant improvement and technical studies to support the revenue divisions’ infrastructure and development needs.

2.3. Organization Chart and Position Descriptions

Appendix 3 presents the Port’s organization chart showing staff involved in implementing the SSMP. Position descriptions are explained as follows:

- **Board of Port Commissioners**

The Board of Port Commissioners (“Board”) is vested with exclusive control and management of the Port. The Board is responsible for establishing policies, ordinances,

and the overall approval of the SSMP, as well as the approval of funding expenditures related to the SSMP program elements.

- **Executive Positions**

The Executive Office provides leadership and direction to all Port divisions. This includes strategic and business planning, policy development, communications, social responsibility, community affairs, and government relations. The roles and responsibilities of the executive positions that are relevant to the SSMP are described below:

- **Executive Director.** The Executive Director is responsible for the administration and operations of the Port and is the agency official who designates Port staff to serve as Port's LROs.
- **Chief Audit Officer.** The Chief Audit Officer is responsible for all internal audits of the Port organization.
- **Port Attorney.** The Port Attorney is responsible for verifying that the Port, through service agreements, ordinances, or other legally binding provisions, has the authority to implement the programs and activities documented or recommended in this plan.
- **Chief Financial Officer.** The chief financial officer is responsible for the Port's overall finance and budget, risk management, purchasing, and accounting services.
- **Chief Operating Officer.** The chief operating officer is responsible for Port-wide operations and compliance with government regulations and Board policies.

- **Aviation Division**

The Aviation Division is responsible for the operation and maintenance of the Oakland International Airport and associated facilities. The roles and responsibilities of specific positions as relevant to the SSMP are described below:

- **Director/Assistant Director of Aviation.** The Director and Assistant Director of Aviation is responsible for the overall management and operations of the airport.
- **Aviation Planning and Development Manager.** The Aviation Planning and Development Manager is responsible for developing and coordinating capital improvement expenditures related to the airport sanitary sewer system.
- **Aviation Facilities Maintenance Manager.** The Aviation Facilities Manager is responsible for the all infrastructure facilities operation and maintenance (O&M) program of the Aviation Division. As relevant to the SSMP, the Aviation Facilities Manager oversees the budgeting process for O&M expenditures and supervises lower level maintenance positions responsible for maintaining the airport sewer collection system.
- **Maintenance/Construction Supervisor and Foremen.** As related to the SSMP, the Maintenance/Construction Supervisor and foremen are responsible for coordinating the maintenance of the gravity sewer collection system and for coordinating the response to spills within the gravity collection system. He also oversees the in-house repair, replacement, or construction of the sewer collection system.

- **Utilities Supervisor and Foremen.** As related to the SSMP, the Utilities Supervisor and foremen are responsible for the O&M of sewer lift stations outside of the terminal area. He is also responsible for responding to spills caused by sewer lift station failure.
- **Equipment Systems Superintendent, Senior, and Equipment Systems Engineers.** The Equipment Systems Superintendent and Senior/Equipment Systems Engineer is responsible for the O&M of sewer lift stations, building sewers, and other sewer appurtenance in the terminal area of the airport sanitary sewer system. He is also responsible for coordinating the response to spills that occur due to failure of these facilities.
- **Facility Support Supervisor.** The Facilities Support Supervisor is responsible for coordinating O&M activities and tenant request maintenance activities within the Port's computerized maintenance management system (CMMS).

- **Maritime Division**

The Maritime Division is responsible for the operation and maintenance of the seaport and associated facilities, plus Port owned gravity sewers located within the commercial real estate area. The roles and responsibilities of specific positions as relevant to the SSMP are described below:

- **Director of Maritime.** The Director of Maritime is responsible for the overall management and operations of the seaport area.
- **Administrative/Financial Services Manager.** The Administrative/Financial Services Manager is responsible for developing and coordinating capital improvement expenditures related to the seaport sanitary sewer system.
- **Chief Wharfinger and Wharfingers.** The Chief Wharfinger and four wharfingers serve as the liaison between the Port and its maritime tenants and is responsible for notifying Port staff in the event of a spill.
- **Harbor Facilities Maintenance Manager.** The Harbor Facilities Manager is responsible for all infrastructure facilities operation and maintenance (O&M) program of the Maritime Division. As relevant to the SSMP, the Harbor Facilities Manager oversees the budgeting process for O&M expenditures and supervises lower level maintenance positions responsible for maintaining the seaport sewer collection system. The Harbor Facilities Manager serves as one of the Port's LRO, as discussed in Section 2.1.
- **Maintenance/Construction Supervisor and Foremen.** As related to the SSMP, the Maintenance/Construction Supervisor and foremen are responsible for coordinating the maintenance of the gravity sewer collection system and for coordinating the response to spills within the gravity collection system. He also oversees the in-house repair, replacement, or construction of the sewer collection system.
- **Utilities Supervisor and Foremen.** As related to the SSMP, the Utilities Supervisor and foremen are responsible for the O&M of sewer lift stations in the Maritime

area. He is also responsible for responding to spills caused by sewer lift station failure.

- **Facility Support Supervisor.** The Facilities Support Supervisor is responsible for coordinating O&M activities and tenant request maintenance activities within the Port's computerized maintenance management system (CMMS).

- **Commercial Real Estate Division**

The Commercial Real Estate Division manages the Jack London Square, the Airport Business Park and other commercial real estate areas along the Oakland Estuary. The roles and responsibilities of specific positions as relevant to the SSMP are described below:

- **Director of Commercial Real Estate.** The Director of Commercial Real Estate is responsible for managing the Port's commercial real estate portfolios.
- **Commercial Real Estate Manager.** The Commercial Real Estate Manager is responsible for the direct communications and coordination of the tenant/leasehold agreements including maintenance responsibilities. The Commercial Real Estate Manager serves as one of the Port LRO, as discussed in Section 2.1.
- **Commercial Real Estate Representative(s).** The Commercial Real Estate Representative(s) serve as the liaison between commercial real estate tenants and harbor facilities.

- **Chief Operating Office**

The Chief Operating Office is responsible for Port-wide operations and coordination with staff across the organization. Divisions in the chief operating office include Engineering, Utilities, Environmental Programs and Planning, and Information Technology. The roles and responsibilities of specific positions as relevant to the SSMP are described below:

- **Director of Environmental Programs and Planning.** The Director of Environmental Programs and Planning and staff are responsible for regulatory compliance and environmental protection. The Director of Environmental Programs and Planning also serves as one of the Port's LRO, as discussed in Section 2.1.
- **Utilities Administration Manager.** The Utilities Administration Manager manages all aspects of utility services as well as the Port's utility business, including the buying and selling of electricity, water, and gas; provides master planning on the Port's utility systems; and supports infrastructure developments.
- **Aviation/Maritime Design & Delivery and Engineering Services.** The Aviation/Maritime Design & Delivery and Engineering Services departments are responsible for the design and delivery and support services for all aviation, maritime, and CRE capital improvements and major maintenance projects.
- **Water Systems Engineer.** The Water Systems Engineer is responsible for the overall system management and regulatory compliance of water distribution and wastewater collection system at the Port. The Water Systems Engineer serves as one of the Port's LRO, as discussed in Section 2.1.

- **Finance and Administration**

The Finance and Administration Division includes Human Resources, Financial Planning, Accounting, Purchasing, Risk Management, and Enterprise Resources Planning. The roles and responsibilities of the specific position as relevant to the SSMP are described below:

- **Environmental Health and Safety Specialist.** The Environmental Health and Safety Specialist is responsible for Port-wide health and safety issues and for spill responses, cleanup, and mitigation of spills and for reporting spills to the appropriate regulatory agencies. The Environmental Health and Safety Specialist also serves as one of the Port's LRO, as discussed in Section 2.1.

3 - LEGAL AUTHORITY

This section provides a regulatory background and local codes ordinances applicable to the operations and maintenance of the Port sewer collection system. This section also describes the Port's legal authority to comply with the State Water Board's WDR requirements, as provided in the Port sewer ordinances.

3.1. Regulatory Background

The United States Environmental Protection Agency ("EPA"), the State Water Resources Control Board ("State Water Board"), and the San Francisco Regional Water Quality Control Board ("Regional Board") regulate discharges into the San Francisco Bay, pursuant to the federal Clean Water Act and the California Water Code. On a local setting, EBMUD owns and operates the main wastewater treatment plant and the large diameter interceptor sewers which convey sewage from collection systems in the East Bay within its service boundary. EBMUD regulates wastewater discharge into its system through the Wastewater Control Ordinance and imposes local limits for select pollutants. Oakland Municipal Code establishes the City's legal authority to operate and maintain its collection system.

In February 2010, in response to the lawsuit that was brought by the EPA, the State and Regional Water Boards and other plaintiffs, EBMUD adopted a Regional Private Sewer Lateral ("PSL") Ordinance and amended its wastewater control ordinance. The City also amended its municipal codes to enforce the provisions of the EBMUD Regional PSL Ordinance.

In September 2014, EBMUD and other agencies within EBMUD's wastewater service area reached a settlement agreement in the form of a federal Consent Decree ("CD"), requiring a regional collaboration to improve the aging sewer infrastructure and protect the San Francisco Bay from sewage spills.

The Port, although not a party to the CD, has been collaborating with the City and EBMUD to ensure appropriate compliance strategies since 2014. As a result, the Board adopted the Port PSL Ordinance on May 10, 2018 ("Port Ordinance 4474") to confirm applicability and enforceability of EBMUD and City PSL regulations.

3.2. Port Sewer Ordinances

Port Ordinance 4113 was developed during the preparation of the Port's original SSMP and adopted by the Board on November 17, 2009 to strengthen the Port's ability to regulate the type of wastewater discharged into the Port sanitary sewer system and to require that sewers and connections be properly designed and constructed in conformity with EBMUD's wastewater control ordinance and City's sanitary sewer design standards and provisions.

Port Ordinance 4474 adopts by reference Oakland Municipal Code Sections 13.08.590 through 13.08.620 with certain modifications that require Port tenants to comply with the private sewer lateral regulations established by the City and EBMUD whenever the Port tenant's actions trigger the application of those ordinances, including the responsibilities of inspecting, maintaining, repairing, and replacing sewer laterals.

The Port ordinances are not meant to supersede any existing or future statutes, rules, regulations, and/or ordinances established by any government body that regulates the discharge of wastewater into the sanitary sewer collection system. Rather, they are meant for the Port to

provide additional clarity or to exercise its legal authority in the implementation of specific SSMP elements. The following section summarizes the provisions of the ordinances as applicable to the WDR requirements. Both ordinances are included in **Appendix 4** for reference

3.2.1. Prevention of Illicit Discharges and I/I Control

Section 5 of Port Ordinance 4113 provides prohibitions as well as limitations of the types of substances that may be discharged into the Port's sewer system. This generally includes wastewater discharges that result in contamination, pollution, or a nuisance.

3.2.2. Sewer Service Lateral Maintenance

Section 6 of Port Ordinance 4113 grants the authority of Port staff, under the direction of the Executive Director or his designated representative, to secure access to any buildings, structures, or premises under Port jurisdiction to inspect, repair, or maintain sanitary sewer facilities.

Section 3 of Port Ordinance of Port Ordinance 4774 requires Port tenants to obtain all required permits, to perform necessary inspection, repair, or replacement of all building sewers, in compliance with EBMUD's and City's codes and ordinances for sewer service laterals located within leasehold property in which the tenant has the maintenance responsibility under the lease agreements. The Port is responsible for all sanitary sewer pipes within the Port Area that are not the responsibility of the tenants.

3.2.3. Proper Design and Construction of Sewers and Connections

Section 3 of Port Ordinance 4113 places the authority to the Engineer to develop and enforce standards for design, construction, inspection, and testing of new or rehabilitated sanitary sewers within the Port's jurisdiction. Element 5 describes the design and construction standards in greater details.

3.2.4. Enforcement

Section 7 of Port Ordinance 4113 provides the policies and procedures including abatement by the Port, recovery of attorney fees and costs if and when there is a public nuisance created by any person or entity within the Port jurisdictional area as set forth in the California Water Code and the City Charter. Any violation of the provisions of the Port ordinance may be punishable by a fine and penalty not exceeding five hundred dollars (\$500), or six (6) months imprisonment, or both.

ELEMENT 4 – OPERATIONS AND MAINTENANCE PROGRAM

This section discusses the Port’s wastewater collection system operations and maintenance (“O&M”) program including mapping, preventive maintenance, repair, and training.

4.1. Collection System Mapping

A number of Port buildings and facilities including the sewer collection system infrastructure in the Maritime and Aviation areas have been in existence for many decades. The seaport and airport functioned as critical military installations during World War II. While most of the infrastructure have since been rebuilt as part of the Port’s continuous developments over the past 30 years, other sections of the collection system which are remaining in service have passed their useful life.

Since the adoption of the original SSMP in 2010, the Port has expended considerable effort to assemble available records into a comprehensive set of maps. The results from this effort were compiled in several mapbooks and later imported into the Port’s Enterprise Geographical Information System (“GIS”), referred to as PortView. The GIS platform supports asset inventory and management functions (i.e., pipe length, diameter, material, manhole data, etc.) extremely well, allowing users to quickly locate and review available asset characteristics using a mapping interface. In 2019, for the preparation of the Port-wide Condition Assessment Plan (“CAP”) the Port conducted extensive field work to verify the locations of sanitary sewer lines, manholes, and cleanouts within Port-owned property where confidence in the integrity of the Port’s available mapping was questionable due to either age or modifications to the collection system that have occurred over the years.

Appendix 2 provides an overview of the Port sanitary sewer collection system which is divided into three main subsystems: Aviation, Maritime, and Commercial Real Estate. Due to the size and geographical locations of Port properties, sewage from the Port discharges to several distinct locations. The Oakland International Airport discharges directly to the EBMUD Pump Station G. The Seaport facilities and CRE properties discharge to the City of Oakland collection system which then connects to the EBMUD regional large-diameter interceptor system.

The Port’s sewer asset inventory and GIS and mapping will require regular updating as the sanitary sewer system is modified or changed as a results of new system upgrades, new developments, and improvements by Port tenants.

4.2. Preventive Maintenance

4.2.1. Computerized Maintenance Management System

The Port utilizes a computerized maintenance management system (“CMMS”) software application, currently Oracle Enterprise Asset Management (Oracle eAM - part of Oracle E-Business Suite), for tracking all maintenance and repair activities, managing work requests and work orders, scheduling routine preventive maintenance, and tracking emergency responses.

4.2.2. Gravity Sewer Maintenance Program

To effectively manage the sewer collection system the Port performs cleaning, closed-circuit television (“CCTV”) inspection, and using these CCTV data to assess the condition of the gravity sewers in accordance with the National Association of Sewer Service Company (“NASSCO”) condition assessment guidelines. In addition to identifying pipe defects and possible blockages, CCTV inspections data can also be used for locating sources of infiltration and inflows into the collection system. In 2019, the Board approved a Port-wide Condition Assessment Plan (“CAP”) for

its sewer assets following the adoption of Port Ordinance 4474 which directs Port staff to prepare plans to assess and repair Port owned sanitary sewer facilities. A condition assessment schedule and assessment method for all existing gravity sewer lines and service laterals are described in detail in the CAP. Understanding the condition of an asset at a specific point in its lifecycle has been proven to be a good tool to estimate the remaining reliable life and to prioritize capital improvement.

Since the adoption of the SSMP in 2010, the Port has been using outside consultants and contractors to perform CCTV inspections within the Port owned properties. Recently, the Port has completed extensive inspections of approximately 61,400 linear feet of gravity sewer lines in the Maritime area, which covers the Outer Harbor Terminal, Ben. E. Nutter Terminal, Joint Intermodal Terminal, Oakland International Container Terminal (“OICT”), Matson Terminal, Howard Terminal, TraPac Terminal, the Middle Harbor Shoreline Park, and Portview Park.

As of July 28, the Port has also completed inspection of 23,000 linear feet of gravity sewer lines in the Aviation area, which covers both the North Field and South Field of the Airport.

Following sewer inspection and condition assessment of the sewer assets, the Port plans to update the system with capital improvement projects to ensure that the system condition and capacity meets the service requirements. The planned sewer rehabilitation and upgrade projects are discussed in detail in Element 8.

4.2.3. Pump Station Maintenance Program

As discussed in the overview of the Port’s sewer collection system, the Port currently operates and maintains a total of 26 lift stations (12 at the airport and 14 at the seaport). In addition, there are several smaller pump stations privately maintained by Port tenants and other sewage pump stations that the City and EBMUD owns, operates, and maintains within the Port Area separately. Port maintenance staff performs vast amount of maintenance activities including regular inspections, cleaning and washdown, minor repairs, and other preventive maintenance not only to prolong the life of these critical facilities but to ensure system reliability to prevent sewer spills.

Since the adoption of the SSMP in 2010, the Port has completed capacity evaluation and assessment of all sanitary sewer lift stations and continues to rehabilitate and upgrade these facilities as prioritized in the condition assessment reports. A list of lift station rehabilitation projects is included in Element 8.

4.2.4. CCMS Tracking System

The Port utilizes a computerized maintenance management system (“CMMS”) software application to schedule routine preventive maintenance, track emergency spill responses, repair activities, and to generate work orders. The software package currently utilized by the Port is Oracle eAM.

The Port has integrated the unique pipe IDs, lift stations, and other sewer facilities from the collection system maps into the Oracle eAM software, and most of the maintenance activities are assigned with unique work order number, giving the Port the ability to track maintenance activities for specific assets. In addition to managing the assets on the Oracle eAM, the Port also uses other software tools such as AutoCAD, Excel, and Enterprise GIS PortView as described above.

4.2.5. Staffing and Training Program

Sewer maintenance and repair activities are performed by Port staff in the respective Aviation and Harbor Facilities with supplemental support services from outside contractors. Port maintenance

staff also maintains other utilities such as water, power, storm drain system, etc. and performs maintenance for other Port facilities.

Training for maintenance staff are provided through the specific training program within each revenue division or through the Port-wide training program. Ongoing training for Port staff is provided through a combination of informal and on-the-job training and other focused training classes or seminars. The Port engineering staff attend training sessions with regards to the new programs or policies hosted by the State Water Board and local agencies. Several Port staff also has received and maintained certification with NASSCO.

4.2.6. Equipment and Replacement Part Inventories

The Port maintains adequate inventory of spare pipes, pump parts, and other parts needed to perform emergency repair work on the collection system. The Port has equipment for trench excavation if required by underground sewer repair work. The Port, however, does not own CCTV inspection and hydraulic cleaning trucks but have maintained access to these readily available services through monthly vendors and/or on-call contractors.

ELEMENT 5 - DESIGN AND PERFORMANCE STANDARDS

Since the Port sanitary sewer facilities discharge into the City's and EBMUD's sewer collection systems, the Port follows the established guidelines and standards for design, inspection and testing for sanitary sewer facilities from these two agencies.

5.1. Design and Construction Standards

The Port currently does not maintain its own set of guidelines or standards for the design and construction of new or replacement sewer system facilities. In lieu of an official set of design guidelines, Port engineering staff reviews each sewer system design to ensure conformance with the City's standards. Port staff and its design consultants normally refer to the City's "Sanitary Sewer Design and Construction Standards" at the following website address:

<https://www.oaklandca.gov/documents/sewer-design-standards>

This document has an effective date of August 2008 and is maintained by the Oakland Public Works Department's Engineering Design and Construction. In addition to this document, the City has also developed and maintained a set of standard details drawings for sanitary sewer facilities. The Port normally refers to the City's standard details for sanitary sewer design and make modification to details as needed. The City's standard details are at the following website address: <http://www2.oaklandnet.com/government/o/PWA/o/EC/s/DGP/OAK025902>

In addition to the above, the City has adopted the "Standard Specifications for Public Works Construction", commonly known as the "Greenbook", to ensure that sanitary sewers are installed, rehabilitated, or repaired properly. This document is normally republished every three years by the City. The Port uses the City's specifications documents for reference but prepares its own special provisions (i.e., project manual) specific for each project.

5.2. Inspection and Testing Standards

The Port makes references and directs Port tenants and contractors to the City's and EBMUD's inspection and testing standards. Oakland Municipal Code ("OMC") chapter 13.02 "Sewer System" provides definition of the sanitary sewer system. OMC chapter 13.08 "Building Sewers" codifies the regulations and set forth the requirements for the construction, reconstruction, repair, or abandonment of building sewers including the requirements for compliance with EBMUD's Regional Private Sewer Lateral Ordinance as discussed in Element 3. Sections 5 and 7 of EBMUD's Regional Private Sewer Lateral Ordinance set forth the standards for maintenance, inspections, repair and verification testing requirements for sewer laterals and apply to all sewer laterals within the Port's collection system. The regional ordinance including testing and compliance guidelines and other resources can be found at the following website address:

<https://www.eastbaypsl.com/eastbaypsl/>

ELEMENT 6 – SANITARY SEWER SPILL EMERGENCY RESPONSE PLAN

This section summarizes the Port’s Spill Emergency Response Plan (“SERP”), which provides for an effective response plan in the event of a spill. The Port’s SERP is a standalone document and may be updated as necessary to reflect any changes in staffing or notification requirements. A copy of the SERP is included in **Appendix 5**.

6.1. Goals

The Port’s goals with respect to responding to spills are to:

- Immediately stop the spill and preventing/minimizing a discharge to waters of the State;
- Intercept sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recover, clean up and dispose of sewage and wash down water; and
- Clean publicly accessible areas while preventing toxic discharges to waters of the State

6.2. Summary of SERP Components

The components of the SERP are briefly explained below:

6.2.1. Technical Definitions and Spill Categories

The Spill Emergency Response Plan includes technical definition of a spill and lists the four categories of spills from the public sewer system and Port-managed lateral sewage discharges. The category of spill determines specific regulatory requirements and are shown in the table on the following page.

Category 1	<p>A spill of any volume of sewage from or caused by a sanitary sewer system or publicly owned lateral that results in a discharge to:</p> <ul style="list-style-type: none"> • A surface water, including a surface water body that contains no flow or volume of water; or • A drainage conveyance system that discharges to surface waters¹ when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly. <p>Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.</p>
Category 2	A spill from a sewer main of 1,000 gallons or greater that does not discharge to a surface water.
Category 3	A spill from a sewer main of equal to or greater than 50 gallons and less than 1,000 gallons that does not discharge to a surface water.
Category 4 and non-Category 1 Port-Managed Lateral	A spill from a sewer main of less than 50 gallons that does not discharge to a surface water, or a non-Category 1 Port-managed lateral spill.

6.2.2. Key Personnel

Specific Port personnel are identified as applicable to spill response procedures for responding, reporting, and/or mitigating a spill event. References are made to job titles, rather than individual names. The purpose of this is to simplify the process of updating the document as staff changes occur. These staff receive training on the contents of the SERP. New employees receive training before they are placed in a position of responsibility for spill response and current employees receive periodic refresher training on the procedures in the SERP.

6.2.3. Spill Response Procedure

The Port has specific reporting structures for the Aviation, Maritime, and Commercial Real Estate Area that are within the Port's jurisdictional area.

For sewer spills occurs in the Aviation Area, calls from Port tenants or the public regarding potential spills or any spill events in the vicinity of the Oakland International Airport are generally received through either the Airport Operations at (510) 563-3361 or the Airside Operations at (510) 563-6432. The Airport Operations is staffed 24/7 every day of the year. The Manager on Duty at the Airport Operations or his/her designated representative then records the spill information and forwards it to the Aviation Facilities Maintenance and to the Port's Spill Responder, when appropriate.

In the Maritime Area, calls from Port tenants or the public regarding potential spills or any spill events in the Maritime area are generally received through the Port Security Operations Watch Desk. The Port Security Operations Watch Desk then records the spill information and forwards it

¹ Surface water includes waters on the earth's surface including, but not limited to, streams, lakes, ponds, oceans, and reservoirs; and irrigation and drainage systems discharging directly into a stream, lake, pond, ocean, reservoir, or other surface water

to the Harbor Facilities Maintenance Department and to the Port's Spill Responder, when appropriate. Sewer spills in the maritime area detected by Port staff in the course of their normal duties shall be reported immediately to the Harbor Facilities Maintenance Department. Dispatching personnel in the maritime division should record all relevant spill information and dispatch response crews, as needed.

Calls from Port tenants or the public regarding potential spills in the Commercial Real Estate may be routed through the Commercial Real Estate Representative(s) for appropriate responses. In some instances, the City's Call Center may receive calls from the public in public area within the Port jurisdiction and will contact the Port for appropriate actions.

6.2.4. Spill Containment and Clean up

The response crew is trained to immediately isolate and secure all sources of sewer spills to mitigate the spill volume, such as securing any bathrooms that may be added to the spill upon arrival to the site. Once the spill has been contained, the crew shall determine the cause(s) of the spill and determine impact to the surrounding properties, storm drains, and surface water and apply additional measures (i.e., water quality monitoring, appropriate signage, etc.) as required.

The response crew will take appropriate cleanup actions. In many cases, the Port utilizes the services of an emergency hazardous material spill response contractor for cleanup and disinfection. The cleanup actions include thoroughly flush and clean the area from any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal. The spill site is to be secured to prevent contact by members of the public until the site has been thoroughly cleaned.

6.2.5. Regulatory Reporting

The SERP includes procedures, timelines and staff responsibilities for reporting spills to the State Water Board's online spill database (CIWQS). The crew supervisor/superintendent is responsible for confirming that the Sanitary Sewer Spill Field Report is completed and that the available information is forwarded to one of the Port's LROs for reporting and certifying the Spill Report with to the State Water Board and other applicable regulatory agencies.

6.2.6. Spill Investigation and Documentation

The SERP contains a description and procedures for completing a Spill field form. The Spill field form documents the specifics of a spill event and any follow up investigative actions (e.g., CCTV inspections, repairs, etc.). Each spill event record contains completed field form(s), volume estimation and photographs (if applicable). The spill record will be analyzed in for follow-up actions including repair or rehabilitation/replacement considerations.

6.2.7. Spill Water Quality Monitoring Program

The SERP contains requirements for Water Quality Monitoring of spills 50,000 gallons or greater that reach surface waters. The Port will utilize its best judgment to determine if sampling is appropriate on a case-by-case basis. The Port will collect and analyze samples of the receiving water for those spills that may pose any imminent danger to human health and the environment when it is feasible and safe to do so. The SERP contains detailed water quality sampling and monitoring program.

ELEMENT 7 - FATS, OILS, AND GREASE CONTROL PROGRAM

The purpose of the fats, oil, and grease (“FOG”) control program is to minimize the amount of FOG material from restaurants and food services establishments (“FSE”) that may enter the sanitary sewer collection system and create the formation of blockages in the pipes. The Port primarily relies on the FOG control programs established and administered by the East Bay Municipal Utility District (“EBMUD”) and the City of Oakland (“City”).

7.1. Legal Authority

EBMUD's Wastewater Control Ordinance provides legal authority for EBMUD to regulate discharges into its wastewater collection and treatment facilities. The ordinance established strict local limits on the volumes and strength of the wastes including FOG material that can be discharged into the sanitary sewer system. EBMUD's limit for FOG is 100 mg/L.

Oakland Municipal Code Chapter 13.08 - Building Sewers also includes regulations that provide the City authority to restrict the use of the public sewer system to the discharge of sewage that does not endanger the condition, operation or capacity of its collection system; to prohibit the discharge of FOG into the sanitary sewer system; and to disconnect buildings from the sanitary sewer system at the owner's expense.

Port Ordinance 4413 provides the Port authority to regulate the type of wastewater including FOG discharged into the Port sanitary sewer system.

7.2. FOG Control Plan

The Port facilities are covered under the FOG control programs developed and administered by EBMUD and the City. Both of these programs include a wealth of information and outreach materials (i.e., grease traps and interceptors maintenance, best management practices, brochures, posters, flyers, etc.) for commercial restaurants and FSEs. Therefore, it is not necessary for the Port to develop a redundant FOG program. Most relevant to the Port is the operations of food and beverage concessions at the Oakland International Airport (“OAK”). FOG control program details can be found at the following website addresses for EBMUD and the City, respectively:

<https://www.ebmud.com/wastewater/bay-friendly-waste-disposal/fats-oils-and-grease/>

<https://www.oaklandca.gov/topics/fats-oils-and-grease-fog>

7.3. Source Control and Pretreatment Requirements

Source control and pretreatment are currently regulated and enforced through the EBMUD's Wastewater Control Ordinance and the California Plumbing Code as amended by the City. EBMUD and the City may require certain FSEs to install and properly maintain grease control devices (“GCD”) in compliance with applicable regulations.

Since 2010, the Airport have installed a number of grease interceptors and is responsible for conducting periodic inspections and maintenance of the GCDs and overseeing the disposal of grease in accordance with EBMUD's requirements.

ELEMENT 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

This section presents the Port's system evaluation and capacity assurance plan ("SECAP"). The purpose of the SECAP is to provide the design criteria of the Port sanitary sewer system facilities, to identify, evaluate and develop feasible alternatives to correct these deficiencies, and finally to develop a capital improvement program for sanitary sewer utility infrastructure including budget and schedule for improvements.

8.1. Planning and Design Criteria

Capacity analysis of the wastewater collection system was performed in accordance with the criteria established in the SECAP. This section summarizes the most important planning criteria that were used in the SECAP.

8.1.1. Gravity Sewers

Sewer pipe capacities are dependent on many factors, including roughness of the pipe, the maximum allowable depth of flow, minimum velocity, and slope of pipe. Relevant criteria are summarized below:

- **Manning Coefficient (n).** The Manning coefficient 'n' is a friction coefficient and varies with respect to pipe material, size of pipe, depth of flow, smoothness of pipe and joints, and extent of root intrusion. For sewer pipes, the Manning coefficient typically ranges between 0.011 and 0.017, with 0.013 being a representative value used for sewer system planning.
- **Flow Depth Criteria (d/D).** The primary criterion used to identify capacity deficient trunk sewers or to size new improvements is the maximum flow depth to pipe diameter ratio (d/D). The d/D value is defined as the depth (d) of flow in a pipe during peak flow conditions divided by the pipe's diameter (D).
 - **Flow Depth for Existing Sewers.** Using a conservative d/D ratio when evaluating existing sewers may lead to unnecessary replacement of existing pipelines. Therefore, a d/D ratio of 1.0 was used to evaluate the existing sewer system for peak wet weather flow (PWWF) (this is typically the maximum hourly flow in the collection system). If the flow depth was greater than the maximum allowed, then the sewer was deemed deficient and a larger sewer was proposed to provide greater flow capacity.
 - **Flow Depth for New Sewers.** When designing new sewers, it is common practice to adopt variable flow depth criteria for different pipe sizes. Design d/D ratios typically range from 0.5 to 0.92.

The maximum d/D ratio under the design flow condition depends on the pipe diameter as shown in **Table 8.1**.
- **Design Velocities and Minimum Slopes.** In order to minimize the settlement of sewage solids, gravity sewers should be designed for a minimum velocity of 2 feet per second (fps) (based on roughness coefficient of 0.013). At this velocity, the sewer flow will typically provide self-cleaning for the pipe. **Table 8.2** lists the recommended minimum slopes and their corresponding maximum flows for maintaining self-

cleaning velocities (equal to or greater than 2 fps) when the pipe is flowing at its maximum depth.

Table 8.1 Maximum Allowable d/D Ratio for New Sewers	
Port of Oakland Sewer System Management Plan	
Pipe Diameter (in.)	Maximum d/D Ratio (at Design Flow)
Less than 12	≤ 0.50
12 to 18	≤ 0.67
Larger than 18	≤ 1.00

Table 8.2 Minimum Slope for New Sewer Pipes				
Port of Oakland Sewer System Management Plan				
Pipe Diameter (in.)	Minimum Slope ^{(1),(2)} (ft/ft)	Calculated Flow at Maximum d/D Criterion ^{(2),(3)}		
		d/D	(cfs)	(mgd)
8	0.0033	0.50	0.35	0.23
10	0.0025	0.50	0.55	0.35
12	0.0019	0.67	1.23	0.80
15	0.0014	0.67	1.92	1.24
18	0.0011	0.67	2.77	1.79
21	0.0009	1.00	4.81	3.11
24	0.0008	1.00	6.28	4.06
27	0.0007	1.00	7.95	5.14
30	0.0006	1.00	9.82	6.35
36	0.0006	1.00	16.38	10.59
42	0.0006	1.00	24.71	15.97

Table 8.2 Minimum Slope for New Sewer Pipes				
Port of Oakland Sewer System Management Plan				
Pipe Diameter (in.)	Minimum Slope ^{(1),(2)} (ft/ft)	Calculated Flow at Maximum d/D Criterion ^{(2),(3)}		
		d/D	(cfs)	(mgd)
Notes:				
1. Recommended minimum slope for design flow at maximum d/D and at minimum velocity of 2 ft/s.				
2. Manning’s n = 0.013				
3. Calculated flow is determined using the minimum slope and the maximum allowable d/D presented in Table 8.1.				

8.1.2. Lift Stations and Force Mains

- **Submersible pump.** A minimum of two (2) non-clog, submersible pumps specifically designed for conveying raw wastewater should be installed in each lift station. If two pumps are to be installed, each should be capable of independently conveying the design flow with the second pump serving as standby. If three or more pumps are to be installed, the firm capacity of the lift station, which is defined as the total pumping capacity of the lift station less the capacity of the largest pump, should be sufficient to convey the design flow.
- **Force main.** Force main piping should be sized to provide a minimum velocity of 3 fps at the design flow rate of the lift station and no more than 8 fps. For the determination of head loss, the Hazen Williams Equation was used with a C factor of 100.

8.2. Flow Monitoring, Hydraulic Model Development, and Capacity Evaluation

The Port conducted Port-wide flow monitoring in 2010 and 2011 and developed the hydraulic model for the Port sanitary sewer system during the preparation of the 2010 SSMP. The primary purpose of flow monitoring is to measure flow contributions from different tributary areas of the collection system. Flow monitoring also provide useful data for identifying infiltration and inflow ("I/I") into the collection system and for developing and calibrating the wastewater collection system hydraulic model for dry weather and wet weather flow.

In addition, the Port conducted flow monitoring at the Airport from December 2018 to February 2019 to develop updated flow measurements for hydraulic model and to validate the model. Analysis of the flow monitoring data revealed a likely source of direct inflow from the Terminal Area of the Airport. Subsequently, the Port set an interim goal of reducing this inflow by at least 50 percent through identification and future capital improvements.

The Port conducted additional flow monitoring at the Airport from January 2020 to March 2020 to identify the source of the inflow identified in the prior study. This flow monitoring was successful in identifying the likely source of the inflow and the Port prioritized the rehabilitation of the identified pipe segment in its 5-year capital improvement program. The model also showed that there was insufficient reserve capacity in line segments along Airport Drive and Earhart Road

for future development. The Port utilized this information to determine the necessary capacity improvements in its planned upgrades of Airport Drive and Earhart Road.

8.3. Capital Improvement Program (“CIP”)

This section summarizes the sewer rehabilitation and upgrade projects completed since the 2015 SSMP Update to correct system deficiencies including I/I elimination and reduction in spills as well as to accommodate Port developments. This section also provides a list of ongoing and 5-year proposed capital improvement projects for the Port sanitary sewer collection system. Implementing these sewer rehabilitation and upgrade projects will require a significant amount of capital resources and prioritization and coordination with the revenue divisions.

Table 8.3 provides a list of sewer system related projects completed from 2015 to 2019, and **Table 8.4** provides a list of proposed sanitary sewer capital improvement projects for FY21-25.

Table 8.3 Port of Oakland Sanitary Sewer Projects since 2015	
Projects	Year of Completion
1. Rehabilitate 2200 feet of 15-inch sewer gravity main on 7 th Street and former Ferry Street in the Maritime area	2015
2. Abandon existing sanitary sewer infrastructure and replace with new sanitary sewer trunk lines, force mains, laterals, and lift stations on Maritime Street as part of the redevelopment of the former Oakland Army Base	2015-18
3. Rehabilitate Lift Station AP01P at Oakland Airport	2017
4. Abandon existing sanitary sewer infrastructure and replace with a new collection system including complete rehabilitation of lift station D09P as part of the tenant development of the Cool Port Oakland in the Maritime area	2018
5. Replaced 45 feet 4-inch sewer drain line in Building M-101, at Terminal 1, Oakland Airport	2019

Table 8.4 Port of Oakland Capital Improvement Program for Sanitary Sewer System									
Project No.	Asset ID	Location	Description	5-Year CIP Budget (\$ 1000)	FY20-21 (\$ 1000)	FY21-22 (\$ 1000)	FY22-23 (\$ 1000)	FY 23-24 (\$ 1000)	FY24-25 (\$100)
Aviation									
A200520005	AP02P	Parking Bowl	LS 2 Rehab	1,775	1,775	0	0	0	0
A20052007	AP12E & AP15E	Terminal 1	LS 12 & 15 Rehab	1,900	1,500	400	0	0	0
A20052008	AP 06P & AP 08P	Terminal 1	LS 6 and 8 Rehab	1,500	0	1,500	0	0	0

A20052009		Airport Drive	Airport Drive SS Rehab	1,520	120	4,000	0	0	0
A200520010		Earhart Road	Earhart Road SS Rehab	7,500	1,200	6,300	0	0	0
AA00520014	Pipe-505	Neil Armstrong Way	Pipe 505 SS Rehab	780	580	200	0	0	0
TBD	AP01P	Airport Drive	LS1 Rehab – Pump Replacement	2,215	0	415	1,800	0	0
TBD	AP155P Southwest Provisioning Bldg Lift Station	Air Cargo Way	LS 155P Rehab	1,350	0	400	950	0	0
TBD	AP137P Tank Farm/Swissport Lift Station	Edward White Way	LS 137P Rehab	1,300	0	400	900	0	0
TBD	AP911P ARFF Lift Station	ARFF Facility	LS 911 Rehab	1,300	0	400	900	0	0
TBD	AP912P GRE Lift Station	GRE Facility	LS 912 Rehab	1,400	0	400	1,000	0	0
Aviation Total				25,140	5,175	14,415	5,550	0	0
Maritime									
M19005	Outer Harbor Sewer System	Berth 20-24	Sanitary Sewer Lines Rehab	2,200	2,200	0	0	0	0
M19004	Oil Water Separator	OICT East Power Shop and East Reefer Cleaning Area	Oil Water Separator Rehab	350	350	0	0	0	0
M19019	Sewer Lift Stations	Berth 20, 55, & 56	Lift Station Rehab	1,000	1,000	0	0	0	0
M20007	Ben E Nutter Terminal Sewer System	Berth 35-38, Portview Park	Sanitary Sewer Lines Rehab	300	1,200	0	0	0	0
M20008	Sewer Lift Stations	OICT Berth 57, 58, 59	Lift Station Rehab	1,500	1,500	0	0	0	0
New Project	JIT Sewer System	Maritime St	Sanitary Sewer Lines Rehab	3,500	500	1,500	1,500	0	0
New Project	TraPac Sewer System	Berths 25-33, MHSP, 7th St	Sanitary Sewer Lines Rehab	3,500	500	1,500	1,500	0	0

New Project	OICT Sewer System	Berths 55-59	Sanitary Sewer Lines Rehab	3,500	500	1,500	1,500	0	0
Maritime Total				15,850	7,750	4,500	4,500	0	0
Commercial Real Estate (CRE)									
CRE Total									
Port of Oakland Total									

Notes:

1. For budget planning purpose only, pending completion of condition assessments on all pipelines & lift stations.
2. Other sewer improvements may be embedded in other CIP projects

ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

This section discusses how the Port monitors implementation of the SSMP and measures the effectiveness of SSMP elements in reducing spills. Performance indicators have been selected to meet the SSMP goals of the Port as stated in Element 1. spill trends, frequencies, locations, and volumes are also reported as set forth in the SSMP provisions of the WDR.

9.1. Performance Indicators

- 1) Number of spills by locations per year;
- 2) Percentage of spills greater than 100 gallons in volume;
- 3) Quantity and percentage of total length of sanitary sewer pipes inspected; and
- 4) Quantity and percentage of total length of sanitary sewer pipes rehabilitated.

9.2. SSMP Implementation, Monitoring, Measurement, and Program Modification

To gauge the progress of the SSMP implementation, the Port will periodically evaluate the performance of its sanitary sewer collection system using the performance indicators identified in Section 9.1 above or other measures that the Port deems appropriate to align with its strategic business goals.

As mentioned in Element 4 above, following the adoption of Port Ordinance 4474 in May 2018, the Port completed the CAP in May 2019 and since then has accelerated ahead of the implementation schedule as outlined in the CAP. It is anticipated that the Port will complete the condition assessment of the majority, if not all, of the sanitary sewer lines in the Aviation and Maritime area before the end of fiscal year 2021. The Port will use these inspection and assessment data to develop a Corrective Action Work Plan (CAWP) by June 30, 2023 with a goal to complete all necessary repairs and rehabilitation of the Port owned and maintained sewer assets by 2036 in alignment with the term of the CD.

The Port will determine the need to modify update the SSMP based on the results of the next biennial audit as discussed in Element 10 below and the overall performance of its sanitary sewer system. The Port may also choose to revise the SSMP at any time and as necessary after significant changes to its current operations and/or new business developments that may have an impact on the operations and maintenance of the sewer collection systems. Port staff will seek approval of a revised SSMP by the Board when there are significant changes that warrant a revised SSMP. The authority for approval of minor changes such as employee names, contact information, or minor procedural changes is delegated to the Executive Director or his designated representative(s).

9.3. Spill Trend

Table 9.1 summarized spills that have occurred since 2015. The Port documented the cause of each spill event and implemented follow-up projects to address the issue causing spills to eliminate the spill event at the same location. A detailed table showing the cause of spill events, list of follow-up projects, and a spill chart is provided in **Appendix 6. Table 9.1** below shows statistics of spills since 2015. It should be noted that the total spill volume reported in 2016

included the spill volumes from the three spill events caused by mechanical and power failures during the City's joint venture to redevelop the former Oakland Army Base. The Port reported these events on behalf of the City's Redevelopment Agency under the previous utility management agreement.

Table 9.1 Spill Trend Tracking Table

Spill Statistic ¹	Year						Totals
	2015	2016 ²	2017	2018	2019	2020	
Total Number of Spills	3	5	2	3	3	1	17
Category 1	0	1	0	1	1	0	3
Category 2	2	3	0	0	0	0	5
Category 3	1	1	2	2	2	1	9
Greater than 1000 gals	1	2	0	0	0	0	3
Less than 1000 gals	2	3	2	3	3	1	14
Total Volume of Spills (gals)	2,275	11,930	35	1,050	86	30	15,406
Volume recovered	40	10	0	0	45	0	95
Volume to surface water	0	30	0	75	1	0	106
Percent to surface water (%)	0	23	0	13	100	0	45

Note:

1. Source of spill data is the public spill database, the California Integrated Water Quality System (CIWQS) Information displayed is current as of July 2020.

2. The total volume of spills in 2016 includes three spill events occurred at Lift Station LS 18 in the former Oakland Army Base Area. These spills were caused by mechanical and power failures during the City's joint venture to redevelop the former Oakland Army Base.

ELEMENT 10 – SSMP AUDITS

The Port has an Office of Internal Audit Services which provides independent and objective reviews and evaluations of the Port's financial and operational activities to ensure compliance with all applicable laws and regulations. The decision to engage the Port's internal audit staff or to use an outside independent auditor who is familiar with the SSMP audit process has not been made. However, it is anticipated that the Port will conduct in next biennial audit in the fiscal year 2023, the same year as the completion of the CAWP mentioned above. The performance indicators listed in Element 9 or another set of performance indicators may be used to evaluate the success of the Port SSMP implementation as well as reduction in spills. The results of this audit will be included in the next SSMP Update in 2025.

ELEMENT 11 – COMMUNICATION PROGRAM

11.1. Communication Plan

The Port's website at <https://www.portofoakland.com/community/environmental-stewardship/programs/> provides the public with information regarding the Port's environmental stewardship program including a link to the current Sewer System Management Plan ("SSMP"). The SSMP may also be reviewed during normal business hours at the Engineering Services Counter, 530 Water Street, 2nd Floor, Oakland, CA 94607.

The Port held public meetings to formally approve and adopt the SSMP in 2010 and the SSMP update in 2015, respectively. **Appendix 7** includes copies of Board's Resolutions No. 10-58 and No. 15-073 formally approving and adopting the SSMP. In addition, the Port regularly communicate with the its tenants and other stakeholders through a variety of community outreach programs, bulletins, and Board's meetings for certain sewer program, workplan or projects that may have any impact to the surrounding communities.

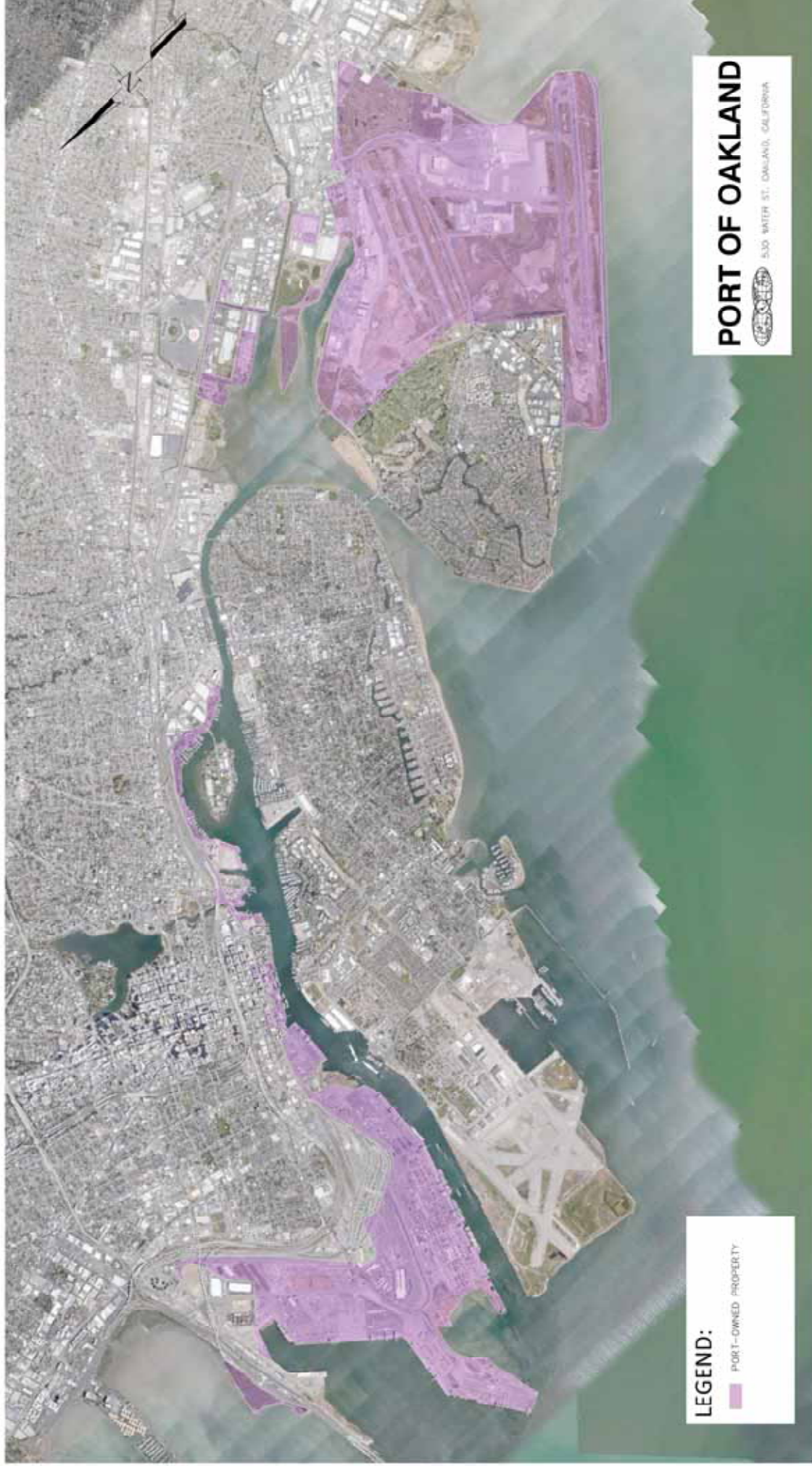
11.2. FINAL CERTIFICATION

The Port's LRO is required to certify that all sections of the SSMP are in compliance with the requirements set forth in the WDR. This will be accomplished by completing the re-certification process in the California Integrated Water Quality System ("CIWQS") Online Database. The Port continues to monitor and update its sanitary sewer compliance program to align with the Port's strategic goals and will re-certify the SSMP by the Board when significant changes are made. At a minimum, the Port will update and re-certify this report every five years.

APPENDIX 1

Port of Oakland Property Map

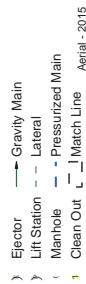
PROPERTY OWNED BY PORT OF OAKLAND

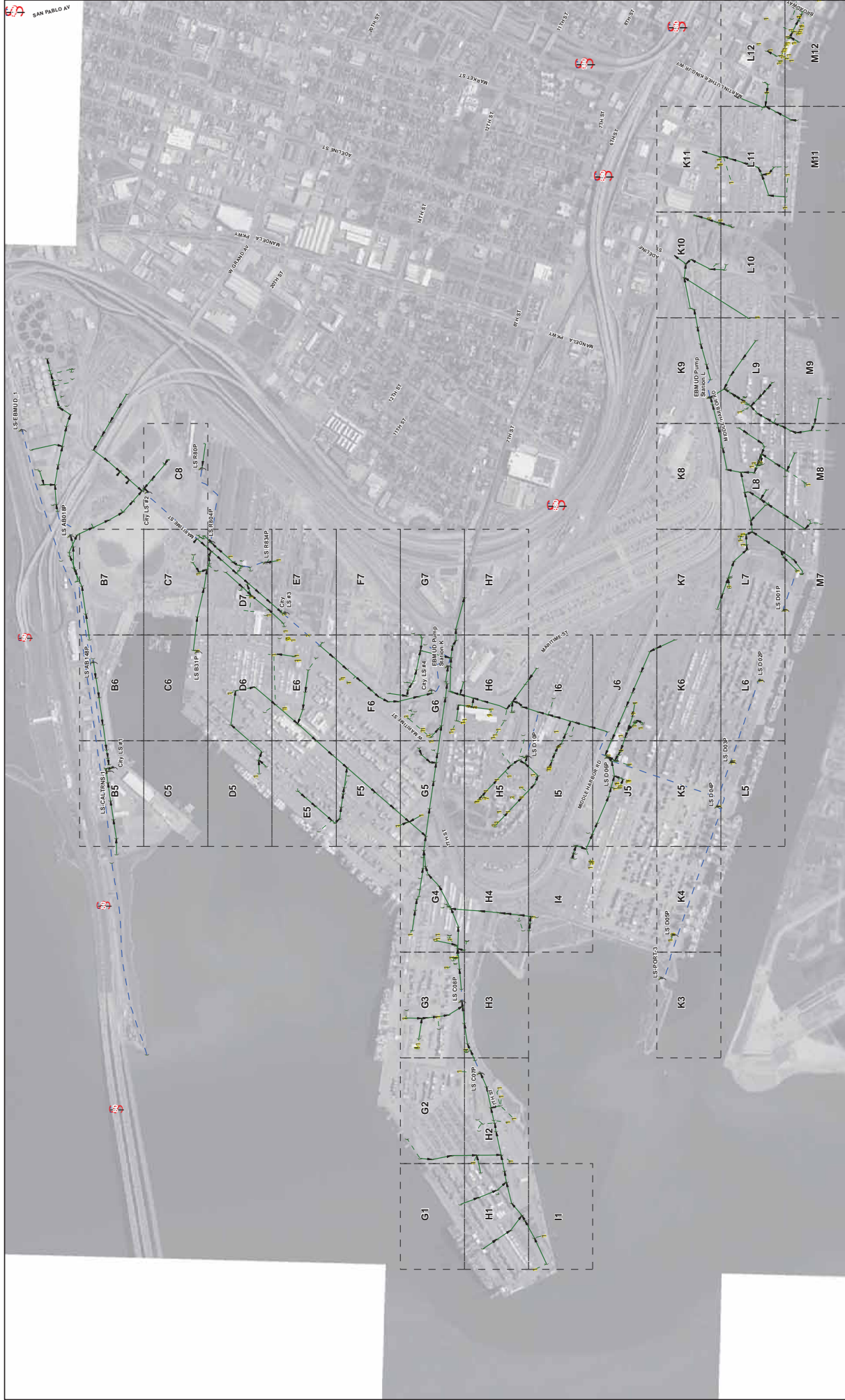


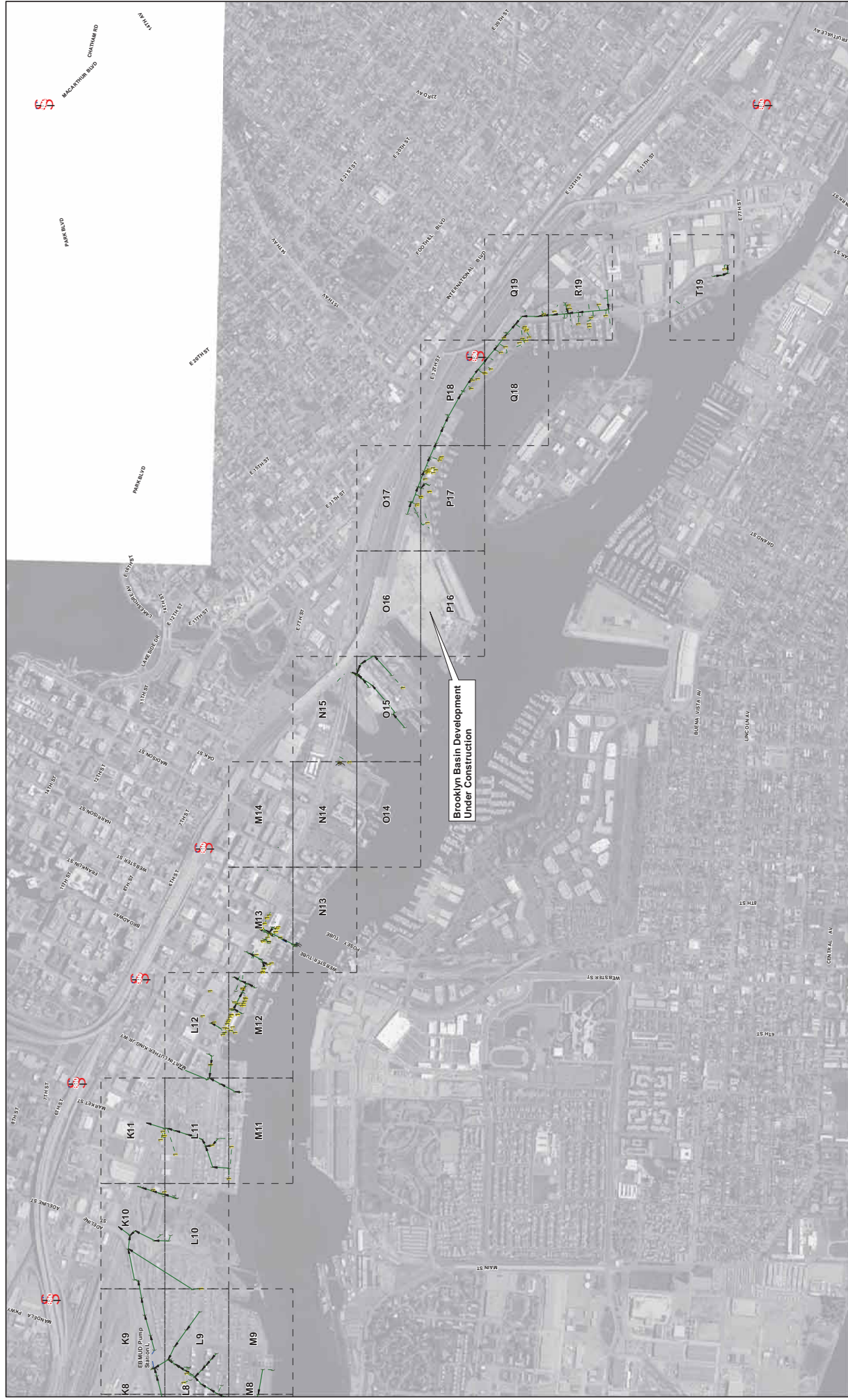
APPENDIX 2

Port of Oakland

Sanitary Sewer System Overview Map

PORT OF OAKLAND
SEWER COLLECTION SYSTEM
AVIATION AREA INDEX





APPENDIX 3

Port of Oakland Organization Chart & Key Personnel Contact Information



PORT SSMP KEY PERSONNEL CONTACT INFORMATION
Port-Wide Sewer System Management Plan
Port of Oakland

Position	Name	Phone
Executive		
Executive Director	Danny Wan	(510) 627-1212
Port Attorney	Mary Richardson	(510) 627-1572
Chief Audit Officer	Ric Jazaie	(510) 627-1257
Chief Operating Officer	Kristi McKenney	(510) 627-1178
Chief Financial Officer	Julie Lam	(510) 627-1138
Aviation		
Director of Aviation	Bryant L. Francis	(510) 563-6421
Assistant Director Aviation	Craig Simon	(510) 563-6425
Aviation Planning and Development Manager	Joan Zatopek	(510) 563-6530
Aviation Facilities Maintenance Manager	DeJon Iglehart	(510) 563-3947
Superintendent Equipment Systems Engineer	Terry (T-C) Padilla	(510) 563-3939
Utilities Supervisor	Michael Henning	(510) 563-3942
Senior Equipment Systems Engineer	Donald Gonzaga	(510) 563-2959
Maintenance/Construction Supervisor	Toby Tatom	(510) 599-2932
Facilities Support Supervisor	Vanessa Valderrama	(510) 563-3977
Commercial/Real Estate		
Director of Commercial Real Estate	Pam Kershaw	(510) 627-1168
Commercial Real Estate Manager	Dorin Tuitin	(925) 352-4846
Maritime		
Director of Maritime	Bryan Brandes	(510) 627-1243
Chief Wharfinger	Eric Napralla	(510) 627-1403
Wharfingers	Ralph Reynoso	(510) 384-3163
	Gerard Olson	(510) 921-6547
	Mark Simpson	(510) 627-1407
	Kevin Wong	(925) 639-5637
Administrative and Financial Services Manager	Delphine Prevost	(510) 627-1141
Harbor Facilities Maintenance Manager	Bill Morrison	(510) 773-9981
Utilities Supervisor (vacant)		
Facilities Support Supervisor	Eric Fan	(510) 627-1298
Chief Operating Office (Environmental Program & Planning, Utility, & Engineering)		
Director of Environmental Programs & Planning (Acting)	Colleen Liang	(510) 627-1198
Utilities Administration Manager	Jared Carpenter	(510) 627-1167
Port Principal Engineer - Aviation	Robert Andrews	(510) 627-1273



PORT OF OAKLAND

PORT SSMP KEY PERSONNEL CONTACT INFORMATION
Port-Wide Sewer System Management Plan
Port of Oakland

Position	Name	Phone
Port Principal Engineer - Maritime	Thanh Vuong	(510) 627-1266
Port Principal Engineer - Engineering Services	Steve Low	(510) 627-1890
Engineering Project Manager	Emilia Sanchez	(510) 627-1202
Finance & Administration (Human Resources)		
Environmental Health & Safety Specialist	Desmond DeMoss	(510) 773-9991

APPENDIX 4

Port of Oakland Sewer Ordinances

**BOARD OF PORT COMMISSIONERS
CITY OF OAKLAND**

PORT ORDINANCE 4113

ORDINANCE ESTABLISHING DESIGN, CONSTRUCTION,
TESTING, AND INSPECTION STANDARDS FOR SANITARY
SEWER FACILITIES, AND LIMITS ON THE TYPE,
CHARACTER, AND VOLUME OF ALLOWABLE DISCHARGES TO
THE SANITARY SEWER SYSTEM

BE IT ORDAINED by the Board of Port Commissioners of the City of Oakland as follows:

SECTION 1 - DEFINITIONS. As used in this ordinance:

"Board" means the Board Port of Commissioners.

"City" means the City of Oakland.

"Contamination" means an impairment of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. Contamination shall include any equivalent effect resulting from the disposal of wastewater, whether or not waters of the state are affected.

"Director" means the Executive Director, or his or her designated representative.

"EBMUD" means the East Bay Municipal Utility District.

"Engineer" means the Chief Engineer, or his or her designated representative.

"Lateral" means the particular sanitary sewer which lies between the building or structure it serves, to and including its connection with the sanitary sewer system and which carries wastewater and liquid wastes from the serviced building or structure to the sanitary sewer system.

"Misfeasor" means any person or entity, or their agents, assigns, designees, employees, or successors, who causes or allows to be caused a Nuisance under this ordinance.

"Nuisance" shall have the meaning set forth in California Water Code Section 13050(m), as it may be amended from time to time. Any violation of, noncompliance with, or refusal to comply with any of

the provisions of this ordinance, or any of the provisions incorporated herein, is deemed a "Nuisance" under this ordinance..

"Pollution" means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects (1) such waters for beneficial use or (2) facilities which serve such beneficial uses.

"Port" means the Port of Oakland.

"Private Sewer" means a pipe, conduit, or channel, not maintained by the Port, used to carry wastewater.

"Public Sewer" means a pipe, conduit, or channel, maintained by the Port and used to carry wastewater.

"Sanitary Sewer" means any building sewer, private sewer, or public sewer used to carry wastewater.

"Sanitary Sewer System" means either the entire network or a portion of that network of publicly and privately maintained pipes, conduits, channels, manholes, pump stations, and all appurtenances thereto, under the jurisdiction of the Port, used to collect, store, and transport wastewater.

"Wastewater" means water carrying waste from residences, commercial, and industrial establishments, or any combination of such wastes, but excluding storm water when conveyed in a separate storm water system.

"Wastewater Control Ordinance" means EBMUD Ordinance Number 311A.03, or any subsequent amendment thereof.

"Wastewater Treatment Plant" means the EBMUD Main Wastewater Treatment Plant.

SECTION 2 - PURPOSE. The purpose of this ordinance is to regulate the design, construction, inspection, testing, and abandonment of the sanitary sewer system, and to define the allowable and prohibited discharges to the sanitary sewer system. This ordinance shall not supersede any existing or future statute, rule, regulation, or ordinance of any public agency, State, or Federal regulatory body governing wastewater and water discharges into the sanitary sewer system.

SECTION 3 - AUTHORITY TO DEVELOP DESIGN, CONSTRUCTION, INSPECTION, TESTING STANDARDS. The Board hereby approves, and authorizes the Engineer for and on behalf of the Board to develop, publish, and enforce standards for the design, construction, inspection, testing and abandonment of the sanitary sewer system and for updating the standards from time to time. Such standards shall apply to all sanitary sewers under Port jurisdiction regardless of whether they are public sewers or private sewers.

SECTION 4 - ALLOWABLE DISCHARGES. Wastewater may be discharged into the Port sanitary sewer system provided that it does not violate the limitations established in this ordinance and further provided that the discharger obtains permission of the Port, EBMUD, and City, as applicable, to discharge into the sanitary sewer system.

SECTION 5 - PROHIBITED DISCHARGES.

(A) General Prohibition. The discharge of wastewater into the Port sanitary sewer system that results in contamination, pollution, or a nuisance is prohibited.

(B) Prohibited Effects. Wastewater or a substance of any kind shall not be discharged or otherwise deposited into the Port sanitary sewer system in such quantities or qualities which, either alone or by interaction with other wastewater, cause or threaten to cause:

1. Danger to the life or safety of any person.
2. Damage to Port facilities.
3. Interference with the operation or capacity of the Port sanitary sewer system.
4. Obstruction of flow in sanitary sewers.
5. Interference with the wastewater treatment and disposal process.
6. Flammable or explosive conditions.
7. Interference with the ability for reclamation and reuse of wastewater.
8. Any noxious or malodorous gas or substance capable of creating a public nuisance.
9. Violation of receiving water quality limitations.
10. Violation of any statute, rule, regulation, or ordinance of any public agency, State, or Federal regulatory body governing wastewater and water discharges into the sanitary sewer system.
11. The presence of toxic gases, fumes, or vapors in quantities that endanger the health and safety of Port personnel.

(C) Prohibited Substances. No person shall discharge, by either direct or indirect means, any of the following into the Port sanitary sewer system, or any substance for which discharge is prohibited by the City Municipal Code or by the current EBMUD Wastewater Control Ordinance:

1. Any storm water or other unpolluted water that meets the requirements for and is acceptable for discharge to storm drains or receiving waters of the State.
2. Any unpolluted industrial process water.

3. Any substance which creates a fire or explosion hazard.
4. Any liquid or vapor having a temperature detrimental to the Port sanitary sewer system.
5. Any water or waste, which contains excessive amounts of fats, oil, and/or grease.
6. Any garbage, except garbage from dwellings and establishments where food is prepared and consumed on the premises, and which has been ground to such a degree that all particles will be carried freely under the flow conditions prevailing in the sanitary sewer system.
7. Any heavy solid, viscous substance, or other matter of such a nature as to obstruct the flow in sanitary sewers or cause interference with the proper operation of the sanitary sewer system, including but not limited to sand, cement, lime, plaster, cinders, ashes, metal, glass, straw, shavings, animal hair, feathers, paunch manure, fibrous matter, tar, asphalt, resins, or plastics.
8. Any substance having a corrosive property capable of causing damage or other hazard to structure, equipment, or personnel.
9. Any toxic or poisonous substances in sufficient quantity to constitute a hazard to humans, animals, or fish, or to create a hazard in the waters receiving effluent from the wastewater treatment plant.
10. Any waters or wastes containing suspended solids or dissolved matter of such character and quantity that unusual attention or expense is required to handle such materials in the sanitary sewer system or at the wastewater treatment plant.

(D) Prohibition on Dilution Waters. No user shall increase the use of process water, or in any other way attempt to dilute a discharge in order to meet applicable pretreatment standards or to comply with this or any other applicable resolution or ordinance, unless otherwise permitted to do so.

(E) Radioactive Limits. No person shall discharge or cause to be discharged any radioactive wastewater into any sewer, unless the person is authorized to use radioactive material by the Nuclear Regulatory Commission or other governmental agency empowered to regulate the use of radioactive materials, the wastewater is discharged in strict conformity with Nuclear Regulatory Commission regulations and recommendations for safe disposal, and the discharge is in compliance with all rules and regulations of State and local regulatory agencies.

(F) Wastewater Strength Limits. No user shall discharge wastewater into a sewer lateral or otherwise introduce into the Port sanitary sewer system wastewater that exceeds the numerical limits established in EBMUD Ordinance Number 311A.03, or any subsequent amendment thereof, or the City Municipal Code, whichever is more stringent.

(G) Wastewater Flow Rate Limits. No person shall discharge wastewater into any sewer in such a quantity or at such a rate of flow as to overload or have a harmful or adverse impact on Port facilities or the wastewater treatment plant.

SECTION 6 - RIGHT OF ENTRY. Duly authorized representatives of the Director may enter and inspect any building, structure, or premises with Port jurisdiction to secure compliance with, or prevent a violation of, any provision of this ordinance under the following conditions:

(A) Whenever the Director shall have reasonable cause to believe that conditions which do not conform to this ordinance exist in a particular building, structure, or premises.

(B) Whenever the Director authorizes and directs the inspection of all buildings, structures, or premises subject to the provisions of this ordinance in a defined area of the Port.

(C) Whenever the Director shall authorize and direct inspections of buildings, structures, or premises as a part of a routine spot check.

(D) Whenever the Director authorizes the performance of needed maintenance or repair activities.

(E) No premises shall be inspected until a reasonable notice is given to the discharger or occupant, or to the agent of either.

SECTION 7 - POLICIES FOR VIOLATION.

(A) Notice of violation. Whenever the Director finds that any Misfeasor is causing or allowing to be caused a Nuisance, the Director shall serve notice on the Misfeasor stating the existence of the Nuisance, requiring abatement of the Nuisance, and specifying the measures necessary for abatement. Such notice shall be served personally on the Misfeasor or by mailing such notice to the Misfeasor by U.S. Mail, and by posting a copy of such notice on the property whereupon the Nuisance is being caused.

(B) Abatement by Misfeasor. It shall be the duty of the Misfeasor to abate the Nuisance within one hundred eighty days of personal service or mailing of such notice.

(C) Abatement by the Port. If the Misfeasor should neglect or refuse to abate the Nuisance pursuant to such notice, the Director may

abate the Nuisance at the expense of the Port and the Port may recover the amount of such expense, including the costs of inspection, enforcement and correction to the full extent permitted by Government Code Section 54988 as it may be amended from time to time.

(D) Recovery of attorneys fees and costs. The Port may in its discretion commence legal actions and/or equitable proceedings in a court of competent jurisdiction to abate the Nuisance and/or to collect and recover Port abatement costs. If the Port prevails in such action and/or proceeding, it shall be entitled to recover costs and attorneys' fees in addition to any taxes, fees, assessments, penalties and interest. The remedies provided for herein shall be cumulative and not exclusive, and shall not preclude the Port from any other relief which otherwise is available.

(E) Abatement costs made nuisance abatement lien or special assessment lien. Notwithstanding any other provision of this ordinance to the contrary, the costs incurred by the Port in the abatement of a Nuisance subject to the provisions of this ordinance may be placed against any privately owned and affected property as either a nuisance abatement lien or a special assessment lien pursuant to Government Code Section 38771, et seq. as amended from time to time or a lien pursuant to Government Code Section 54988 as amended from time to time. The Port may enforce a lien under this chapter in any manner permitted by law, including filing a civil action to either foreclose on its liens or to obtain a money judgment or both, or pursuing non-judicial foreclosure. The Port may elect, upon 30 days notice to all known and record owners of the privately owned and affected property, to convert any nuisance abatement lien authorized by this chapter to a special assessment lien, or vice versa. Costs recoverable under this ordinance shall include those categories of costs and fees set forth in Civil Code Section 3496, regardless of the type of nuisance involved.

(D) Protest filing procedure. Any alleged Misfeasor desiring to protest against the Director's determination that the alleged Misfeasor is causing or allowing to be caused a Nuisance may file with the Director's office a protest in writing within ten days after receiving notice to abate the Nuisance. Any Misfeasor desiring to protest against the costs incurred by the Port in abating a Nuisance may file with the Director's office a protest in writing within ten days after receiving notice of the cost incurred by the Port in abating the Nuisance.

(F) Protest hearing. Upon the filing of a protest, the Director shall conduct a public hearing. At such hearing, the Director may affirm, modify, or reverse the prior determination. The Director's decision at the end of such hearing shall be final.

(G) Criminal penalties. Every person or persons, firm, company or corporation, who shall violate, disobey, or refuse to comply with any of the provisions of this ordinance, or any of the provisions

incorporated therein, shall, upon conviction, be punishable by fine and penalty, not exceeding Five Hundred Dollars (\$500.00) or six (6) months imprisonment, or both. Each day constitutes a separate violation.

The Board of Port Commissioners, Oakland, California, November 3, 2009. Passed to print for one day by the following vote: Ayes: Commissioners Batarse, Calloway, Gonzales, Gordon, Head, Katzoff, and President Uno - 7. Noes: None.

John T. Betterton
Secretary of the Board

Adopted at a regular meeting held November 17, 2009
by the following vote:


Ayes: Commissioners Gonzales, Gordon, Head, Katzoff, and President Uno - 5

Excused: Commissioners Batarse, and Calloway - 2

Noes: None

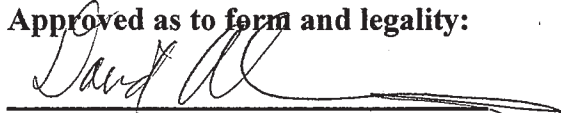


President.

Attest: 

Secretary.

Approved as to form and legality:



Port Attorney

**BOARD OF PORT COMMISSIONERS
CITY OF OAKLAND**

PORT ORDINANCE NO. 4474

ORDINANCE ADOPTING BY REFERENCE OAKLAND MUNICIPAL AND PLANNING CODES SECTIONS 13.08.590 THROUGH 13.08.620 AS MODIFIED HEREIN, REQUIRING PORT TENANTS TO COMPLY WITH SUCH PRIVATE SEWER LATERAL REGULATIONS, AND DIRECTING PORT STAFF TO PREPARE PLANS TO ASSESS AND REPAIR PORT-OWNED PRIVATE SEWER LATERALS

WHEREAS, in 2009, the United States Environmental Protection Agency ("EPA") and the California State Water Resources Control Board, and the California Regional Water Quality Control Board, San Francisco Bay Region filed lawsuits against the East Bay Municipal Utility District ("EBMUD") and six satellite agencies, including the City of Oakland (the "City"), citing violations of the Clean Water Act and the California Water Code and requesting that defendants fix old, cracked sanitary sewer pipes (the "CWA Lawsuits"). Also in 2009, the EPA filed an Administrative Order against the City directing it to fix the sewer system, including adopting a private sewer lateral program (Docket No. CWA 309(a)-10-009) (the "EPA Administrative Order");

WHEREAS, many pipes in the City are in need of repair to prevent the infiltration of rainwater, which can overwhelm wastewater treatment facilities and lead to the release of partially treated wastewater into the Bay. In response to the CWA Lawsuits and EPA's Administrative Order, EBMUD and the City took several actions to address old sanitary sewer pipes, including phasing in a Regional Private Sewer Lateral ("PSL") Ordinance (the "East Bay Regional Private Sewer Lateral Program"). Under the program, affected property owners must obtain a certificate from EBMUD certifying that all of their PSLs are leak-free and have passed a verification test. Property owners may also choose to have their laterals tested and certified;

WHEREAS on February 9, 2010, EBMUD adopted Ordinance No. 353-10, which amended Ordinance No. 311 by adding Title VIII thereto, establishing the East Bay Regional Private Sewer Lateral Program and enacting regulations for the inspection, testing, repair, replacement, and ongoing maintenance of PSLs within the program area, including the City. EBMUD amended the EBMUD Regional PSL Program on July 23, 2013 (Ordinance No. 359-13), which deleted Title VIII and re-enacted its modified provisions as a new standalone ordinance, and amended Ordinance No. 359-13 again on October 28, 2014 (Ordinance No. 362-14) (Ordinance 359-13 and all existing and future amendments thereto are collectively

referred to herein as the "EBMUD Regional PSL Ordinance";

WHEREAS, the EBMUD Regional PSL Ordinance requires "property owners" to obtain a "compliance certificate" upon the happening of certain events including title transfer, construction or remodeling the permitted work cost of which exceeds \$100,000 or change in water services. Under the EBMUD Regional PSL Ordinance, a "property owner" includes "a person that owns a parcel of real property, or that person's representative including a tenant or contractor." A public entity, including the Port is not defined as a property owner for the purposes of the EBMUD Regional PSL Ordinance;

WHEREAS, the City has enacted Sections 13.08.590 through 13.08.620 to the Oakland Municipal and Planning Codes ("OMC") by adopting Ordinance No. 13026 and Ordinance No. 13080, respectively (and collectively referred to as the "City PSL Ordinance"), which adopted by reference the EBMUD Regional PSL Ordinance and directed the City's Building Official to enforce the provisions of the EBMUD Regional PSL Ordinance and other City ordinance requirements relating to sewer laterals;

WHEREAS, pursuant to Article VII, Section 706(4) of The Charter of the City of Oakland ("Charter"), the Board of Port Commissioners ("Board" or "Port") has been vested with the complete and exclusive power, and it shall be its duty on behalf of the City to have control and jurisdiction of the "Port Area" (as defined in the Charter), as it may be amended from time to time;

WHEREAS, pursuant to Article VII, Section 706(27) of the Charter, the Board has been vested with the complete and exclusive power, and it shall be its duty on behalf of the City to adopt and enforce such ordinances, orders, regulations and practices as are necessary for the proper administration, management and government of the Port and its facilities; and

WHEREAS, the intent of this ordinance is to: 1) confirm the applicability and enforceability of the City PSL Ordinance, and the EBMUD Regional PSL Ordinance incorporated therein, within the Port Area and on Port-owned property within the City of Oakland as set forth in this ordinance, and 2) to establish a "Local Ordinance Requirement" as defined in the EBMUD Regional PSL Ordinance establishing that Port tenants shall be "property owners" for the purposes of complying with the City PSL Ordinance, and the EBMUD Regional PSL Ordinance incorporated therein, with certain exceptions as outlined herein; now, therefore,

BE IT ORDAINED by the Board of Port Commissioners of the City of Oakland as follows:

Section 1. In acting upon this matter, the Board has exercised its independent judgment based on substantial evidence in the record and adopts and relies upon the facts, data, analysis, and

findings set forth in the Agenda Report and in related agenda materials and in testimony received.

Section 2. The Board hereby finds and determines as follows:

- A. Keeping Port owned sewer lines free from the infiltration and inflow ("I/I") of storm water and ground water reduces sewer overflows from Port property into surface waters like the San Francisco Bay, which pose a threat to public health, safety and the environment, and to reduce I/I into Port owned sewer lines, the Board finds it necessary and prudent to adopt this ordinance; and
- B. The proposal to adopt the City PSL Ordinance, and the EBMUD Regional PSL Ordinance incorporated therein, as modified herein and to apply it to the Port Area and all Port owned property in the City of Oakland was reviewed in accordance with the requirements of the California Environmental Quality Act ("CEQA") and the Port CEQA Guidelines. The proposal is categorically exempt from CEQA pursuant to Section 15308 of the Port CEQA Guidelines in that the proposal constitutes a regulatory action taken to assure the maintenance, restoration, enhancement, or protection of the environment. Accordingly, the Board hereby finds and determines that the proposal will not have a significant effect on the environment and is therefore exempt from the provisions of CEQA.
- C. The Port has the authority as a property owner acting in its proprietary capacity to regulate certain uses and activities on Port property; and
- D. Charter Section 706(3) requires the Port to "take charge of, control, and supervise ... all the water front properties, and lands adjacent thereto, ... which are now or may hereafter be owned or possessed by the City, and the purpose of this ordinance is consistent with the Port's authority under the Charter Section 706(27) to adopt ordinances and regulations necessary for the proper administration and management of Port facilities.
- E. "Property Owners", as defined in Section 3(A)(3) below, shall be expressly required to obtain a Compliance Certificate from EBMUD as specified in the City PSL Ordinance, and the EBMUD Regional PSL Ordinance incorporated therein, as modified herein.

Section 3. The Board hereby adopts by reference Oakland Municipal and Planning Codes Sections 13.08.590 through 13.08.620 (Chapter 13.08 of Title 13) and declares those provisions, in particular the EBMUD Regional PSL Ordinance incorporated therein, to be enforceable within the Port, subject to the following additions and modifications:

A. For the purpose of this ordinance, the following definitions and clarifications are hereby added:

1. "Leasehold Property" means the property contained within the boundaries of any property lease, assignment agreement, license and concession agreement, temporary rental agreement, contract or any other tenancy or occupancy agreement between the Port and a tenant (such agreement referred to herein as a "Lease" for purposes of this ordinance) for a property located in the Port Area or on Port property in the City of Oakland, which may include more than one Assessor's Parcel Number or less than a full Assessor's Parcel Number.
2. The term "Parcel" as used in the EBMUD Regional PSL Ordinance means, for purposes of implementing this ordinance, the Leasehold Property.
3. "Property Owner". In addition to the persons and entities included within the EBMUD Regional PSL Ordinance definition of 'property owner', a 'property owner' also includes any person or party using or occupying any lands or other real property owned by the Port pursuant to any Lease as defined above."

B. Within the Port Area and on Port-owned property within the City of Oakland, Property Owners, as defined above, shall be responsible for inspecting building sewers, obtaining all required permits, performing all necessary building sewer repair or replacement, scheduling inspections with EBMUD, passing a verification test witnessed by EBMUD, obtaining and filing with the City a compliance certificate from EBMUD as set forth in the EBMUD Regional PSL Ordinance for the entire building sewer (upper building sewer

lateral and lower building sewer lateral) when one or more of the triggering events in OMC Sections 13.08.600 A, B, or C occurs, except as modified below for Leasehold Properties with sanitary sewers totaling greater than 1000 feet in length.

- C. The first sentence of OMC Section 13.08.600 is hereby amended to add the following text at the beginning of the sentence: "Unless otherwise excepted under Sections F and H below,".
- D. Subsection "E" of OMC Section 13.08.600 is amended to read as follows:

"Properties with Sanitary Sewers Totaling Greater than 1000 Feet in Length. Within one year of occurrence of any event specified in Subsection A, B or C of this section [OMC Section 13.08.600], Property Owners of real property or Leasehold Property that contains sanitary sewers totaling greater than 1000 feet in length shall submit for EBMUD approval, a condition assessment plan with a schedule to perform testing to assess the condition of all of the sewer laterals on the property to determine compliance with the EBMUD Regional PSL Ordinance. Within 6 years of triggering compliance requirements, such Property Owners shall complete all condition assessment testing and submit a corrective action work plan for EBMUD approval with a copy to the Port's Director of Engineering.

- E. Subsection "H" (Port Exemption) is hereby added to OMC Section 13.08.600 to read as follows:

"(H) Port Exception:

- 1. A Property Owner may be excepted by written agreement between said Property Owner and the Port by which a party other than the Property Owner, expressly assumes the responsibility for compliance with the City PSL Ordinance, and the EBMUD Regional PSL Ordinance incorporated therein".

Section 4. The Board hereby finds and directs that:

- A. The Port is not a "Property Owner" for the purposes of the EBMUD Regional PSL Ordinance, the City PSL

Ordinance or this ordinance. Nonetheless, the Port is committed to participating and furthering the goals of the East Bay Regional Private Sewer Lateral Program.

- B. Notwithstanding the finding in Section 4.A above, the Port will voluntarily proceed where feasible to assess the condition of all Port owned sewer lines on all properties owned by the Port ("Port Controlled Property"), except those sewer lines that are within a Leasehold Property and serve only one tenant. The purpose of such assessment will be to determine whether such Port owned sewer lines comply with standards set forth in Section 5 of the EBMUD Regional PSL Ordinance and OMC Section 13.08.610 (collectively, "Compliance Standards"), which for purposes of this ordinance, will apply to all sewer lines assessed by the Port and not, for the avoidance of doubt, only to private sewer laterals. To this end, the Board directs Port staff to prepare a "condition assessment plan" for Board approval as soon as feasible, but no later than June 30, 2019. The condition assessment plan will include a schedule for the performance of testing to assess the condition of all Port owned sewer lines on Port Controlled Property.
- C. Once the Port has implemented the condition assessment plan, the Board directs Port staff to prepare a "corrective action work plan" for Board approval which shall describe the type, quantity and schedule of work needed to bring all Port-owned sewer lines on Port Controlled Property into compliance with the Compliance Standards. Port staff shall present such corrective action work plan to the Board no later than June 30, 2023.
- D. After the Board approves the corrective action work plan, the Port shall complete the work described in the approved corrective action work plan, subject to budget appropriations adopted by the Board as part of the Port's capital improvement program or other available sources of funding.

Section 5. The requirements of this ordinance are Local Ordinance Requirements within the meaning of the EBMUD Regional PSL Ordinance. This ordinance is neither intended nor shall it be construed, to alter, or diminish the powers and responsibilities of the Board under the Charter or the Port's practice in the carrying out of its powers and responsibilities.

Section 6. This ordinance shall be effective thirty (30) days after the adoption of this ordinance by the Board.


The Board of Port Commissioners, Oakland, California, April 26, 2018. Passed to print for one day by the following vote: Ayes: Commissioners Colbruno, Cluver, Hamlin, Martinez, Yee and President Story - 6. Excused: Commissioner Butner - 1. Noes: 0.


Daria Edgerly
Secretary of the Board

Adopted at a Regular Meeting held May 10, 2018
by the following vote:

Ayes: Commissioners Butner, Colbruno, Cluver, Hamlin, Martinez, Yee and President Story - 7
Noes: 0

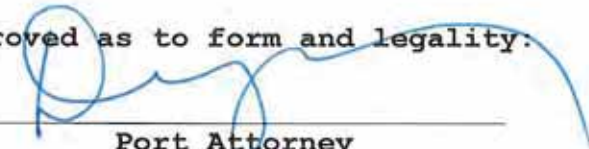
Attest:



President.


Secretary.

Approved as to form and legality:



Port Attorney

APPENDIX 5

Port of Oakland Spill Emergency Response Plan



530 Water Street

Oakland, CA 94607

(510) 627-1100

SPILL EMERGENCY RESPONSE PLAN

Updated

May 5, 2023



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SPILL EMERGENCY RESPONSE PLAN

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SPILL EMERGENCY RESPONSE PLAN

1.0 INTRODUCTION

The Port of Oakland (Port) is committed to the effective management, operation, and maintenance of its sanitary sewer system, providing reliable infrastructure facilities to serve its airport, seaport, and commercial real estate tenants and customers.

Wastewater flows generated within the Port service area are conveyed through the Port collection system to the City of Oakland (City) sanitary sewer system or directly to sewer interceptors owned and maintained by the East Bay Municipal Utility District (EBMUD). All Port wastewater flow is treated at EBMUD's Main Wastewater Treatment Plant (MWWTP).

This Spill Emergency Response Plan (SERP) has been developed as part of the Port-Wide Sewer System Management Plan (SSMP), which focuses on the reduction of wastewater collection system spills, previously termed sanitary sewer spills. The effective date of this plan is June 5, 2023.

1.1 Background

A sanitary sewer spill is defined as a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system spill, operational failure, and/or infrastructure failure.

In an effort to reduce spills in the State of California, the State Water Resources Control Board (SWRCB), as part of State General Waste Discharge Requirements Order No. 2006-0003 (GWDRs), established in 2006 that all municipalities and districts with over one mile of sanitary sewer pipelines develop a SSMP. As part of the requirements for the completion of a SSMP, the SWRCB required that municipalities and districts develop a site-specific SERP, the required contents of which were revised in 2013 by Order WQ 2013-0058-EXEC and again in 2022 by Order WQ 2022-0103-DWQ (Statewide WDR).

This SERP was developed to meet the requirement of the Statewide WDR, which requires the Port to update its SERP before the WDR effective date of the June 5, 2023.

1.2 Spill Categories

Four categories of spills, Categories 1 through 4, are defined in the Statewide WDR, as defined in Table 1.1. For reporting purposes, the Statewide WDR also has requirements for a "No Spill" category.

All agencies that own or operate sanitary systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility are required to report all spills, excluding private lateral spills.

Table 1.1 Statewide WDR Spill Categories

Category 1	<p>A spill of any volume of sewage from or caused by a sanitary sewer system or publicly owned lateral that results in a discharge to:</p> <ul style="list-style-type: none">• A surface water, including a surface water body that contains no flow or volume of water; or• A drainage conveyance system that discharges to surface waters¹ when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly. <p>Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.</p>
Category 2	<p>A spill from a sewer main of 1,000 gallons or greater that does not discharge to a surface water.</p>
Category 3	<p>A spill from a sewer main of equal to or greater than 50 gallons and less than 1,000 gallons that does not discharge to a surface water.</p>
Category 4 and non-Category 1 Port-Managed Lateral	<p>A spill from a sewer main of less than 50 gallons that does not discharge to a surface water, or a non-Category 1 Port-managed lateral spill.</p>

1.3 Objectives

The primary objectives of the Spill Emergency Response Plan are to document measures in place to protect public health and the environment as related to wastewater collection system spills. The Port is required to respond to spills from its system in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and

¹ Surface water includes waters on the earth's surface including, but not limited to, streams, lakes, ponds, oceans, and reservoirs; and irrigation and drainage systems discharging directly into a stream, lake, pond, ocean, reservoir, or other surface water

- Cleaning publicly accessible areas while preventing toxic discharges to waters of the State.

This SERP has been developed to meet the requirements of the Statewide WDR. The SERP does not supersede existing standard operating procedures if more stringent, unless otherwise specified by the Executive Director or their designated representative.

1.4 Organization

The key elements of the SERP are addressed individually as follows:

- Section 1: Introduction
- Section 2: Regulatory Requirements
- Section 3: Spill Response Procedure
- Section 4: Public Advisory Procedure
- Section 5: Regulatory Agency Notification Procedure
- Section 6: Media Notification Procedure
- Section 7: Post-Spill Debriefing
- Section 8: Recordkeeping Requirements
- Section 9: Staff and Spill Response Contractor Training
- Section 10: Distribution and Maintenance of SERP

Certain aspects or provisions of this SERP, such as spill clean-up procedures, are specific to each of the Port's three major divisions, while others apply to the entire Port regardless of division. Individual sections of this document are organized by Port division, where applicable.

1.5 Key Personnel

This report contains references to specific Port personnel as applicable to spill response procedures. References are made to job titles, rather than individual names. The purpose of this is to simplify the process of updating the document as staff changes occur. Appendix A contains a list of the key personnel identified in this report and their contact information. This list should be updated as necessary.

1.6 Safety Provisions

When responding to the reported location of a potential spill, Port staff may encounter emergency situations requiring immediate action. Specific actions to be taken will vary greatly depending on the type of spill and its underlying cause (e.g., main blockage, lift station failure, etc.). While swift action may be required to mitigate the negative impacts associated with the spill, it is important to perform these actions in a safe and competent manner that is consistent with existing standard operating procedures.

1.7 Abbreviations

To conserve space and to improve readability, the following abbreviations are used in this report. The abbreviations are spelled out in the text the first time the phrase or title is used in each chapter and subsequently identified by abbreviation only.

City	City of Oakland
EBMUD	East Bay Municipal Utility District
gpm	gallons per minute
Statewide WDR	General Waste Discharge Requirements Order WQ 2022-0103-DWQ
MWWTP	Main Wastewater Treatment Plant
NPDES	National Pollutant Discharge Elimination Program
SERP	Spill Emergency Response Plan
Port	Port of Oakland
RWQCB	San Francisco Bay Area Regional Water Quality Control Board
SSMP	Sewer System Management Plan
Spill	Sanitary Sewer Spill (previously called sanitary sewer overflow or SSO)
SWRCB	State Water Resources Control Board
WDR	Waste Discharge Requirements

2.0 REGULATORY REQUIREMENTS

2.1 SWRCB Requirements

The Statewide WDR requires the Spill Emergency Response Plan to assure prompt detection and response to spills, to reduce spill volumes, and to enable the collect information for prevention of future spills. More specifically, the Spill Emergency Response Plan must address the for the following:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in the Statewide WDR; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

3.0 SPILL RESPONSE PROCEDURE

This section presents a strategy for Port staff to mobilize labor, materials, tools, and equipment to mitigate foreseeable conditions that may cause or contribute to a spill. The plan considers a wide range of potential system failures that could create a spill to surface waters, land, or buildings.

3.1 Receipt of Information Regarding a Spill

A spill may be detected by the general public, Port tenants, Port staff through routine maintenance activities, or by others. This section summarizes the various ways in which Port staff may become aware of a potential spill, and how the information is documented and transferred to the appropriate Port personnel.

The communication paths are described in this section are illustrated on Figures 3.1 through 3.3.

To effectively respond to calls regarding potential spills, operators should obtain as much relevant information regarding the potential spill from the caller as possible. The Statewide WDR requires, at a minimum, collection of the information listed in Table 3.1 on the following page.

Until verified by Port staff, the report of a possible spill should be referred to as a potential sanitary sewer spill.

More specific information related to the Aviation, Maritime, and Commercial Real Estate divisions is provided in the sections below.

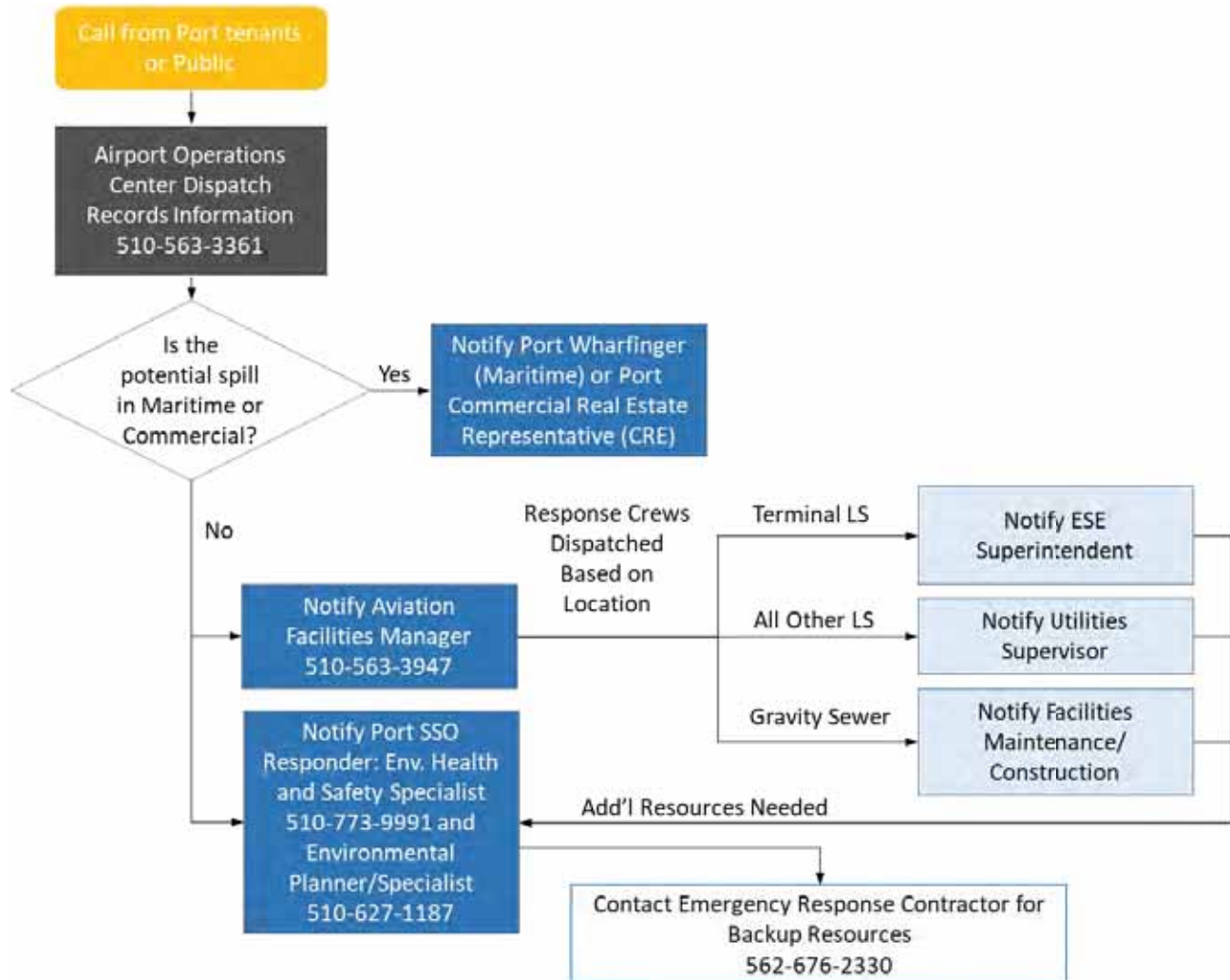
Table 3.1. Information to Gather from Caller of Potential Spill

Call Notes from Potential Spill – Conversation Checklist
<ul style="list-style-type: none">• Date and time of call;• Date and time the caller first noticed the spill, if available;• Specific location of the potential problem;• Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available;• Caller's contact information, if available; and• Additional supportive information such as whether the caller smells any odor, or whether the appearance was at a cleanout or manhole would be beneficial.• Document on the same record the final resolution of the call.

3.1.1 Aviation Division

- Calls from Port tenants or the public regarding potential spills in the vicinity of the Oakland International Airport are generally received through the **Airport Airside Operations Department (Operations Department) at (510) 563-3361**. The Operations Department is staffed 24 hours per day, every day of the year (including weekends, non-business hours, and holidays).
- The Airport Operations Dispatch at the Operations Department or their designated representative then records the spill information and forwards it to the **Aviation Facilities Maintenance Department (Aviation Facilities Manager), the Port's Spill Responder (Environmental Health and Safety Specialist), and the Programs & Planning Department (Environmental Planner/Specialist)** when appropriate.
- The Aviation Facilities Maintenance Manager determines the potential spill location and **contacts the appropriate responder** (see Figure 3.1) based on whether the potential spill is from the Terminal Lift Station, all other lift stations, or from the Gravity Sewer.
- From time to time, representatives of the maritime or commercial real estate divisions may not be available to field calls regarding potential spills. For this reason, the Aviation Operations Department may also receive calls regarding potential spills in the vicinity of the harbor or commercial real estate areas. In this case, the **Airport Operations Dispatch (or Manager on Duty or their representative)** will record the relevant information and forward it to the **Port Wharfinger or Port Commercial Real Estate Representative**. Sewer spills in the vicinity of the Oakland International Airport detected by Port staff in the course of their normal duties shall be reported immediately to the **Aviation Facilities Maintenance Department**. Dispatching personnel in the aviation division should record all relevant spill information and dispatch response crews, as needed (see Section 3.2).
- Figure 3.1 shows how initial notification of potential spills within the Aviation Division is addressed.

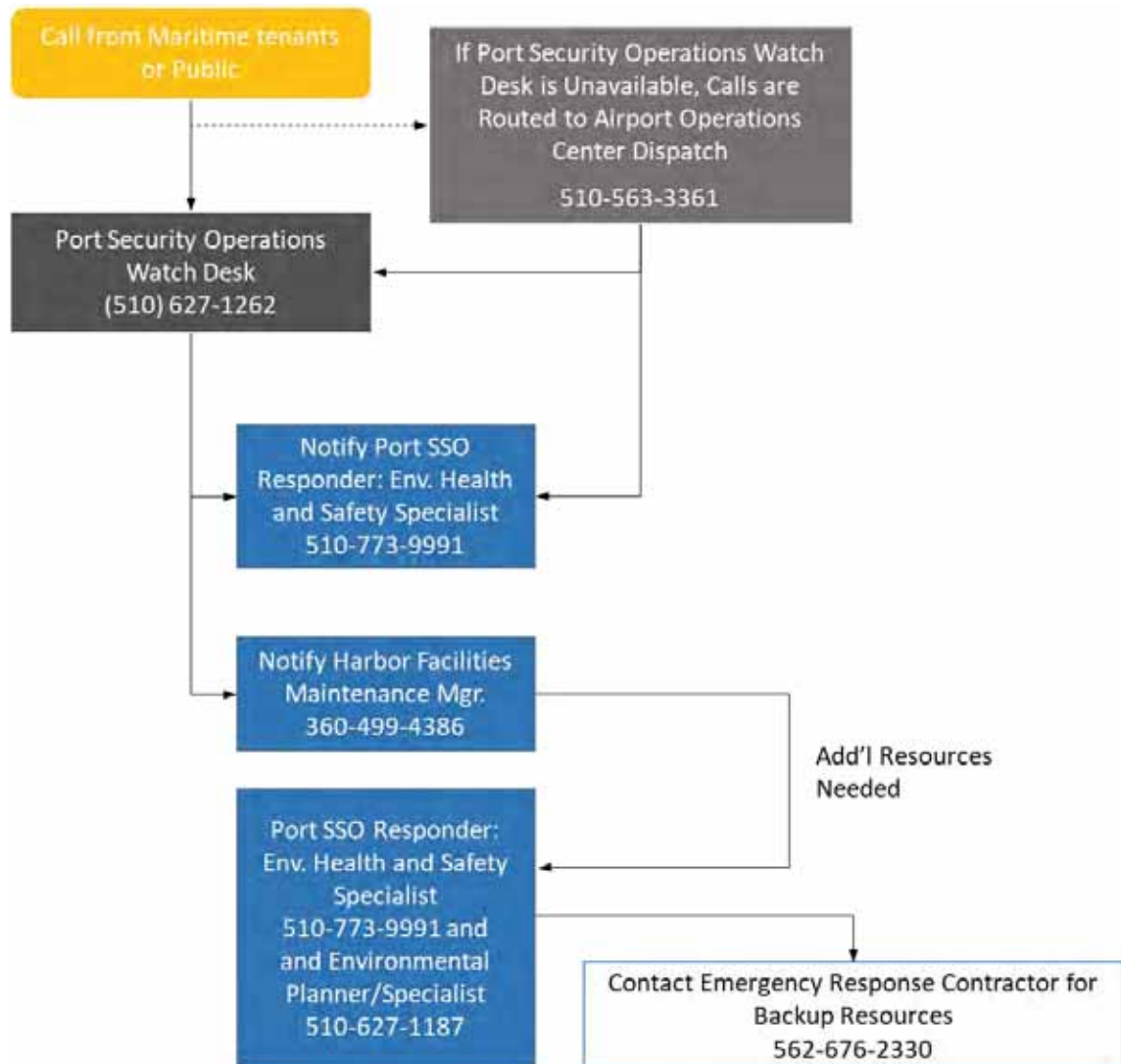
Figure 3.1 Initial Notification of Potential Spill – Aviation Division



3.1.2 Maritime Division

- Figure 3.2 on the following page shows how notification of potential spills in the Maritime Division are addressed.

Figure 3.2 Initial Notification of Potential Spill – Maritime Division



- Calls from Port tenants or the public regarding potential spills in the maritime area are generally **received through the Port Security Operations Watch Desk**. Should the Port Security Operations Watch Desk be unavailable, all calls regarding potential spills are routed through the **Airport Operations Department** (see Section 3.1.1).
- The Port Wharfinger (or the Manager on Duty at the Airport Operations Department or their representative) then records the spill information and forwards it to the **Harbor Facilities Maintenance Department**, the **Port's Spill Responder (Environmental Health & Safety Specialist)**, and the **Environmental Programs & Planning Department (Environmental Planner/Specialist)**, when appropriate.
- The Maintenance Manager determines the potential spill location and **contacts the appropriate responder** (see Figure 3.2) based on whether the potential spill is from a Lift Station or from the Gravity Sewer.
- Sewer spills in the maritime area detected by Port staff in the course of their normal duties shall be reported immediately to the Port Security Operations Watch Desk **or Harbor**

Facilities Maintenance Manager if the Port Security Operations Watch is unavailable. Dispatching personnel should record all relevant spill information and dispatch response crews, as needed (see Section 3.2).

3.1.3 Commercial Real Estate Division

- Calls from Port tenants or the public regarding potential spills in Jack London Square or other commercial real estate areas are generally received through the **Commercial Real Estate Manager** (See Figure 3.2). Should the Commercial Real Estate Representative be unavailable, all calls regarding potential spills are routed through the **Airport Operations Department** (see Section 3.1.1).
- The Commercial Real Estate Manager or Airport Operations Dispatch (or the Manager on Duty at the Airport Operations Department or their representative) then records the spill information and forwards it to the **Harbor Facilities Maintenance Department, Port's Spill Responder (Environmental Health & Safety Specialist), and Environmental Programs & Planning Department (Environmental Planner/Specialist)**, when appropriate.
- Sewer spills in Jack London Square or other commercial real estate areas detected by Port staff in the course of their normal duties shall be reported immediately to the **Port Commercial Real Estate Manager**. Dispatching personnel in the maritime division should record all relevant spill information and dispatch response crews, as needed (see Section 3.2)

3.2 Dispatch of Appropriate Crews to Site of Sanitary Sewer Spill

Failure of any element within the Port sewer system that threatens to cause or causes a spill will trigger a field response to isolate and correct the problem. Crews and equipment shall be available to respond to any spill location and shall be dispatched to the site of a reported spill immediately. Also, additional maintenance personnel shall be "on call" should extra crews be needed. Figure 3.1 summarizes the Aviation Sanitary Sewer Spill Field Response Action Plan, while Figure 3.2 summarizes the Maritime and Commercial Real Estate Sanitary Sewer Spill Field Response Action Plan. Figure 3.3 on the following page summarizes the regulatory reporting process to be enacted following both action plans; however, note that there are monthly and annual reporting requirements not included in this figure. For a complete list of all regulatory reporting requirements, please see Table 5.1.

3.2.1 Dispatching Duties

Dispatchers should receive notification of spills as outlined in Section 3.1 and dispatch the Environmental Health & Safety Specialist, who will assess the situation and request that appropriate crews and resources are dispatched as needed.

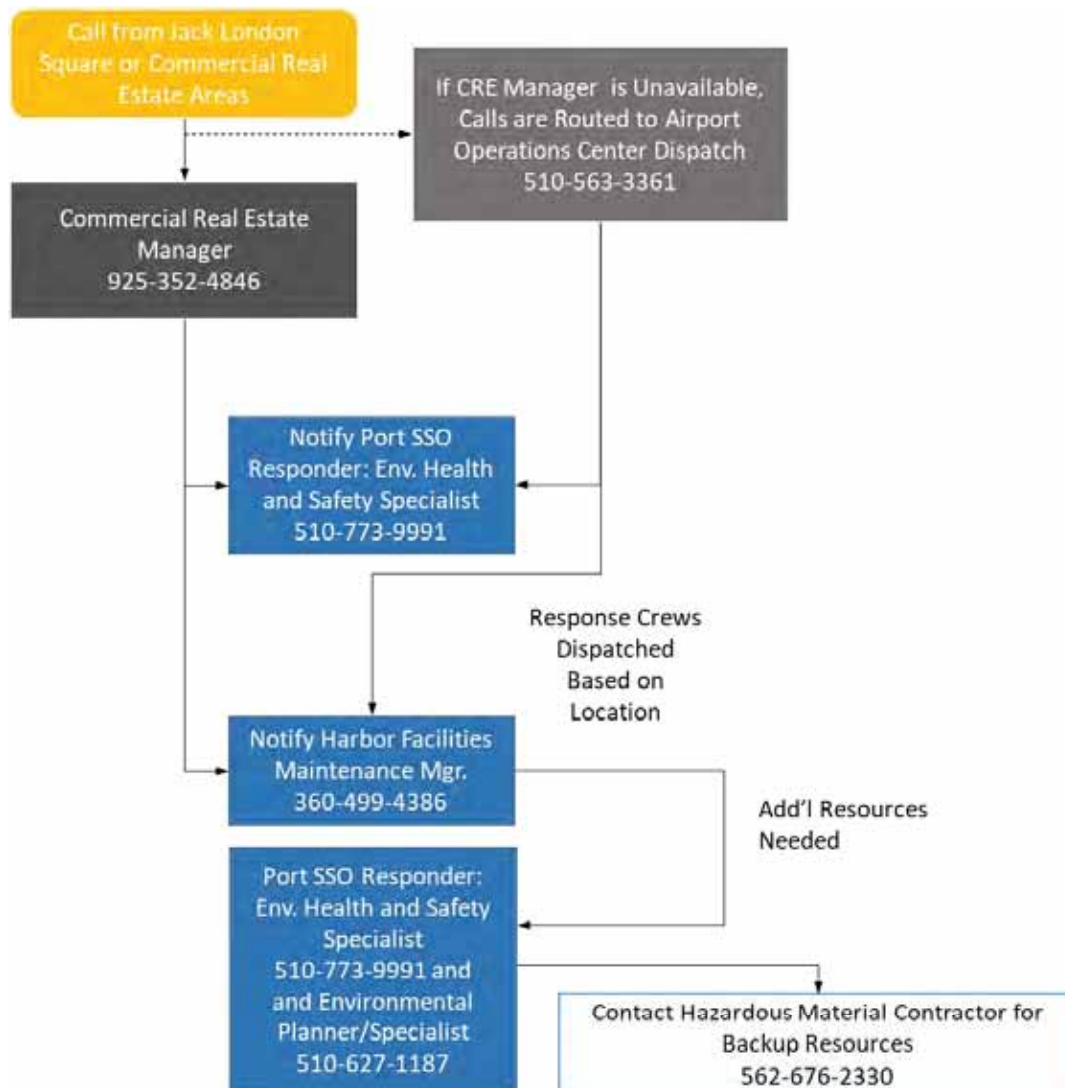
Dispatching duties are assigned based on the division responsible for maintaining the sewers where the spill occurred (e.g., Aviation, Maritime, CRE), as summarized below and shown in Figure 3.1 to 3.3, above.

In the Port, the dispatcher is also responsible for the coordination of the spill response activities, and shall maintain frequent contact with the response crew throughout the spill response and mitigation process.

3.2.1.1 Aviation Division

The Aviation Maintenance/Construction Supervisor, Utilities Supervisor, or ESE Superintendent normally performs dispatching duties for spills in Aviation sewer facilities, depending on the nature of the problem.

Figure 3.3 Initial Notification of Potential Spill – Commercial Real Estate



3.2.1.2 Maritime Division

The Port Security Operations Watch Desk followed by the Harbor Facilities Maintenance Manager normally performs dispatching duties for spills in Maritime sewer facilities.

3.2.1.3 Commercial Real Estate Division

The Commercial Real Estate Manager followed by the Harbor Facilities Maintenance Manager normally performs dispatching duties for spills in Commercial Real Estate sewer facilities.

3.2.2 Crew Instructions and Work Orders

Response crews should receive instructions regarding appropriate materials, supplies, and equipment needed by the designated dispatcher. The dispatcher should also inform the response crew of all pertinent information regarding the spill. Key information regarding dispatcher and response personnel responsibilities are as follows:

- Dispatchers shall verify that the entire message has been received and acknowledged by the crews who were dispatched. All standard communications procedures should be followed.
- All employees being dispatched to the site of a spill shall proceed immediately to the site of the spill. Any delays or conflicts in assignments must be immediately reported to the dispatcher for resolution. Work orders are coordinated through the Port's computerized maintenance management system (CMMS) software.
- Response crews should report their findings (e.g., details about the spill, was the spill recovered or did the spill enter surface waters, is there possible damage to private and public property, etc.), to the dispatcher immediately upon making their investigation.
- If the dispatcher has not received findings from the field crew within a reasonable amount of time, they shall contact the response crew to determine the status of the investigation.
- The dispatcher shall also refer all pertinent information to the next shift, including any details of the problems described by customers.

3.2.3 Additional Resources

The dispatcher should receive and shall convey to appropriate parties within the Port requests for additional personnel, material, supplies, and equipment from crews working at the site of a spill. If outside spill response assistance is necessary, the Port's designated Spill responder, the Environmental Health and Safety Specialist, shall be notified by the dispatcher and shall immediately contact the Port's Emergency Response Contractor. The dispatcher shall also notify the Environmental Programs & Planning Department (Environmental Planner/Specialist).

3.2.4 Preliminary Assessment of Damage to Private and Public Property

The focus of the field response is to resolve the problem in an efficient manner and to protect the public health and welfare. The response crews should use discretion in assisting individual tenants/property owners as reasonably as they can for spills in sewers not owned or maintained by the Port. Appropriate still photographs and video footage, if possible, should be taken of the outdoor area of the spill and impacted area in order to thoroughly document the nature and extent of impacts. Available photographs are to be forwarded to the appropriate department below for filing with the Sanitary Sewer Spill Field Report:

- **Aviation Sewer System:** Aviation Facilities Maintenance Department
- **Maritime Sewer System:** Harbor Facilities Maintenance Department
- **Commercial Real Estate Sewer System:** Harbor Facilities Maintenance Department

3.2.5 Field Supervision and Inspection

The supervisor/superintendent appropriate to the spill site location and type may visit the site of the spill, if necessary, to verify that the provisions of this spill response plan and other directives are met. They are responsible for confirming that the Sanitary Sewer Spill Field Report is completed and that

the available information is forwarded to the Port's Environmental Health & Safety Specialist for reporting to the SWRCB and other applicable regulatory agencies, including 2-hour notification to the Cal OES if required, as established in the Statewide WDR. The Environmental Health & Safety Specialist is also responsible for coordinating with the Port's "Legally Responsible Official," who will certify all spill reports submitted to the SWRCB.

3.2.6 Coordination with Emergency Response Contractor

In the event of a spill, the Environmental Health & Safety Specialist or designated Spill Responder, in coordination with the Environmental Programs & Planning Department, should be notified and consulted and will then determine if the Port's Emergency Response Contractor should be utilized. This is of particular importance if a suspicious substance (e.g., oil sheen, foamy residue) is found on the ground surface or has entered a storm drain or surface water, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the response crew should immediately contact the dispatcher and the Spill Responder for guidance before taking further action.

Should the Port's Spill Responder determine the need to alert the Port's Emergency Response Contractor, the SSO First Responder and/or field response crew shall await their arrival. Any vehicle engine, portable pump, or open flame (e.g., cigarette lighter) that can provide the ignition for an explosion or fire should flammable fluids or vapors be present shall be put out and not operated. The SSO First Responder and/or field response crew should maintain a safe distance and observe caution until assistance arrives. In this instance, the Operations Department should also be notified so that refueling activities in the area can be suspended until the fuel cleanup is completed.

Upon arrival of the Port's Emergency Response Contractor, the SSO First Responder and/or field response crew will take direction from the person with the lead authority of the SSO response team and from the Environmental Health & Safety Specialist. Only when that authority determines it is safe and appropriate for the SSO response crew to proceed or assist with spill response actions can they then proceed with containment (as needed), clean-up activities, and correction. These actions, however, may be performed by the Port's Emergency Response Contractor, depending on the size and nature of the event.

3.2.7 Crowd Control, Traffic Diversion, and Other Emergency Operations

Should a spill be of such a size or at such a location as to cause major disruptions to the flow of traffic at any point in the Port, the SSO field response crew shall notify the dispatcher as soon as possible. The dispatcher will then coordinate with the appropriate Port staff to set up a traffic diversion to move motorists away from the spill location.

Steps should be taken to barricade off the site of a spill to eliminate the potential of large crowds to inhibit the SSO field response crew's ability to effectively work. If necessary, additional assistance may be required (from the City of Oakland Police Department or other appropriate City/Port departments).

3.3 Spill Correction, Containment, and Clean-Up

Spills of various volumes occur from time to time, in spite of concerted prevention efforts. Spills may result from blocked sewers, pipe failures, or mechanical malfunctions, among other natural or man-made causes. The Port should be ready to respond upon notification and confirmation of a spill. This section describes specific actions to be performed by the SSO field response crews during a spill event.

The objectives of these actions are:

- To protect public health, environment, and property from sewage spills and restore surrounding area back to normal as soon as possible;
- To promptly notify appropriate regulatory agencies, including the SWRCB and OES if required;
- To contain the spill to the maximum extent possible, including preventing the discharge of sewage into waters of the State;
- To return the spilled sewage to the sewer system; and
- To minimize the Port's exposure to any regulatory agency penalties and fines.

An important issue with respect to an emergency response is to make sure that the temporary actions necessary to divert flows and repair the problem do not produce a problem elsewhere in the system. For example, repair of a force main could require the temporary shutdown of the pump station and diversion of the flow at an upstream location. If the closure is not handled properly, sewage system back-ups may create other spills.

Although the Port is staffed with individuals capable of responding efficiently to spills, the Port does not currently own the equipment necessary to fully mitigate large spills that occur. For this reason, the Port typically contracts with an Emergency Response Contractor when conditions warrant such assistance. The Emergency Response Contractor is required to and capable of providing immediate response when notified.

3.3.1 Responsibilities of Response Crew upon Arrival

It is the responsibility of the first personnel who arrive at the site of a spill to protect the health and safety of the public by mitigating the impact of the spill to the greatest extent possible. Should the spill not be the responsibility of the Port, but there is imminent danger to public health, public or private property, or to the quality of waters of the State, then prudent emergency action should be taken to prevent and rectify imminent danger until the responsible party assumes responsibility and provides actions. If the responsible party does not assume responsibility in time to prevent health and safety dangers, the Port has the ability and authority to contain and clean the spill and require compensation from the responsible party.

Upon arrival at a spill, the response crew should do the following:

- Isolate and secure all sources of spill materials to mitigate the spill volume, such as securing any bathrooms that may be added to the spill;
- Determine the cause of the spill, e.g., sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.;
- Identify and request, if necessary, assistance or additional resources to correct the spill or to assist in the determination of its cause;
- Determine if private property is impacted;
- Take immediate steps to stop the spill if possible (e.g., relieve pipeline blockage, manually operate pump station controls, repair pipe, etc.) Extraordinary steps may be considered where spills from private property threaten public health and safety or the environment, including

surface waters (e.g., a spill running off of private property into the public right-of-way and/or towards a storm drain);

- Communicate with the Port's Spill Responder for guidance on how to proceed; and
- Request additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the spill.
- For spills 50,000 gallons or more, conduct water quality monitoring as described in Section 3.3.4.

3.3.2 Initial Measures for Containment

The response crew shall initiate measures to contain the spilling sewage and recover sewage that has already been discharged. Appropriate steps should be taken to minimize the impact to public health or the environment, including the following:

- Determine the immediate destination of the spill (e.g., storm drain, street curb gutter, body of water, creek bed, etc.);
- Identify and request the necessary materials and equipment to contain or isolate the spill, if not readily available.
- Take immediate steps to contain the spill (e.g., block or bag storm drains, divert into downstream manhole, plug downstream storm drain, etc.)

3.3.3 Additional Measures Under Potentially Prolonged Spill Conditions

In the event of a prolonged sewer line blockage or a sewer line collapse, a determination should be made to set up a portable by-pass pumping operation around the obstruction. This may require the Port to seek assistance from an outside contractor (e.g., Rain for Rent).

- Appropriate measures shall be taken to determine the proper size and number of pumps required to effectively handle the sewage flow.
- Continuous or periodic monitoring of the by-pass pumping operation shall be implemented as required.
- Regulatory agency issues shall be addressed in conjunction with emergency repairs.

3.3.4 Cleanup

Sewer spill sites are to be thoroughly cleaned after a spill. No readily identified residue (e.g., sewage solids, papers, rags, plastics, rubber products) is to remain. Appropriate cleanup actions that shall be addressed, as applicable, are discussed in this section.

In many cases, the Port utilizes the services of an Emergency Response Contractor for clean-up and disinfection. Actions performed by the contractor include the following:

- Where practical, the area should be thoroughly flushed and cleaned of any sewage or wash-down water.
- Solids and debris should be flushed, swept, raked, picked-up, and transported for proper disposal.
- Where appropriate, the spill site should be disinfected and deodorized.

- Where sewage has resulted in ponding, the pond should be pumped dry and the residue disposed of in accordance with applicable regulations and policies.
- If a pond area contains sewage and no fish or other aquatic life, and cannot be pumped dry, it may be treated with bleach.
- If sewage has discharged into surface water, including wetlands, ponds, or the Bay, bleach or other appropriate disinfectant should not be applied. The California Department of Fish and Game and Alameda County Environmental Health Department should be contacted for specific instructions.
- The spill site shall be secured to prevent contact by members of the public until the site has been thoroughly cleaned. Posting, if required, should be undertaken pursuant to Section 4.1.

3.3.4.1 Aviation Division

Following initial attempts for spill correction and containment, Aviation personnel should contact the Port's Spill Responder for guidance on how to proceed. For smaller wastewater spills, Aviation staff may be able to use wash-down water to direct wastewater collected in the spill area back into a manhole and into the collection system. For larger spills, the Port's Spill Responder typically contacts an Emergency Response Contractor to clean up and disinfect the affected area.

3.3.4.2 Maritime Division

Following initial attempts for spill correction and containment, Maritime personnel should contact the Port's Spill Responder for guidance on how to proceed. For spills in the maritime area, the Port's Spill Responder typically contacts an Emergency Response Contractor to clean up and disinfect the affected area.

3.3.4.3 Commercial Real Estate Division

Following initial attempts for spill correction and containment, Maritime personnel should contact the Port's Spill Responder for guidance on how to proceed. For spills in the commercial real estate area, the Port's Spill Responder typically contacts an Emergency Response Contractor to clean up and disinfect the affected area.

3.4 Spill Report

A Sanitary Sewer Spill Field Report (Appendix B) shall be completed by response crews and designated Port staff whenever there is a spill from a Port asset on Port property. The appropriate dispatcher shall be promptly notified when the spill is eliminated. Actions and documentation regarding the spill should include the following:

- Arrival time at the site of the spill;
- Verify of the existence of a sewer system spill;
- Determine whether the spill is from a Port-managed sewer or lateral, or a privately-controlled lateral;
- Identify the affected area and extent of spill;
- Take photographs upon arrival and throughout the response period when possible;

- Determine whether the sewage spill has reached surface waters or a stormwater drainage conveyance system which discharges to surface waters:
 - Sewage may be observed running to surface waters;
 - There may be other indications, such as sewage residue, that confirm that sewage entered surface waters.
- Alternatively, confirm that the spill did not reach surface waters:
 - Document extent of the spill and confirm it did not enter surface waters, including wetlands or the San Francisco Bay;
 - Sewage may have spilled to covered storm drains (with no public access) where personnel verify, by inspection, that the entire volume is contained in a sump or impoundment and where complete clean-up occurs leaving no residue;
 - If a pre-planned or emergency maintenance jobs involves bypass pumping, access by the public to the bypass channel is restricted, and subsequent complete clean-up has occurred leaving no residue, water leaving the bypass pumping assembly is not considered a spill;
 - On-site evidence may clearly indicate all sewage was retained on land and did not reach surface water, or complete cleanup may have occurred, leaving no residue.
- Spill start time through information received, visual observation, pump station flow charts and other recorded data, or other sources;
- Spill end time determined by when the blockage is cleared and/or flow is controlled or contained;
- Visual observations supporting volume estimate - an estimation of the rate of sewer spill in gallons per minute (gpm) by direct observation and/or measurement; and
- Assessment of any damage to the exterior areas of public/private property.

3.5 Impact to Waters of State

If a spill is confirmed to have entered waters of the State² or a drainage conveyance system that has the potential to discharge to surface waters, the Port's Spill Responder shall be immediately notified. The response team should then proceed with the following additional activities:

- Make all required notifications, including the 2-hour notification to Cal OES for spills 50,000 gallons or more.
- Immediately notify and coordinate response with the RWQCB and Alameda County Environmental Health Department.
- Notify Environmental Planning and Programs Department for tracking.

² Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

- Determine the extent of the spill by investigating downstream until there is no evidence of sewage or debris along the creek or water body.
- Conduct receiving water visual observations, as described in Section 3.5.1.
- If the spill is 50,000 gallons or greater, collect water quality samples **within 18 hours** of becoming aware of the spill.
- Post contaminated water sign(s) and protect the water body from public access on all sides. This activity should be in coordination with direction from the Alameda County Environmental Health Department.
- Photograph sign placement and evidence of the spill in and around the water body to the farthest point reached by the sewage.
- Determine if the water body is safe to enter. During the winter storm season, cleaning the water body or taking samples may not be feasible or safe due to high water flows.
- If feasible, block the water body downstream of the affected area in a location that is safe to enter and is accessible to set up a pump or utilize other sewer cleaning equipment.
- To the extent feasible, recover and return contaminated water to the collection system.
- For spills 50,000 gallons or greater, perform follow-up sampling until posted signs can be removed. The Engineering Project Manager, in conjunction with the Alameda County Environmental Health Department, will determine when this happens; the LRO should also make any follow up calls to affected agencies.

3.5.1 Receiving Water Visual Observations

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the response team shall gather and document the following information for spills that discharged to surface waters:

- Estimated spill travel time to the receiving water;
- For spills which entered a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume that entered the receiving water; and
- Photography of:
 - Waterbody bank erosion,
 - Floating matter,
 - Water surface sheen (potentially from oil and grease),
 - Discoloration of receiving water, and
 - Impact to the receiving water.

3.5.2 Water Quality Monitoring

For spills that are 50,000 gallons or greater, and when it is determined to be feasible and safe, the Port shall collect and analyze samples of the receiving water. The purpose of testing is to determine the extent and impact of the spill. The guidelines listed below must be followed.

- The Environmental Health and Safety Specialist arranges for the collection of samples.
- Samples must be collected and tested **within 18 hours** of initial knowledge of the spill event.
- Water samples shall be taken to the following laboratory:

Environmental.com
262 Rickenbacker Circle
Livermore, CA 94551
Phone: 925-833-7810
Fax: 925-829-9101
Email: admin@environmental.com

- Records of monitoring information should include the date, exact place, and time of sampling or measurements, the individual(s) who performed the sampling or measurements, the date(s) analyses were performed, the individual(s) who performed the analyses, the analytical technique or method used, and the results of such analyses.
- The required water quality sampling procedures are as follows:
 - Collect one water sample, each day of the duration of the spill, upstream of the spill entry point if sewage discharges to a surface water via a drainage conveyance system, and/or
 - Three receiving water sampling locations (upstream, at the spill entry point, and downstream)
 - If the receiving water has no flow during the duration of the spill, report “No Sampling Due To No Flow” for the receiving water sampling locations
 - Analyze the collected receiving water samples for **Ammonia** and the appropriate other bacterial indicator(s) that include one or more of the following, unless directed otherwise by the Regional Water Board: **Total Coliform Bacteria, Fecal Coliform Bacteria, E-coli, and/or Enterococcus**.
 - Collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee
- Sample locations are described further in the Table 3.1.

Table 3.1. Sampling Locations for Spills 50,000 Gallons or Greater

Sampling Location	Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.

RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.
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- Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. A method is considered sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.
- The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

Samples should be taken, stored, and shipped as advised by the testing laboratory.

3.6 Spill Technical Report

If 50,000 gallons or greater from a spill reaches surface waters, a Spill Technical Report must be prepared and submitted to the CIWQS online spill database within 45 calendar days of the spill end date. The Spill Technical Report include, at a minimum, the following:

1. Spill causes and circumstances, including at minimum:
 - a. Complete and detailed explanation of how and when the spill was discovered;
 - b. Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
 - c. Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
 - d. Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
 - e. Detailed description of the spill cause(s);
 - f. Description of the pipe material, and estimated age of the pipe material, at the failure location;
 - g. Description of the impact of the spill;
 - h. Copy of original field crew records used to document the spill; and
 - i. Historical maintenance records for the failure location.
2. The Port's response to the spill:
 - a. Chronological narrative description of all actions taken by the Port to contain and terminate the spill;
 - b. Explanation of how the SERP was implemented to respond to and mitigate the spill;

and

- c. Final corrective action(s) completed and a schedule for planned corrective actions, including:
 - i. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, Illicit discharges are defined in the Statewide WDR as inflow and infiltration, unauthorized stormwater, chemical dumping, unauthorized debris, roots, fats, oils, and grease, and trash, including rags and other debris that may cause blockages
 - ii. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
 - iii. Necessary modifications to the SERP to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
 - a. Description of all water quality sampling activities conducted;
 - b. List of pollutant and parameters monitored, sampled and analyzed;
 - c. Laboratory results, including laboratory reports;
 - d. Detailed location map illustrating all water quality sampling points; and
 - e. Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses³ of the surface water.

3.7 Customer Satisfaction

As a customer service gesture, the dispatcher or response crew confirming the spill should follow-up in person or by telephone, or by email if possible, with the citizen(s) or tenant(s) reporting the spill. The cause of the spill and its resolution should be disclosed.

³ Water Code Section 13050 defines "Beneficial uses" as including but not limited to: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

4.0 PUBLIC ADVISORY PROCEDURE

This section describes the actions the Port should take to limit public access to areas potentially impacted by unpermitted discharges of pollutants to surface water bodies from the wastewater collection system.

4.1 Temporary Signage

The Port has primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from uncontrolled wastewater discharges from its facilities. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination. A sample warning posting for use by the Port is provided in Appendix D.

4.2 Other Public Notification

Should the posting of surface water bodies or ground surfaces subjected to a sewer spill be deemed necessary by the Aviation or Harbor Facilities Manager, they shall also determine the need for further public notification through the use of pre-scripted notices made available to the printed or electronic news media for immediate publication or airing, or by other measures (e.g., front door hangers). These measures shall be coordinated through the Port's designated Public Information Officer.

5.0 REGULATORY AGENCY NOTIFICATIONS

This section summarizes the procedures that Port staff shall follow to provide formal notice to the appropriate regulatory agencies as necessary in the event of a spill. Agency notifications shall be performed in parallel with other internal notifications. The procedures for providing notification of a spill to the media are presented in Section 6.0. Internal notification and mobilization of personnel are detailed in Section 3.0.

The regulatory agency that must be notified if a spill occurs varies depending on the type of discharge. Likewise, the time frame in which the appropriate agencies must be notified depends on the type of discharge.

Table 5.2 summarizes the regulatory agency notification plan for each type of discharge. The requirements for which regulatory agencies must be notified and under what conditions are the same regardless of the responsible Port division.

5.1 Multiple Appearance Points – Single Spill

For reporting purposes, if one spill event of any category results in multiple appearance points in a sewer system, a single spill report is required in CIWQS which includes the GPS coordinates for the location of the spill appearance point closest to the failure point, blockage or location of the flow condition that caused the spill, and descriptions of the locations of all other discharge points associated with the single spill event.

Key time periods in the reporting period are listed on Table 5.1 on the following page.

Table 5.1 Key Deadlines for Spill Reporting

2 HOURS of being aware of spill	<p>Call Office of Emergency Services if Category 1 sewer main spill or Category 1 Port-managed lateral spill is 1000 gallons or more.</p> <p>Additional notifications for Category 1 spills include Alameda County Environmental Health Department, RWQCB, and Coast Guard if the spill enters the San Francisco Bay.</p>
3 BUSINESS DAYS of being aware of spill	Submit draft reports to CIWQS for Category 1 and sewer main or Port-managed lateral spills or Category 2 sewer main spills
15 CALENDAR DAYS from spill end date	Certify Category 1 and Category 2 spills
30 CALENDAR DAYS from end of month if applicable	Certify Category 3 and/or Category 4 sewer main spills or submit “No Spill” report
45 CALENDAR DAYS from spill end date	Submit Spill Technical Report for spills 50,000 gallons or larger that reach Waters of the State
90 CALENDAR DAYS from spill end date (Cat 1 or 2) or certified spill report due date (Cat 3)	Submit amended spill report for Category 1 through 3 spill
FEBRUARY 1 of each year	Submit Category 4 spill summary report and/or Port-managed lateral Category 1 summary report

Table 5.2. Regulatory Reporting Timelines and Actions

Element	Requirement	Method
NOTIFICATION	<ul style="list-style-type: none"> Category 1 Sewer Main or Port-Managed Lateral Spill Greater than 1,000 Gallons: <ul style="list-style-type: none"> Notify OES within two hours of becoming aware of any Category 1 Spill (i.e., greater than or equal to 1,000 gallons discharged to Waters of the State. Obtain an OES notification control number. For any spills which threaten water quality in the San Francisco Bay, contact the United States Coast Guard as soon as possible. Also notify RWQCB and Alameda County Environmental Health Department. Complete internal notifications in addition to regulatory notifications, including Port Environmental Programs and Planning Department. 	<ul style="list-style-type: none"> Call Cal OES at: (800) 852-7550, Alameda County Environmental Health Department at (510) 267-8000, and the Coast Guard at http://www.nrc.uscg.mil/nrcnp.html
REPORTING	<ul style="list-style-type: none"> Category 1 Sewer Main or Port-Managed Lateral Spill: <ul style="list-style-type: none"> Draft Report within three business days of becoming aware of the spill LRO certifies within 15 calendar days of spill end date Category 1 Spill Greater than 50,000 Gallons: <ul style="list-style-type: none"> LRO submits a Spill Technical Report within 45 calendar days after the spill end date Category 2 Spill: <ul style="list-style-type: none"> Draft Report within 3 business days of becoming aware of the spill LRO certifies within 15 calendar days of the spill end date Category 3 Spill: <ul style="list-style-type: none"> Certified report within 30 calendar days of the end of month in which the spill occurred Category 4 Spill or Port-Managed Lateral Spill not Category 1: <ul style="list-style-type: none"> Monthly certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills within 30 calendar days after the end of the calendar month in which the spills occurred LRO certifies annually a report of all Category 4 spills or non-Category 1 Port-managed lateral spills by February 1 after the end of the calendar year in which the spills occurred "No Spill" certification : <ul style="list-style-type: none"> LRO certifies that no Spills occurred within 30 calendar days of the end of the month. Collection System Questionnaire (to be changed to Annual Report in 2024): <ul style="list-style-type: none"> Port updates and certifies every 12 months, with the Annual Report deadline beginning on April 1, 2024. 	<ul style="list-style-type: none"> Enter data into the CIWQS Online Spill Database (http://ciwqs.waterboards.ca.gov/), certified by the Legally Responsible Official(s). All information required by CIWQS should be captured in the Spill report. Certified Spill reports may be updated by amending the report or adding an attachment to the Spill report within 90 calendar days after the Spill end date (for Category 1 and 2 spills) or the date of the certified report (for Category 3 spills), as applicable. After 90 days, the State and Regional Board must be contacted to request to amend a Spill report along with a justification for why the additional information was not available prior to the end of the 90 days. <p>Port Ordinance No. 4474 assigns responsibility to the Property Owner for inspecting upper and lower building sewers (laterals) and performing necessary repairs or replacement of these laterals. Ordinance 4474 defines the Property Owner in two ways: 1) owner of the property in question or 2) lease holder of a property located in the Port Area or Port property. Based on the assignments made in Ordinance No. 4474, Port-managed laterals are defined as laterals that are not privately-owned or under a lease agreement with a tenant.</p>
WATER QUALITY MONITORING	<ul style="list-style-type: none"> Category 1 Spill Greater than 50,000 Gallons: <ul style="list-style-type: none"> Port conducts water quality sampling within 18 hours after knowledge of the spill for Category 1 Spills in which 50,000 gallons or greater are spilled to Waters of the State. 	<ul style="list-style-type: none"> Water quality results will be uploaded into CIWQS for Category 1 Spills in which 50,000 gallons or greater are spilled to surface waters.

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5.2 2-Hour Notification to Regulatory Agencies of Spills

The First Responder or appropriate party shall notify Cal OES of a Category 1 spill *greater than or equal to 1,000 gallons discharged to waters of the State*. Notification must be made **no later than 2 hours** after knowledge of the spill. **A CalOES Number must be obtained.**

The Cal OES phone number is (800) 852-7550.

In addition, contact the Alameda County Environmental Health Department at (510) 267-8000, RWQCB at RB2SpillReports@waterboards.ca.gov or (510) 622-2369, and the Coast Guard at <http://www.nrc.uscg.mil/nrchp.html>.

The following information should be reported to Cal OES, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description, which includes:
 - Brief narrative of the spill event, and
 - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Port was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

Following the initial notification to Cal OES and until the spill report is certified in the online SWRCB Sanitary Sewer Spill Database, the Legally Responsible Official (LRO) should provide updates (or provide direction for updates to be provided) to Cal OES regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

5.3 Detailed Reporting Requirements

Table 5-1 above provides detail on the Port's regulatory reporting process, which is also described below.

All reporting must be submitted electronically to the online CIWQS Sanitary Sewer System Database (<https://ciwqs.waterboards.ca.gov>). Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official.

The Port shall report any information that is protected by the Homeland Security Act, by email to SanitarySewer@waterboards.ca.gov, with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only

5.3.1 CATEGORY 1 SPILLS

5.3.1.1 Spill Reporting for Category 1 Spills – 3 Business Days of Becoming Aware of Spill

Cal OES, Alameda County Environmental Health Department, RWQCB, and the Coast Guard shall receive notification of Category 1 spills greater than or equal to 1,000 gallons.

The LRO must then submit the initial draft report to the SWRCB's CIWQS Online Spill Database @ <http://ciwqs.waterboards.ca.gov/ciwqs> **within 3 business days of becoming aware of the spill.**

Table 5.2 on the following page lists information that is required in the draft spill report. The data provided in the draft spill must be supplemented further, during the certification process, as discussed in Section 5.3.1.2.

Table 5.3 Category 1 and 2 CIWQS Draft Spill Report – Required Information

Required Information for Category 1 and 2 Draft Spill Reports
<ol style="list-style-type: none"> 1. Contact information: Name and telephone number of contact person to respond to spill-specific questions; 2. Spill location name; 3. Date and time the Port was notified of, or self-discovered, the spill; 4. Operator arrival time; 5. Estimated spill start date and time; 6. Date and time the Port notified the California Office of Emergency Services, and the assigned control number; 7. Description, photographs, and GPS coordinates of the system location where the spill originated; <ol style="list-style-type: none"> a. If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field; 8. Estimated total spill volume exiting the system; 9. Description and photographs of the extent of the spill and spill boundaries; 10. Did the spill reach a drainage conveyance system? If Yes: <ol style="list-style-type: none"> a. Description of the drainage conveyance system transporting the spill; b. Photographs of the drainage conveyance system entry location(s); c. Estimated spill volume fully recovered from the drainage conveyance system; d. Estimated spill volume remaining within the drainage conveyance system; 11. Description and photographs of all discharge point(s) into the surface water; <p style="text-align: center;"><i>** Items 12 and 13 are required for Category 1 spills only **</i></p> 12. Estimated spill volume that discharged to surface waters; and 13. Estimated total spill volume recovered.

5.3.1.2 Spill Certification for Category 1 Spills – 15 Calendar Days of the Spill End Date

Within 15 calendar days of the spill end date, the LRO must review and certify the report in the CWIQS Online spill database at <http://ciwqs.waterboards.ca.gov/ciwqs>

The Certified Spill Report requires additional information to supplement the data provided in the Draft Spill Report. Table 5.3 on the following page summarizes information that is required during spill certification.

5.3.1.3 Spill Technical Report

If 50,000 gallons or greater from a spill reaches surface waters, an Spill Technical Report must be prepared and submitted to the CIWQS online spill database within 45 calendar days of the spill end date. The LRO is responsible for submitting the Spill Technical Report. The required contents of the Spill Technical Report are discussed in Section 6.5, above.

5.3.1.4 Spill Amendments for Category 1 Spills – 90 Calendar Days of the Spill End Date

The Port shall update or add additional information to a Certified Spill Report within 90 calendar days of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report. After 90 calendar days, the Port shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

5.3.2 CATEGORY 2 SPILLS

5.3.2.1 Spill Reporting for Category 2 Spills – 3 Business Days of Becoming Aware of the Spill

Within 3 business days of becoming aware of the spill, the LRO must submit the initial report to the SWRCB's CWIQS Online Spill Database @ <http://ciwqs.waterboards.ca.gov/ciwqs>. The draft report shall include Items 1 through 11 of the list provided in Table 5.2 above, for the Category 1, 3-day draft report.

5.3.2.2 Spill Certification for Category 2 Spills – 15 Calendar Days of the Spill End Date

Within 15 calendar days of the spill end date, the LRO must review and certify the report in the CWIQS Online Spill Database @ <http://ciwqs.waterboards.ca.gov/ciwqs>. The Spill Certification must include, in addition to the information provided in the draft report plus Items 1 through 13 of the list provided in Table 5.3, above. *In addition, the Spill Certification must include a new Item 14 - Whether or not the spill was located within 1,000 feet of a municipal surface water intake.*

Table 5.4 Category 1 and 2 CIWQS Spill Certification – Required Information

Required Information for Category 1 and 2 Spill Certification	
<ol style="list-style-type: none"> 1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill; 2. Spill end date and time; 3. Description of how the spill volume estimations were calculated, including at a minimum: <ol style="list-style-type: none"> a. The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered); and b. The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time; 4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); 5. System failure location (for example, main, lateral, pump station, etc.); 6. Description of the pipe material, and estimated age of the pipe material, at the failure location; 7. Description of the impact of the spill; 8. Whether or not the spill was associated with a storm event; 9. Description of spill response activities including description of immediate spill containment and cleanup efforts; 10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps; 11. Spill response completion date; 12. Detailed narrative of investigation and investigation findings of cause of spill; 13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; 	<p><i>** Items 14 through 17 are required for Category 1 spills only **</i></p>
	<ol style="list-style-type: none"> 14. Name and type of receiving water body(s); 15. Description of the water body(s), including but not limited to: <ol style="list-style-type: none"> a. Observed impacts on aquatic life; b. Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill; c. Responsible entity for closing/restricting use of water body; and d. Number of days closed/restricted as a result of the spill. 16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and 17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, "Not Applicable" shall be selected.

5.3.2.3 Amended Certified Spill Reports for Individual Category 2 Spills – 90 Calendar Days of the Spill End Date

The Port shall update or add additional information to a Certified Spill Report within 90 calendar days of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The LRO shall certify the amended report. After 90 calendar days, the Port shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

5.3.3 CATEGORY 3 AND 4 SPILLS AND NON-CATEGORY 1 PORT-MANAGED LATERAL SPILLS

5.3.3.1 Monthly Spill Reporting for Category 3 Spills

Within 30 calendar days of the end of the calendar month in which the spill occurred, the LRO must submit and certify a report to the SWRCB's CWIQS Online Spill database @ <http://ciwqs.waterboards.ca.gov/ciwqs>. Table 5.4 on the following page lists the information that is required for Category 3 spill certification.

5.3.3.2 Amended Certified Spill Reports for Individual Category 3 Spills – 90 Calendar Days of the Spill End Date

The Port shall update or add additional information to a Certified Spill Report within 90 calendar days of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The LRO shall certify the amended report. After 90 calendar days, the Port shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

5.3.3.3 Monthly Spill Reporting for Category 4 Spills or Non-Category 1 Port-Managed Lateral Spills

Within 30 calendar days of the end of the calendar month in which the spill occurred, the LRO must submit and certify the estimated total spill volume exiting the sanitary sewer system and the total number of all Category 4 spills and/or non-Category 1 Port-managed lateral spills to the SWRCB's CWIQS Online spill database @ <http://ciwqs.waterboards.ca.gov/ciwqs>.

Recordkeeping requirements for Category 4 and non-Category 1 Port-managed lateral spill information is discussed further in Section 8.

5.3.3.4 Annual Spill Reporting for Category 4 Spills and Non-Category 1 Port-Managed Lateral Spills

Upload and certify a report, in an acceptable digital format, of all Category 4 and non-Category 1 Port-Managed lateral spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.

Table 5.5 Category 3 CIWQS Spill Certification – Required Information

Required Information for Category 3 Spill Certification
<ol style="list-style-type: none"> 1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions; 2. Spill location name; 3. Date and time the Enrollee was notified of, or self-discovered, the spill; 4. Operator arrival time; 5. Estimated spill start date and time; 6. Description, photographs, and GPS coordinates where the spill originated: <ol style="list-style-type: none"> a. If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field; 7. Estimated total spill volume exiting the system; 8. Description and photographs of the extent of the spill and spill boundaries; 9. Did the spill reach a drainage conveyance system? If Yes: <ol style="list-style-type: none"> a. Description of the drainage conveyance system transporting the spill; b. Photographs of the drainage conveyance system entry locations(s); c. Estimated spill volume fully recovered from the drainage conveyance system; and d. Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable. 10. Estimated total spill volume recovered; 11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill; 12. Spill end date and time; 13. Description of how the spill volume estimations were calculated, including, at minimum: <ol style="list-style-type: none"> a. The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered); and

Required Information for Category 3 Spill Certification	
	<ul style="list-style-type: none"> b. The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
14.	Spill cause(s) (for example, root intrusion, grease deposition, etc.);
15.	System failure location (for example, main, pump station, etc.);
16.	Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
17.	Description of the impact of the spill;
18.	Whether or not the spill was associated with a storm event;
19.	Description of spill response activities including description of immediate spill containment and cleanup efforts;
20.	Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
	<ul style="list-style-type: none"> a. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and b. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including: <ul style="list-style-type: none"> i. Adjusted schedule/method of preventive maintenance; ii. Planned rehabilitation or replacement of sanitary sewer asset; iii. Inspected, repaired asset(s), or replaced defective asset(s); iv. Capital improvements; v. Documentation verifying immediately implemented system modifications and operating/maintenance modifications; vi. Description of spill response activities; vii. Spill response completion date; and viii. Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;
21.	Detailed narrative of investigation and investigation findings of cause of spill.

5.3.4 **MONTHLY CERTIFICATION OF “NO-SPILLS”**

If no spills occur during a calendar month, the LRO shall certify, within 30 calendar days after the end of each calendar month, a “No-Spill” certification statement in the online CIWQS Sanitary Sewer System Database, certifying that there were no spills for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the Port has no further spills of any category, in the subsequent calendar month, the LRO shall certify “no-spills” for the subsequent calendar month. If the Port has no spills from its systems during a calendar month, but the Port voluntarily reported a spill from a private lateral or a private system, the LRO shall certify “no-spills” for that calendar month.

5.3.5 CIWQS NOT AVAILABLE

In the event that the CIWQS online database is not available, the LRO shall e-mail all required information to the Spill Reduction Program at SanitarySewer@waterboards.ca.gov, and the Region 2 Regional Board at RB2SpillReports@waterboards.ca.gov. Region 2 can also be contacted at (510) 622-2369.

In such an event, the Port will submit the appropriate reports using the CIWQS online database when it becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the spill document file.

6.0 MEDIA NOTIFICATION PROCEDURE

When a spill has been confirmed and is a threat to public health, actions should be taken, if necessary, to notify the media in accordance with this section.

6.1 Aviation Division

For confirmed spills in the aviation sewer system requiring media notification, the following steps should be taken:

- Response crew verifies spill and reports back to the aviation dispatcher, who informs the Aviation Facilities Manager.
- The Aviation Facilities Manager confirms with his superiors and contacts the Port's Public Information Officer.
- Calls received by the dispatcher from the media at any time are to be referred to the Port's Public Information Officer.
- Only specified personnel shall conduct interviews with the media.

6.2 Maritime Division

For confirmed spills in the maritime sewer system requiring media notification, the following steps should be taken:

- Response crew verifies spill and reports back to the maritime dispatcher, who informs the Harbor Facilities Manager.
- The Harbor Facilities Manager confirms with his superiors and contacts the Port's Public Information Officer.
- Calls received by the dispatcher from the media at any time are to be referred to the Port's Public Information Officer.
- Only specified personnel shall conduct interviews with the media.

6.3 Commercial Real Estate Division

For confirmed spills in the commercial real estate sewer system requiring media notification, the following steps should be taken:

- Response crew verifies spill and reports back to the maritime dispatcher, who informs the Harbor Facilities Manager.
- The Harbor Facilities Manager confirms with his superiors and contacts the Port's Public Information Officer.
- Calls received by the dispatcher from the media at any time are to be referred to the Port's Public Information Officer.
- Only specified personnel shall conduct interviews with the media.

7.0 POST-SPILL ASSESSMENT

As soon as possible after Category 1 spill events, participants involved in spill response activities should convene to complete a post-spill assessment of spill response activities. Topics to be discussed could include procedures used, and what worked and where improvements could be made in responding to and mitigating future spill events. The results of the assessment should be documented in written minutes.

8.0 RECORDKEEPING REQUIREMENTS

8.1 Spill Documentation - General

In accordance with the WDR, the Port shall maintain spill-related records as follows:

1. Records are retained for at least five (5) years
2. Records are readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request
3. Records are retained for each of the following spill-related events and activities:
 - a. Spill event complaints
 - b. Additional Category 4 and Port-managed lateral spill documentation to supplement information required for CIWQS reporting
 - c. Sewer system telemetry records
 - d. Sewer system management plan implementation records
 - e. Audit records
 - f. Equipment Records
 - g. Work orders

Specific requirements for recordkeeping are listed in the sections below.

8.2 Spill Event Complaints

The Port shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the Port responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
 - Date, time, and method of notification;
 - Date and time the complainant first noticed the spill, if available;
 - Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available;
 - Complainant's contact information, if available; and
 - Final resolution of the complaint.
- Records documenting the steps and/or remedial action(s) undertaken by the Port;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Water quality monitoring records.

8.3 Recordkeeping of Category 4 and Non-Category 1 Port-Managed Lateral Spills

The Port must maintain the following records for each individual Category 4 spill:

1. Contact information: Name and telephone number of Port contact person to respond to spill-specific questions;
2. Spill location name;
3. Description and GPS coordinates for the system location where the spill originated;
4. Did the spill reach a drainage conveyance system? If Yes:
 - a. Description of drainage conveyance system location;
 - b. Estimated spill volume fully recovered within the drainage conveyance system;
 - c. Estimated spill volume remaining within the drainage conveyance system; and
 - d. Estimated total spill volume exiting the sanitary sewer system.
5. Spill date and start time;
6. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
7. System failure location (for example, main, pump station, etc.);
8. Description of spill response activities including description of immediate spill containment and cleanup efforts;
9. Description of how the volume estimation was calculated, including, at minimum:
 - a. The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered); and
 - b. The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time.
10. Description of implemented system modifications and operating/maintenance modifications.

8.4 Recordkeeping for Total Annual Spill Information

The Port shall keep the following records summarizing annual spills:

1. Estimated total annual spill volume;
2. Description of spill corrective actions, including at minimum:
 - a. Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable; and
 - b. System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

8.5 Sewer System Telemetry Records

The Port shall maintain the following sewer system telemetry records if used to document compliance with Statewide WDR, as applicable:

1. Supervisory control and data acquisition (SCADA) system(s);
2. Alarm system(s);
3. Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
4. Computerized maintenance management system records; and
5. Asset management-related records.

8.6 Sewer System Management Plan Implementation Records

The Port shall maintain records documenting the implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

8.7 Audit Records

The Port shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

1. Completed audit documents and findings;
2. Name and contact information of staff and/or consultants that conducted or involved in the audit; and
3. Follow-up actions based on audit findings.

8.8 Equipment Records

The Port shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.

8.9 Work Orders

The Port shall maintain record of work orders for operations and maintenance projects.

8.10 Spill Specific Monitoring

Spill-specific monitoring means the gathering of information and data for a specific spill event to be reported or kept as records. The WDR requires the following assessments, as a component of data gathering following a spill.

8.10.1 Spill Location and Spread

The Port shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Port shall document the critical spill locations, including:

- Photography and GPS coordinates for:
 - The system location where spill originated; or
 - For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
 - Drainage conveyance system entry locations;
 - The location(s) of discharge into surface waters, as applicable;
 - Extent of spill spread; and
 - The location(s) of clean up.

8.10.2 Spill Volume Estimation

The Port shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Port shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

Appendix C includes guidelines for different methods that can be used to estimate the volume of the spill.

- For non-Category 1 Port-managed and/or operated lateral spills, the following records must be maintained:
 - Date and time the Port was notified of, or self-discovered, the spill;
 - Location of individual spill;
 - Estimated individual spill volume;
 - Spill cause(s) (for example, root intrusion, grease deposition, etc.); and
 - Description of how the volume estimations were calculated.
- For both Category 4 spills and non-Category 1 Port-managed and/or operated lateral spills, the following records must also be maintained:
 - Total Annual Spill Information:
 - ◆ Estimated total annual spill volume;
 - ◆ Description of spill corrective actions, including at minimum:
 - ◆ Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and

- ◆ System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

9.0 STAFF AND SPILL RESPONSE CONTRACTOR TRAINING

9.1 Initial and Annual Refresher Training

All Port personnel who may have a role in responding to, reporting, and/or mitigating a sewer system spill should receive training on the contents of this Spill Emergency Response Plan from the Environmental Programs and Planning Department. All new employees should receive training before they are placed in a position where they may have to respond. Current employees and emergency response contractor staff should receive annual refresher training on this plan and the procedures to be followed. Other Port construction contractors are required to adhere to the Statewide WDR and the Port's Spill Emergency Response Plan.

9.2 Sanitary Sewer Spill Response Drills

Periodic training drills should be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g., mainline blockage, mainline failure, force main failure, pump station failure, and lateral blockage). The results and the observations during the drills will be recorded and action items should be tracked to ensure completion.

9.3 Sanitary Sewer Spill Training Record Keeping

Records should be kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each spill emergency response training event and will include date, time, place, content, name of trainer(s), and names of attendees.

10.0 DISTRIBUTION AND SERP MAINTENANCE

This plan was prepared in conjunction with and is an important element of the Port-Wide SSMP. As such, the SERP should be annually reviewed and modified as necessary to reflect operational and policy changes. Audits of the plan should also be performed in conjunction with the larger SSMP program audits, as outlined in Chapter 11 of the Port SSMP.

10.1 Submittal and Availability of SERP

Copies of the SERP and any amendments should be distributed to all of the departments, divisions, and personnel that are heavily involved with the SSMP or SERP programs. All other personnel who may become incidentally involved in responding to spills should be familiar with the SERP.

10.2 Review and Update of SERP

The Port is ultimately responsible for keeping the SERP up to date. The SERP should be reviewed annually for outdated material and should be updated whenever:

- Specified by the Executive Director or their designated representative;
- The SSMP plan audit indicates that material needs to be revised or added;

- Responsibilities of personnel involved in spill response, mitigation or reporting change for various reasons; or
- Governing laws, rules or regulations change.

APPENDIX A - KEY PERSONNEL

The contents of this Appendix are from the Existing OERP and
will be updated if needed prior to June 4, 2023



PORT SSMP KEY PERSONNEL CONTACT INFORMATION
Port-Wide Sewer System Management Plan
Port of Oakland

Position	Name	Phone
Executive		
Executive Director	Danny Wan	(510) 627-1212
Port Attorney	Mary Richardson	(510) 627-1572
Chief Audit Officer	Ric Jazaie	(510) 627-1257
Chief Operating Officer	Kristi McKenney	(510) 627-1178
Chief Financial Officer	Julie Lam	(510) 627-1138
Aviation		
Director of Aviation	Bryant L. Francis	(510) 563-6421
Assistant Director Aviation	Craig Simon	(510) 563-6425
Aviation Planning and Development Manager	Joan Zatopek	(510) 563-6530
Aviation Facilities Maintenance Manager	DeJon Iglehart	(510) 563-3947
Superintendent Equipment Systems Engineer	Terry (T-C) Padilla	(510) 563-3939
Utilities Supervisor	Michael Henning	(510) 563-3942
Senior Equipment Systems Engineer	Donald Gonzaga	(510) 563-2959
Maintenance/Construction Supervisor	Toby Tatom	(510) 599-2932
Facilities Support Supervisor	Vanessa Valderrama	(510) 563-3977
Commercial/Real Estate		
Director of Commercial Real Estate	Pam Kershaw	(510) 627-1168
Commercial Real Estate Manager	Dorin Tuitin	(925) 352-4846
Maritime		
Director of Maritime	Bryan Brandes	(510) 627-1243
Chief Wharfinger	Eric Napralla	(510) 627-1403
Wharfingers	Ralph Reynoso	(510) 384-3163
	Gerard Olson	(510) 921-6547
	Mark Simpson	(510) 627-1407
	Kevin Wong	(925) 639-5637
Administrative and Financial Services Manager	Delphine Prevost	(510) 627-1141
Harbor Facilities Maintenance Manager	Bill Morrison	(510) 773-9981
Utilities Supervisor (vacant)		
Facilities Support Supervisor	Eric Fan	(510) 627-1298
Chief Operating Office (Environmental Program & Planning, Utility, & Engineering)		
Director of Environmental Programs & Planning (Acting)	Colleen Liang	(510) 627-1198
Utilities Administration Manager	Jared Carpenter	(510) 627-1167
Port Principal Engineer - Aviation	Robert Andrews	(510) 627-1273



PORT OF OAKLAND

PORT SSMP KEY PERSONNEL CONTACT INFORMATION
Port-Wide Sewer System Management Plan
Port of Oakland

Position	Name	Phone
Port Principal Engineer - Maritime	Thanh Vuong	(510) 627-1266
Port Principal Engineer - Engineering Services	Steve Low	(510) 627-1890
Engineering Project Manager	Emilia Sanchez	(510) 627-1202
Finance & Administration (Human Resources)		
Environmental Health & Safety Specialist	Desmond DeMoss	(510) 773-9991

APPENDIX B - SANITARY SEWER SPILL FIELD REPORT

The contents of this Appendix are from the Existing OERP and
will be updated if needed prior to June 4, 2023

APPENDIX B - SANITARY SEWER OVERFLOW FIELD REPORT



PORT OF OAKLAND
SANITARY SEWER OVERFLOW FIELD REPORT

FOR DISPATCH USE:

DATE: _____ CALL RECEIVED: _____ AM/PM
RECEIVED BY: _____ CALLER'S NAME: _____
CALLER'S PHONE NUMBER: _____
CALLER'S ADDRESS: _____
LOCATION OF OVERFLOW: _____ CROSS ST: _____
TIME & NAMES OF CREW MEMBERS DISPATCHED: _____
DESCRIPTION OF COMPLAINT: _____

FIELD REPORT (FOR RESPONSE CREW USE):

TIME ARRIVED AT SITE: _____ CREW: _____
TIME OVERFLOW STARTED: _____ TIME OVERFLOW STOPPED: _____
OVERFLOW DURATION: _____ MIN. OVERFLOW FLOW: _____ GAL/MIN
UPSTREAM MH#: _____ DOWNSTREAM MH#: _____
SIZE OF LINE: _____ LENGTH OF LINE: _____
FINDINGS: _____

COMPLETE REMAINDER OF FORM IF AN OVERFLOW HAS OCCURRED:

DESCRIBE CAUSE OF OVERFLOW:

DESCRIBE CLEANUP METHOD AND HOW OVERFLOW VOLUME WAS DETERMINED:

RECEIVING WATERS: YES ☐ NO ☐ LOCATION: _____

TYPE OF PROBLEM: _____

PICTURES TAKEN: YES ☐ NO ☐

SAMPLES TAKEN BY: _____ LOCATION OF SAMPLES: _____

DESCRIBE PROPERTY DAMAGE AND AFFECTED AREA: _____

SIGN POSTED: YES ☐ NO ☐ BARRICADED: YES ☐ NO ☐

NEIGHBORS NOTIFIED: YES ☐ NO ☐

REGULATORY AGENCIES NOTIFIED:

OES YES ☐ NO ☐ DATE/TIME _____ SPILL # _____

RWQCB YES ☐ NO ☐ DATE/TIME _____

COUNTY HEALTH YES ☐ NO ☐ DATE/TIME _____

OTHER _____ YES ☐ NO ☐ DATE/TIME _____

CONTACTS/DETAILS: _____

FOLLOWUP MEASURES:

WORK ORDER NO: _____

FREQUENCY OF EXISTING PM PROGRAM: _____

LAST DATE PM WAS PERFORMED: _____

RECOMENDATIONS ON HOW TO PREVENT FUTURE PROBLEMS:

REPORT COMPLETED BY: _____ DATE: _____

SKETCH OF AREA: (Include manholes, intersections, location of stoppage, etc.)

ATTACH PHOTOS AS AVAILABLE

APPENDIX C- METHODS TO ESTIMATE SPILL FLOW RATES AND VOLUMES

The contents of this Appendix are from the Existing OERP and
will be updated if needed prior to June 4, 2023

APPENDIX C - METHODS TO ESTIMATE SSO FLOW RATES AND VOLUMES

METHODS FOR ESTIMATING SPILL VOLUME

A variety of approaches exist for estimating the volume of a sanitary sewer spill. This appendix documents the three methods that are most often employed. The person preparing the estimate should use the method most appropriate to the sewer overflow in question and use the best information available.

Method 1: Eyeball Estimate

The volume of small spills can be estimated using an “eyeball estimate”. To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. This method is useful for contained spills up to approximately 200 gallons.

Method 2: Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

- Step 1 Sketch the shape of the contained sewage (see Figure 1).
- Step 2 Measure or pace off the dimensions.
- Step 3 Measure the depth at several locations and select an average.
- Step 4 Convert the dimensions, including depth, to feet.
- Step 5 Calculate the area in square feet using the following formulas:

Rectangle: $\text{Area} = \text{length (feet)} \times \text{width (feet)}$

Circle: $\text{Area} = \text{diameter (feet)} \times \text{diameter (feet)} \times 3.14$

Triangle: $\text{Area} = \text{base (feet)} \times \text{height (feet)} \times 0.5$

- Step 6 Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.
- Step 7 Multiply the volume in cubic feet by 7.5 to convert it to gallons

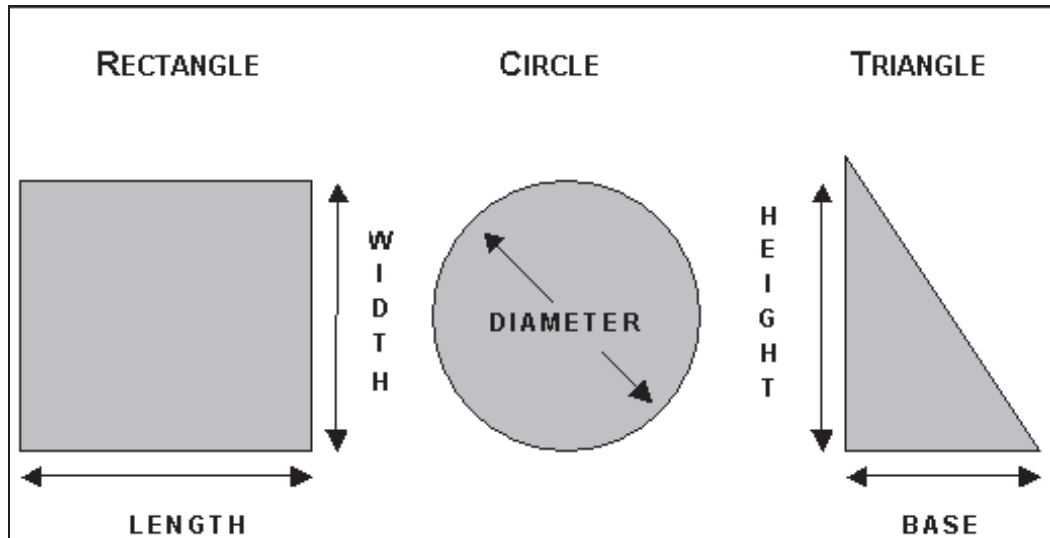


Figure 1: Common Shapes and Dimensions

Method 3: Duration and Flowrate

Calculating the volume of larger spills, where it is difficult or impossible to measure the area and depth, requires a different approach. In this method, the separate estimates are made of the duration of the spill and the flowrate. The methods of estimating duration and flowrate are:

Duration: The duration is the elapsed time from the time the spill started to the time that the flow was restored.

Start time: The start time is sometimes difficult to establish. Here are some approaches:

- Local residents can be used to establish start time. Inquire as to their observations. Spills that occur in rights-of-way are usually observed and reported promptly. Spills that occur out of the public view can go on longer. Sometimes observations like odors or sounds (e.g. water running in a normally dry creek bed) can be used to estimate the start time.
- Changes in flow on a downstream flowmeter can be used to establish the start time. Typically, the daily flow peaks are “cut off” or flattened by the loss of flow. This can be identified by comparing hourly flow data during the spill event with flow data from prior days.
- Conditions at the spill site change over time. Initially there will be limited deposits of toilet paper and other sewage solids. After a few days to a week, the sewage solids form a light-colored residue. After a few weeks to a month, the sewage solids turn dark. The quantity of toilet paper and other materials of sewage origin increase over time. These observations can be used to estimate the start time in the absence of

other information. Taking photographs to document the observations can be helpful if questions arise later in the process.

- It is important to remember that spills may not be continuous. Blockages are not usually complete (some flow continues). In this case, the spill would occur during the peak flow periods (typically 10:00 to 12:00 and 13:00 to 16:00 each day). Spills that occur due to peak flows in excess of capacity will occur only during, and for a short period after, heavy rainfall.

End time: The end time is usually much easier to establish. Field crews on-site observe the “blow down” that occurs when the blockage has been removed. The “blow down” can also be observed in downstream flowmeters.

Flow Rate: The flowrate is the average flow that left the sewer system during the time of the spill. There are three common ways to estimate the flowrate:

- The San Diego Manhole Flowrate Chart: This chart, included as Appendix VII-G, shows sewage flowing from manhole covers at a variety of flowrates. The observations of the field crew can be used to select the appropriate flowrate from the chart. If possible, photographs are useful in documenting basis for the flowrate estimate.
- Flowmeter: Changes in flows in downstream flowmeters can be used to estimate the flowrate during the spill.
- Counting Connections: Once the location of the spill is known, the number of upstream connections can be determined from the sewer maps. Multiply the number of connections by 200 to 250 gallons per day per connection or 8 to 10 gallons per hour per connection.

For example: 22 upstream connections x 9 gallons per hour per connection

= 198 gallons per hour / 60 minutes per hour

= 3.3 gallons per minute

Spill Volume: Once duration and flowrate have been estimated, the volume of the spill is the product of the duration in hours or days and the flowrate in gallons per hour or gallons per day.

For example:

Spill start time = 11:00

Spill end time = 14:00

Spill duration = 3 hours

3.3 gallons per minute X 3 hours X 60 minutes per hour = 594 gallons



City of San Diego
Metropolitan Wastewater Department



**Reference Sheet for Estimating Sewer Spills
from Overflowing Sewer Manholes**
All estimates are calculated in gallons per minute (gpm)



Wastewater Collection Division
(619) 654-4160



All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

D - SURFACE WATER WARNING SIGN

The contents of this Appendix are from the Existing OERP and
will be updated if needed prior to June 4, 2023

KEEP OUT



SEWAGE CONTAMINATED WATER

EXPOSURE
MAY CAUSE ILLNESS

FOR MORE INFORMATION, CONTACT
THE PORT OF OAKLAND

(510) 563-3361



PORT OF OAKLAND

KEEP OUT



SANITARY
SEWER
OVERFLOW

EXPOSURE
MAY CAUSE ILLNESS

FOR MORE INFORMATION,
CONTACT THE PORT OF
OAKLAND

(510) 563-3361



PORT OF OAKLAND

APPENDIX E - SPILL TECHNICAL REPORT TEMPLATE

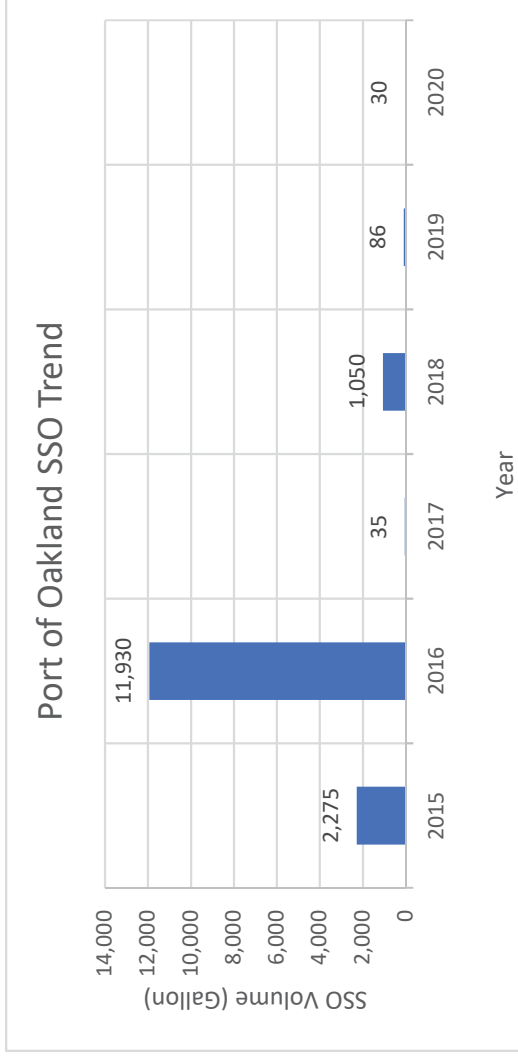
The contents of this Appendix are from the Existing OERP and
will be updated if needed prior to June 4, 2023

APPENDIX 6

Sanitary Sewer Overflow Event Log

Port-Wide SSMP SSO Correction Projects			
Year	Location	Cause	Follow-up Projects
2015	1. OAK Lift Station AP01P 2. Maritime Area – Chungking Street & Maritime Street	1. SSO due to pump and equipment failure 2. City contractor broke sewer lines in two separate incidents	1. Lift station AP01P in design to be rehabilitated 2. City's contractor constructed new sewer gravity and force mains along Maritime Street and repaired the damage
2016	1. OAK Lift Station LS AP01P 2. Maritime Area – Lift Station LS 18 at Burma Road and Maritime Street	1. SSO due to pump and equipment failure 2. SSO due to connection failure and power outage	1. Lift station AP01P rehabilitated (following 2015 design) 2. Lift Station LS 18 to be demolished and replaced with new sewer infrastructure constructed by City
2017	OAK Terminal 1 @ Gate 6	SSOs due to pump failure	Pumps repaired. LS AP06P in design to be rehabilitated
2018	OAK Terminal @ Gate 6 & 12	SSOs at OAK due to ejector piping failure and electrical panel circuit breaker tripped	Lift stations AP06P, AP08P, AP12E, AP15E to be rehabilitated in FY19-21
2019	Maritime Area - OICT B59, Outer Harbor B20, GSC Trailer	SSOs caused by pipes failure	Sewer pipes repaired and replaced Outer Harbor sanitary sewer system B20-24 to be rehabilitated in FY20-21

Note: The data for 2016 shows anomaly- three SSO events occurred at Lift Station LS 18 in the Oakland Army Base Area were included in volume reporting. These SSOs were caused by connection failure and power outage during new lift station construction activities by City contractors for City-Port Joint Venture of Oakland Army Base Redevelopment.



APPENDIX 7

Board Resolution 10-58 & 15-073

**BOARD OF PORT COMMISSIONERS
CITY OF OAKLAND**

Cc: *L. Nguyen*
W. Lau

RESOLUTION NO. 10-58

**RESOLUTION APPROVING AND ADOPTING THE PORT OF
OAKLAND SEWER SYSTEM MANAGEMENT PLAN (SSMP) AS
REQUIRED BY THE STATE WATER RESOURCES CONTROL
BOARD ORDER NO. 2006-0003.**

WHEREAS on May 2, 2006 the State Water Resources Control Board ("State Water Board") adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Resources Control Board Order No. 2006-0003 ("Sanitary Sewer Order"); and

WHEREAS the Port of Oakland owns, operates and maintains approximately 40 miles of pipe which collect and convey sewage to the City of Oakland wastewater collection system and to EBMUD Water Treatment Plant; and

WHEREAS on December 4, 2007, by Resolution No. 07324, the Board approved the Sewer System Management Plan ("SSMP") Development Plan and Schedule. The first two (2) elements of the SSMP was developed; and

WHEREAS on April 7, 2009, by Resolution No. 07048, the Board approved staff to retain Carollo Engineers to complete developing the remaining nine (9) elements of the SSMP; and

RESOLVED the Board hereby approves and adopts the Sewer System Management Plan ("SSMP"), as required by the State Water Resources Control Board Order No. 2006-0003 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems as that report is fully set forth in Agenda Report Item 0-1 dated May 18, 2010; and be it

FURTHER RESOLVED that the Board hereby finds and determines that this project has been determined to be categorically exempt from requirements of the California Environmental Quality Act (CEQA) and the Port CEQA Guidelines pursuant to Guidelines Section 15301, Existing Facilities. CEQA does not apply to the operation repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination; and be it

FURTHER RESOLVED that this resolution is not evidence of and does not create or constitute (a) a contract, or the grant of any right, entitlement or property interest, or (b) any obligation or liability on the part of the Board or any officer or employee of the Board. This resolution approves and authorizes the execution of an agreement in accordance with the terms of this resolution. Unless and until a separate written agreement is duly executed on behalf of the Board as authorized by this resolution, is signed as approved as to form and legality by the Port Attorney, and is delivered to the other contracting parties, there shall be no valid or effective agreement.

At the regular meeting held on May 18, 2010

Passed by the following vote:

Ayes: Commissioners Gordon, Head, Katzoff, Lighty
and President Uno - 5

Excused: Commissioners Calloway and Gonzales - 2

Noes: 0

**BOARD OF PORT COMMISSIONERS
CITY OF OAKLAND**

RESOLUTION NO. 15-073

**APPROVAL AND ADOPTION OF AN UPDATE TO THE PORT OF
OAKLAND'S SEWER SYSTEM MANAGEMENT PLAN ("SSMP").**

WHEREAS, on May 2, 2006 the State Water Resources Control Board ("State Water Board") adopted Statewide Waste Discharge Requirements for Sanitary Sewer Systems, Water Resources Control Board Order No. 2006-003 (the "WDR");

WHEREAS, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly-owned treatment facility in the State of California are required to comply with the WDR;

WHEREAS, the Port of Oakland owns, operates and maintains approximately 35 miles of sewer mains and laterals, which collect and convey sewage to the City of Oakland wastewater collection system and to the East Bay Municipal Utility District ("EBMUD") Water Treatment Plant, and therefore is required by the WDR to develop and implement a SSMP;

WHEREAS, on May 18, 2010, by Resolution No. 10-58, the Board of Port Commissioners ("Board") approved the Port SSMP;

WHEREAS, the WDR requires the SSMP to be updated every five years, submitted to the governing board for approval at a public meeting and recertified when significant updates are made to the SSMP; and

WHEREAS, the State Water Board amended the Monitoring and Reporting Plan requirements ("MRP requirements") of the WDR effective September 9, 2013 (WQ 2013-0058-EXEC), which modify the monitoring and reporting requirements of sewer overflows; and

WHEREAS, in order to conform the SSMP with the current MRP requirements, to update the sanitary sewer reporting process and to expand the designations of Legally Responsible Officials ("LRO") to ensure continuous monitoring of the sanitary sewer system at the Port, certain amendments to the SSMP are necessary at this time.

RESOLVED, that the Board hereby approves and adopts the Updated 2015 SSMP as that report is fully set forth in Agenda Report Item 5.1, dated July 9, 2015 and attachments thereto (the "2015 SSMP"); and

FURTHER RESOLVED, that the Board hereby authorizes the Executive Director to fully implement the 2015 SSMP, such implementation to include but not be limited to:

1. Designating certain position classifications as LROs and Data Submitters for purposes of reporting and certifying all reports submitted to the State Board pursuant to the WDR and the 2015 SSMP; and
2. Establishing a Sanitary Sewer Task Force for purposes of coordinating all requirements of the WDR across all revenue divisions of the Port to assure conformance and consistency with the policies and procedures required to maintain the Port in full compliance with the WDR.

FURTHER RESOLVED, that the Board hereby finds and determines that this project has been determined to be exempt from review under California Environmental Quality Act ("CEQA") pursuant to Section 15061(b)(3). Updating the SSMP will not result in a physical change in the environment. Continuing administrative or maintenance activities, personnel-related actions, general policy and procedure making, such as the proposed administrative and procedural changes to implementation of the SSMP, are not projects under CEQA pursuant to Section 15378(b)(2) of the CEQA Guidelines. To the extent that any minor upgrade projects may be undertaken pursuant to the Updated SSMP, these projects would be covered under existing services contracts that have been subject to previous CEQA review; and be it

FURTHER RESOLVED, that this resolution is not evidence of and does not create or constitute (a) a contract, or the grant of any right, entitlement or property interest, or (b) any obligation or liability on the part of the Board or any officer or employee of the agreement in accordance with the terms of this resolution.

At the regular meeting held on July 9, 2015

Passed by the following vote:

Ayes: Commissioners Butner, Head, Hamlin, Parker and President Yee – 5
Excused: Commissioner Colbruno – 1
Noes: 0

APPENDIX 8

SSMP Update Change Log

Port of Oakland Sanitary Sewer Management Plan Change Log		
Date	SSMP Element	Description
07/2015	Regulatory Requirements	Updated regulatory requirement per State Water Control Board Order No. WQ 2013-0058-EXEC
07/2015	Sanitary Sewer Overflow Emergency Response Plan	Updated emergency response requirements per State Water Control Board Order No. WQ 2013-0058-EXEC
07/2020	All Elements	Reorganized content of all elements
07/2020	Appendix 1	Updated Port-Wide Sanitary Sewer Map
07/2020	Appendix 2	Updated Key Personnel Contact List & Organization Chart