Sewer System Management Plan

City of Albany

Public Works Department

October 2019

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INTRODUCTION

Background

This Sewer System Management Plan (SSMP) has been prepared in compliance with the State Water Resources Control Board (SWRCB) Order 2006-0003: Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR), as revised by Order No. WQ 2008-0002. EXEC on February 20, 2008 and Order No. WQ 2013-0058. EXEC, effective September 9, 2013.

Organization of SSMP

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

1) Goal
2) Organization
3) Legal Authority
4) Operation and Maintenance Program
5) Design and Performance Provisions
6) Overflow 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

System Overview

The City of Albany (City) was incorporated in 1908 as a charter city. The City is situated in northern Alameda County between the East Bay Hills and the San Francisco Bay along Interstate 80 and is between the cities of Berkeley and El Cerrito. The City has a population of approximately 18,500 residents and covers an area of approximately 1.5 square miles. The city is now largely built out, with only a few areas of potential new development, primarily vacant parcels on the UC Village property and scattered vacant or underutilized parcels along San Pablo Avenue, Solano Avenue, and streets north of Brighton Avenue near the border with El Cerrito. The average annual rainfall in the area is 22.5 inches and generally occurs between November and April.

The City owns and maintains approximately 32 miles of sewer main. These pipelines discharge to a trunk sewer (the "North Interceptor") that runs along the east shore of the San Francisco Bay. The trunk sewer is owned, operated, and maintained by East Bay Municipal Utility District, Special District 1 (EMBUD). The wastewater collected from the City's service area is treated by EBMUD's Main Wastewater Treatment Plant in the City of Oakland, near the Bay Bridge.

More than 75 percent of Albany's sewer system consists of 8-inch and smaller diameter pipe, and more than 90 percent is 12 inches and smaller. Table 1 tabulates the footage of pipe by diameter.

Table I: Sewer System Inventory[a]

Pipe Size (Diameter, in.)	Length (feet)	Length (miles)	Percent of Total
<6	1,288	0.2	0.8%
6	51,253	9.7	30.2%
8	78,035	14.8	46.0%
10	16,988	3.2	10.0%
12	9,066	1.7	5.3%
14-15	5,572	1.1	3.3%
18-24	5,231	1.0	3.1%
42[b]	2,186	0.4	1.3%
Total	**169,619**	**32.1**	**100.0%**

a. Current as of end of FY 2019
b. Cerrito Creek trunk sewer, jointly owned by Albany and Berkeley

The oldest portions of the system date to the early 1900s; however, over 50 percent of the system has been rehabilitated or replaced in the past 30 years, so that the average age of the sewer system is now about 50 years. Most older sewers are constructed of vitrified clay pipe (VCP), with plastic materials, primarily high-density polyethylene (HDPE) and polyvinyl chloride (PVC) used for newer sewer construction and rehabilitation. The larger 24- and 42-inch trunk sewers are constructed of reinforced concrete pipe (RCP).

The sewer system also includes approximately 4,600 private sewer laterals. The City assumes responsibility for the maintenance and repair of the lower portion of the laterals located within the public right-of-way from the curb or curb cleanout to the sewer main. A system overview map is contained in **Appendix 1**.

In 1987 the Regional Water Quality Control Board (Regional Board) issued a Cease and Desist Order (CDO) to the Cities of Albany, Berkeley, Emeryville, Oakland, Piedmont, Alameda, EBMUD and to the Stege Sanitary District. Permission to continue to discharge treated wastewater to the San Francisco Bay was conditioned upon participation in the Infiltration and Inflow Correction Program (I/ICP) that required all sanitary sewer overflows (SSOs) for a 5 year design storm or less to be eliminated and that groundwater infiltration and inflow to the EBMUD trunk sewer and treatment facilities be reduced. In 2003, existing sewer bonds were refinanced and new revenue bonds were issued, which enabled the City to continue with several sewer construction projects. The City completed its required capital work under the CDO and subsequently the Regional Water Board adopted Order No. 2011-0055 to remove the City as a party to the CDO.

In November of 2009 the United States Environmental Protection Agency (USEPA) issued an Administrative Order (AO) to the City and six other EBMUD satellite communities. The AO required the agencies to develop and implement programs necessary to further reduce rainfall infiltration and inflow (I/I) entering the City collection system and the EBMUD interceptor system. Due to treatment and conveyance limitations, excessive I/I can cause or contribute to the discharge of wastewater receiving less than secondary treatment from Wet Weather Facilities

(WWFs) during rainfall events that exceeded a recurrence interval of 5 years. These discharges were previously permitted but in 2007 the permit to discharge from the facilities was remanded. A reduction in rainfall dependent I/I is necessary to eliminate or significantly reduce discharges from the WWFs.

On September 6, 2011, the United States District Court Northern District of California issued a Stipulated Order for Preliminary Relief (SO), Case 09-05684 RS, effectively converting the AO to this SO. The requirements contained in this SO are similar to those in the 2009 AO, with the addition of penalties for failure to comply with the timeline and reporting requirements. The terms of the SO identified work to be performed by EBMUD and its satellites, including the City of Albany.

On September 22, 2014, after several years of negotiation with the EPA, SWRCB, and Regional Board and two non-governmental organizations, San Francisco Baykeeper and Our Children's Earth Foundation, a final Consent Decree (CD) Decree intended to eliminate discharges from the WWFs over an approximate 20-year period through programs designed to reduce I/I in the Satellite collection systems, as initiated under the AO and SO, was approved in US District Court. This CD supersedes the 2009 SO and incorporates the requirements of the Satellite and EBMUD SOs, as well as a program to accelerate the identification and elimination of inflow and "rapid infiltration" sources, and processes for documenting compliance toward reducing WWF discharges and eliminating them by the required compliance dates. For the Satellites, including Albany, the CD-required "Work" includes specified annual amounts of sewer rehabilitation, inspection, and cleaning, continued implementation of private sewer lateral compliance and inflow elimination programs, maintaining its current program for SSO response, recordkeeping, notification, and reporting. Other work includes controlling SSOs and reducing I/I set forth in the SSMP, cooperating with EBMUD in the development of the Regional Flow Monitoring Data Assessment Program, and providing EPA with copies of annual SSO reports now provided to the Regional Water Board.

The Consent Decree also contains monetary penalties for non-compliance with any of its requirements. The CD is in effect until December 15, 2036. Albany has prepared the plans and reports and implemented the programs previously required under the AO and SO, and currently under the CD.

In 2010, to address the capital demands of its aging sewer system, the City adopted a 39% increase to its sewer service charge to be phased in over a five-year period. The City periodically updates its sewer service charge to ensure there are sufficient funds to support the operational and capital costs involved with implementing this SSMP.

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ELEMENT 1 – GOALS

The Goals of the City's SSMP are as follows:

1. To provide a plan to properly manage, operate, and maintain all parts of the wastewater collection system
2. To provide adequate capacity to convey peak flows associated with the design storm identified in the East Bay I/I Correction Program (1986)
3. To minimize the frequency of SSOs
4. To mitigate the impact of SSOs
5. To comply with the 2014 Consent Decree issued by EPA

ELEMENT 2 – ORGANIZATION

The intent of this section of the SSMP is to identify City staff responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements. This section also includes the designation of the Authorized Representative to meet SWRCB requirements for completing and certifying spill reports.

2.1. Legally Responsible Official

The City's Legally Responsible Official (LRO), having overall responsibility for wastewater collection system matters, is the Director of Public Works/City Engineer. The City's Public Works Manager is also a Legally Responsible Official for reporting SSOs to the State Water Board online database (CIWQS) when the Director of Public Works/City Engineer is not available.

2.2. Responsibility for SSMP Implementation and Update

The City's Director of Public Works/City Engineer has the ultimate responsibility for development, implementation, and maintenance of all elements of the City's SSMP. The responsibility for day to day implementation of each of the City's SSMP elements has been delegated to City staff.

The Director of Public Works/City Engineer plans, organizes, and directs public works activities and associated budgets for the City. This includes advising City Management and City Council on public works matters including those related to the wastewater collection system. It is the responsibility of City Council to establish new and amend existing ordinances and policies governing municipal operations through recommendations by City management. This includes ordinances and policies related to the wastewater collection system. The Director of Public Works/City Engineer is responsible for updating SSMP Goals, Organization, Legal Authority, Program Audits, and the Communication Program.

2.3. Organization Chart and Position Descriptions

Figure 1 presents an Organization Chart showing staff involved in implementing the SSMP. Position descriptions are explained as follows:

City Council – The City Council establishes policy.

City Manager – The City Manager implements policy, plans strategy, leads staff, allocates resources, delegates responsibility and authorizes outside contractors to perform services.

Finance Director – The Finance Director develops a viable financial plan in order to carry out operating and capital work included in the SSMP.

Public Works Director/City Engineer – The Public Works Director/City Engineer oversees implementation of the SSMP including providing staff and other resources necessary to operate and maintain the sanitary sewer system and implement sewer-related projects as part of the City's Capital Improvement Program. The Public Works Director/City Engineer also manages

wastewater collection system planning to ensure that new and rehabilitated assets meet agency standards.

Community Development Director – The Community Development Director coordinates the City's planning and permitting activities.

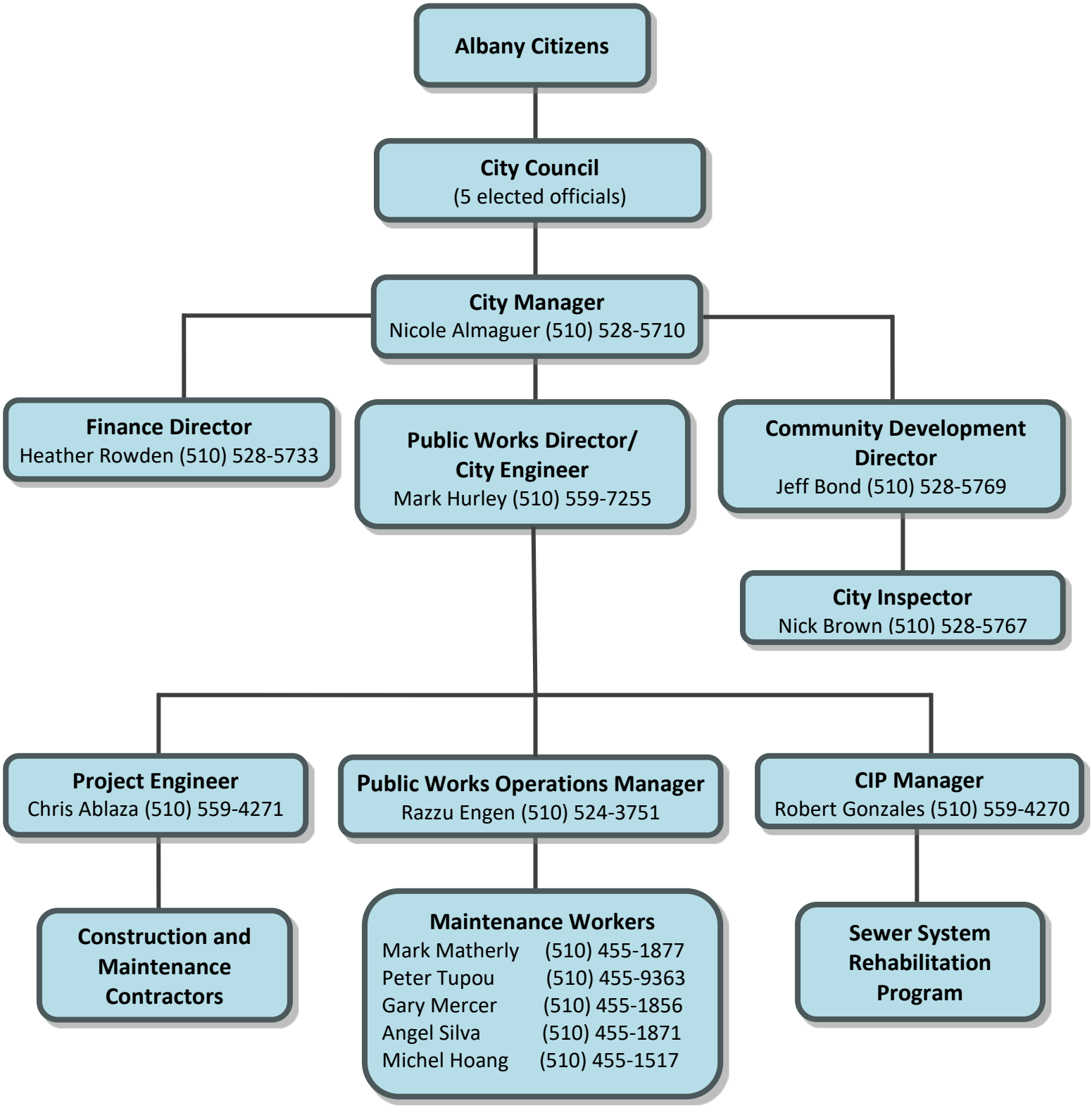
City Inspector – The City Inspector inspects private (upper lateral) replacement projects, maintenance projects and public sewer construction projects.

Project Engineer– The Project Engineer assists in implementing the SSMP including preparing system planning documents, assisting with SSO reporting, supporting system operation and maintenance and capital improvements, and managing sewer maintenance and construction contractors.

Public Works Operations Manager – The Public Works Manager oversees implementation of operation and maintenance elements of the SSMP including assigning and reviewing daily maintenance activities, responding to SSO events, and managing the City's asset maintenance management system.

Capital Improvement Program (CIP) Manager – The CIP Manager is responsible for implementation of the City's CIP which includes rehabilitation of sanitary sewer system assets. The CIP Manager oversees planning, design, bidding, and construction activities.

Maintenance Worker – The Maintenance Crew maintains the sewer system assets and responds to emergency call outs at the direction of the Public Works Maintenance Supervisor.


Albany Citizens
City Council
(5 elected officials)
City Manager
Nicole Almaguer (510) 528-5710
Finance Director
Heather Rowden (510) 528-5733
Public Works Director/
City Engineer
Mark Hurley (510) 559-7255
Community Development
Director
Jeff Bond (510) 528-5769
City Inspector
Nick Brown (510) 528-5767
Project Engineer
Chris Ablaza (510) 559-4271
Public Works Operations Manager
Razzu Engen (510) 524-3751
CIP Manager
Robert Gonzales (510) 559-4270
Construction and
Maintenance
Contractors
Maintenance Workers
Mark Matherly (510) 455-1877
Peter Tupou (510) 455-9363
Gary Mercer (510) 455-1856
Angel Silva (510) 455-1871
Michel Hoang (510) 455-1517
Sewer System
Rehabilitation
Program

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ELEMENT 3 - LEGAL AUTHORITY

This section of the SSMP discusses the City's legal authority to comply with the SSMP requirements, as provided in its Municipal Code and agreements with other agencies.

Chapter 15 of the Albany Municipal Code (AMC) establishes the City's current legal authority to operate and maintain the sewer system. The legal authorities for the specific areas stipulated in the Waste Discharge Requirements (WDR) are discussed below.

3.1. Prevention of Illicit Discharges and I/I Control

AMC Section 15-1.11, Storm Water and Ground Water Prohibited, Section 15-1.19, Building Sewer Materials for Construction and Repair, and Section 15-1.20, Sewer Lateral Construction and Repair, provide the legal foundation for the City to control inflow and infiltration entering the wastewater collection system. Roof downspouts, foundation drains, and other sources of storm water inflow are considered to be illicit connections to the sanitary sewer system. Similarly, these AMC sections also prohibit the connection of groundwater drainage or infiltration.

3.2. Sewer Service Lateral Maintenance

To address old, leaking private laterals, the City began implementing an Upper Sewer Lateral Compliance Program in 1994. The City was one of the first agencies in northern California to adopt such a program. AMC Chapter 15-1.22 requires that upon sale of a property or upon application for a building permit for construction which exceeds a specified amount, the property owner shall demonstrate that their upper lateral complies with City Standards and passes a verification test. In 2014, the City joined the Regional Sewer Lateral Program, implemented by EBMUD. The Statement of Roles and Responsibilities between the City of Albany and East Bay Municipal Utility District for Implementation of the Regional Private Sewer Lateral Program is included in **Appendix 2.**

Section 15-1.22 further requires that property owners maintain their upper lateral such that the following minimum requirements are met:

a. The Upper Sewer Lateral shall be kept free from roots, grease deposits, and other solids which may impede the flow or obstruct the transmission of waste.

b. All joints shall be watertight and all pipe shall be sound to prevent exfiltration by waste or infiltration by ground water or storm water.

c. The Upper Sewer Lateral shall be free of any structural defects, cracks, breaks, openings, rat holes, or missing portions and the grade shall be uniform without sags or offsets.

d. The Upper Sewer Lateral shall have a two (2) way Cleanout located at the property line or at the Sewer Main easement. All Cleanouts shall be securely capped with a proper cap at all times.

3.3. Proper Design and Construction of Sewers and Connections

The proper design and construction of sewer mains, laterals and connections is regulated under AMC Chapter 14-2, "Use of Right-of-Way", AMC Chapter 15-1.14, "Permit Applications", and AMC Chapter 22-9, "Improvements".

Permits are required for all sewer lateral construction work. Work within the public right-of-way must be conducted by licensed contractors in accordance with the Uniform Plumbing Code and the City's standard specifications and detailed drawings. The Public Works Director/City Engineer has authority to review and approve plans and specifications for upper laterals (building sewers on private property) and lower laterals (lateral sewers on public property), to ensure adherence to the City's standard specifications and ordinances. Installation of cleanouts and backwater overflow devices is required for all new construction. Minimum size and slope of side sewers (laterals) are specified, and guidelines for private pumps are provided to the owner/developer whenever sewer lateral flow is below the elevation of the sewer main.

City specifications and standards are posted on the City website at the following address: http://www.albanyca.org/index.aspx?page=987.

3.4. Enforcement

The AMC provides the procedure for the City to follow when a landowner fails to comply with provisions of the code. The City's Public Works Director or his representative (under Section 15-1.24, "Right of Entry" and under Section 15-1.25, "Emergency Work by the City"), has authorization to proceed with all necessary work to bring the lateral into compliance with City standards by entering onto private property and recovering the City's costs from the property owner.

Provisions for appeal of decisions made by the City Public Works Director are provided in the AMC. Appeals must be in writing and state the basis and reason(s) for the appeal.

ELEMENT 4 – OPERATIONS AND MAINTENANCE PROGRAM

This section of the SSMP presents the City's wastewater collection system operations and maintenance (O&M) program.

4.1. Collection System Mapping

The City uses a Geographic Information System (GIS) to create, maintain, and manage maps and data sets associated with its wastewater collection system facilities. Sewer pipe and manhole inventory data including length, diameter, material, rim/invert elevations, street address, and other information are kept current with field edits and new construction data. The City is working with Lynx Technologies to host its GIS system. Any work performed on collection system assets through work order requests or annual rehabilitation projects will be documented through various reporting layers within the GIS system.

Map Updates and Edits

The City's inventory of wastewater collection system facilities is continuously being improved and will be maintained through field edits and new construction record drawings reflected in GIS.

Any updates to the sewer system through work orders or annual rehabilitation will be reflected on the GIS map. Mapbooks will be furnished on an as-needed basis so that copies are available in all emergency response vehicles. A sample depiction of the Sewer and Storm Map index appears as **Figure 2**. An example map page is shown in **Figure 3**.

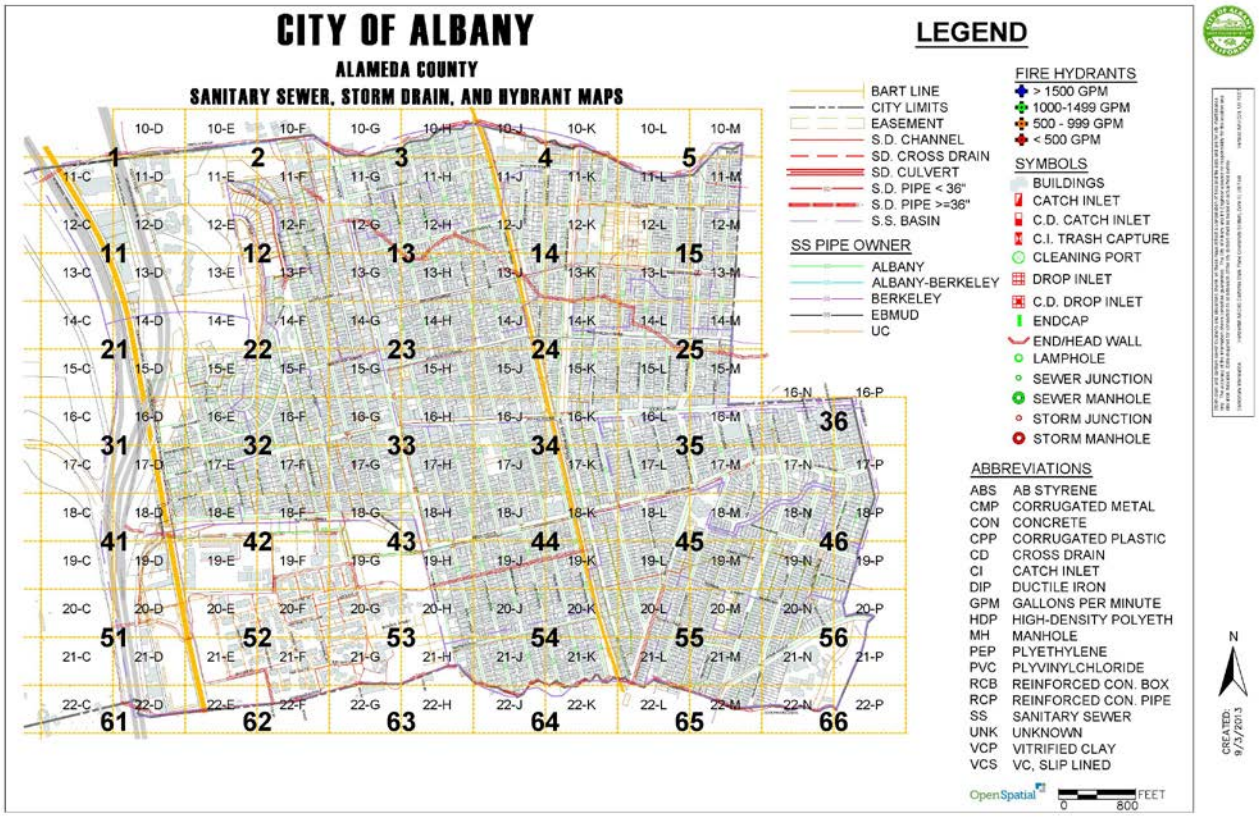

Figure 1. Index to Sewer and Storm Map

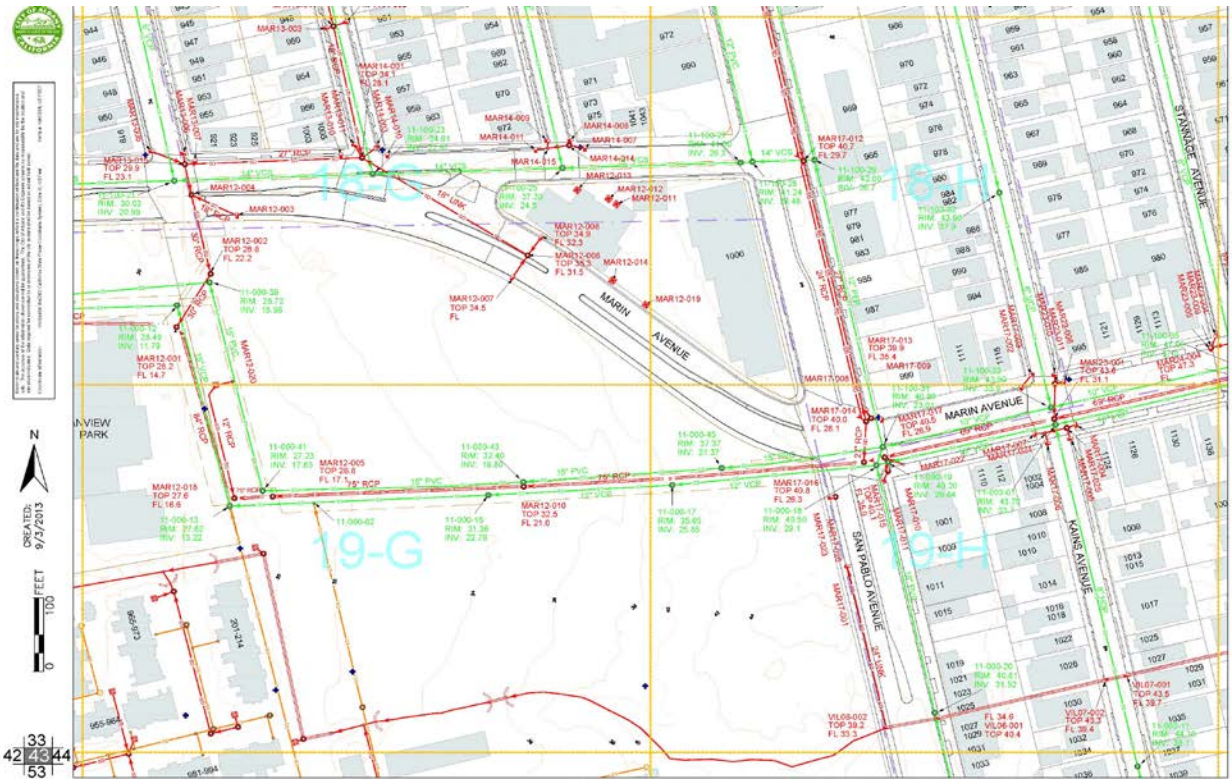

Figure 2. Example Field Map Page

4.2. Resources and Budget

Sewer system maintenance and capital improvements are funded solely by the Sewer Enterprise Fund, which generates its revenue through sewer service charges and new connection fees. The City's sewer service charge has been gradually increased over the last ten years to fund the SSMP as described below.

In July of 2009 City Council approved a proposal from Bartle Wells Associates, Independent Public Finance Advisors of Berkeley, CA to begin preparation of a wastewater financial plan and rate review. The Bartle Wells Associates final wastewater financial plan and rate review determined that to meet the requirements of the City's Stipulated Order the rate at which the wastewater collection facilities are replaced would need to be increased. This increase would require an increase in the Capital Improvement Program expenditures not included in the previously authorized increase in rates approved by the Council in 2007.

The BWA Report recommended that a minimum balance consisting of 60% of the operating expense for the year plus a capital/emergency minimum reserve of $1.5 million be maintained. The total minimum balance for 2010-11 was $2.8 million. The BWA Report projects revenue and expense for the Sewer Enterprise Fund and recommends a rate increase necessary to achieve the required rehabilitation and replacement program and to maintain the minimum recommended balance of $2.8 million at the end of each year. Based on these recommendations, the City Council adopted Resolution #2010-39, authorizing an increase in the sewer service charge by up to two dollars per month plus the previously authorized CPI adjustment for each of the next successive five years and then by the Consumer Price Index (CPI) through FY 2016/17.

In July 2017, the City Council approved a CPI increase in sewer rate, through FY 2021/22. The City will also conduct a rate study to assess rate needs to support sewer operation and capital needs.

4.3. Preventive Maintenance

The elements of the City's wastewater collection system Operation and Maintenance Program include preventive and corrective maintenance of gravity sewers and manholes. The details of the City's O&M programs are described in this section.

Staffing

Sewer maintenance and cleaning activities are performed by a combination of City Maintenance Workers and contractors. The City currently employs five general maintenance workers and a lead maintenance worker. The City's maintenance staff also maintains other City facilities such as roads, buildings, parks, etc. Approximately, one third of the maintenance staff's time is allocated to maintaining the sanitary system. Maintenance workers are completely trained to perform sewer maintenance activities and are capable of operating all maintenance and video equipment. Contractors are used to perform specialized tasks such as root foaming and augment City Staff in performing cleaning and inspection work.

Sewer Cleaning

Each mainline in the system is cleaned every five years, at most, or at a shorter frequency based on the observations from previous cleaning activity.

The schedule for cleaning lines is established at the beginning of the year and either programmed into the maintenance crew's work schedule or contracted out.

Based on the cleaning activity observations, field crew determines the frequency for subsequent cleanings. **Table 2** contains the criteria used to determine the preventive cleaning frequency.

Table 1. Criteria for Establishing Sewer Cleaning Frequency

Condition Score[a]	Sewer Cleaning Frequency
5	90 days (3 months)
4	180 days (6 months)
3	365 days (1 year)
2	1096 days (3 years)
1	1826 days (5 years)

a. Use the single highest condition score recorded during cleaning activity to determine the sewer cleaning frequency

The cleaning frequency is based on condition score as assessed by the City's maintenance management software. Given that conditions in the sanitary sewer are constantly changing, the ability to adjust preventive maintenance schedules based on field observations allows the Operations and Maintenance Program to be continually optimized to ensure program effectiveness and efficiency. It takes only a single Condition Score to increase the cleaning frequency of a pipe segment. To decrease the cleaning frequency of a pipe segment, two consecutive Condition Scores of 1, or a "clear" pipe, are required to decrease the cleaning frequency to the next lower frequency (ex. 180 to 365 days).

Hot Spot Management

The City maintains a Hot Spot Cleaning list containing mainline segments needing more frequent maintenance.

The Hot Spot Cleaning List criteria includes the following:

- Mainline segments that had a blockage or SSO
- Mainline segments that based on field observations have a preventive maintenance (PM) schedule of 180 days or shorter

Main line segments are removed from the Hot Spot Cleaning List if the line is rehabilitated, the source of increased maintenance is addressed (i.e. FOG), or the line is determined clear based on future cleaning and/or inspection data.

Root Control

When a sewer main segment is inspected and root intrusion observed, the City adds the identified segment to the preventive maintenance schedule for root foaming. The root foaming schedule serves as the basis for the annual contractor work request. Chemical root control work is performed by the root-foaming contractor, Duke's Root Control, Inc. They apply licensed root control agents to kill the root growth present in the lines and to inhibit root re-growth without permanently damaging the vegetation producing the roots.

The materials used are USEPA registered, labeled for the intended use in sewer lines, and registered with the California Department of Pesticide Regulation. Duke's complies with all applicable federal, state, and local requirements and ordinances relative to this type of material and usage. Chemical handling and treatments are done by trained, professional applicators that are certified by the State pesticide regulatory agency, as required by law. Application of the chemical root control agent is by foaming in accordance with the best-recommended practice for conditions present in the line under treatment. Duke's Root Control also contacts EBMUD to give advance notice of the chemical application.

4.4. Sewer Inspection and Condition Assessment

Condition assessment is critical to effectively managing sewer assets. The condition of an asset at a specific point in its lifecycle can be used to estimate the remaining reliable life and therefore be used to prioritize capital improvement. City sewer staff performs direct visual inspection of sewer facilities and closed-circuit television (CCTV) inspections of mainline sewer. The City purchased an OZII Pan and Tilt Optical Zoom Camera in July 2008 and customized a trailer to transport the associated equipment and computer with Granite XP™, the sewer inspection data collection and management software.

CCTV inspection is performed to assess the condition of the gravity sewer pipelines in the City's wastewater collection system and to confirm the location and magnitude of structural defects, points of inflow and infiltration, undocumented/illegal connections, existing pipe lining (if any), and blockages within the gravity sewer system.

CCTV inspections are conducted in accordance with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) standards. City staff that conduct CCTV inspections are PACP-certified and use the standard PACP coding for observations during the inspection. Granite XP™is PACP compliant sewer inspection software. Based on the structural pipe rating calculated at the end of an inspection, City staff determine whether or not to include the observed mainline segment on the Hot Spot Cleaning List. Each mainline in the sewer system is inspected every five years, at most, or at a shorter frequency based on the previous structural pipe rating.

Table 3 contains the criteria used to determine the CCTV inspection frequency for a pipe segment.

Table 2. Criteria for Establishing CCTV Inspection Frequency

PACP Structural Score	CCTV Inspection Frequency
5	not to exceed 365 days (1 year)
4	731 days (2 years)
3	1096 days (3 years)
2	1,826 days (5 years)
1	3,653 days (10 years)
0	3,653 days (10 years)

Given that conditions in the sanitary sewer are constantly changing, this ability to adjust preventive maintenance schedules based on field observations allows the Operations and Maintenance Program to be continually optimized to ensure program effectiveness and efficiency.

4.5. Equipment and Parts Inventory

The City owns a 2012 VacCon and a 1994 Vactor. The combination sewer cleaners are designed for line cleaning and offer jack hammer action to clear obstructions. The pumps are hydraulically driven to provide pressure sufficient enough for a scouring velocity.

The City currently uses Granite XP™, a data collection and management software for CCTV pipeline and manhole inspections. The City field crew uses a laptop computer that is connected to an OZII Pan and Tilt Optical Zoom Camera to perform sewer inspections and record the associated media and observation data.

The City maintains contingency equipment and replacement parts for its sewer system. A list of specific equipment kept ready at the maintenance yard for sewer system emergency conditions includes:

- Closed circuit television camera and support equipment
- Portable flooded suction centrifugal pump~~s~~, capable of pumping 1,400 gallons per minute (gpm), large enough to be used for emergency pumping, for SSOs, and for pumping from manhole to manhole around blockages.
- Emergency generator and floodlights
- Suction and discharge hoses for all pumps
- Confined space entry trailer with emergency flashers, one tripod and two winches for manhole entry and rescue, and all associated personal safety equipment
- Vaccon combination sewer cleaner with an older Vactor as backup
- Spare pipes of assorted sizes, materials, and repair couplings are kept at the City.
- Rigid sewer snake
- Electrical eel

4.6. Training

City emergency response personnel are encouraged to become a member of the California Water Environment Association (CWEA) and attend conferences regularly. All response personnel are trained on the Sewer System Management Plan and SSO Emergency Response Plan biannually, at minimum.

Two of the City's maintenance crew have Class I CWEA Certification. In addition, two staff members of the maintenance group have received training for NASSCO PACP Certification. City staff attend other collections systems workshops, seminars, conferences, and safety training, sponsored by professional groups such as Bay Area Clean Water Agencies (BACWA), California Association of Sanitation Agencies (CASA), League of California Cities, National Safety Council, and Water Environment Research Foundation (WERF). The collection system staff holds periodic tailgate meetings to remind staff of standard procedures for maintenance activities and emergency response, especially following emergency response events.

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ELEMENT 5 - DESIGN AND CONSTRUCTION STANDARDS

5.1. Standard Specifications

The City Standard Specifications and Technical Provisions are posted on the City website at the following address: http://www.albanyca.org/index.aspx?page=987.

The documents include design and construction standards for installation and rehabilitation of sewer mains and side sewers, including standards for inspection and testing. **Table 3** contains a summary of provisions pertinent to implementation of the SSMP.

Table 3. City Standard Specifications and Technical Provision Summary

Provision	Reference
Sanitary Sewers and Storm Drains	T-124
Trenching	T-124
Bedding	T-126
Pipe Materials and Installation (New or Replacement)	T-127
Pipe Liners (or Pipe Rehabilitation Lines)	T-138
Backfill	T-143
Testing Pipelines	T-149
Manholes, Cleanouts and Appurtenances	T-154
Sewer Lateral Rehabilitation	T-159
Control of Existing Flows	T-165
Trench Resurfacing	T-166
Measurement and Payment	T-166
Standard Specifications for Public Works Construction "Technical Provisions"	T-218

5.2. Standard Detail Drawings

The City's Standard Detail drawings are posted on the city website at the following address: http://www.albanyca.org/index.aspx?page=987. **Table 4** contains a summary of City Details pertinent to implementation of the SSMP.

Table 4. City Standard Details Summary

Provision	Reference
Standard Manhole	SS 1
Standard Sewer Manhole	SS 2
Raised Manhole Ring and Cover	SS 3
Standard Rodding Inlet	SS 4
Typical Trench Section	SS 5
Standard Laterals and Cleanouts	SS 6
Standard Cleanouts and Backwater Prevention Device	SS 7
Backwater Shutoff and Check Valve System	SS 8
Main Sewer Protection Above Utility Crossing	SS 9
Main Sewer Protection Below Utility Crossing	SS 10
Side Sewer Protection Above Utility Crossing	SS 11
Side Sewer Protection At Utility Crossing	SS 12
Standard Concrete Pipe Protection	SS 13
Standard Redwood Check Board	SS 14

ELEMENT 6 – SANITARY SEWER OVERFLOW EMERGENCY RESPONSE PLAN

The purpose of the Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The complete OERP is contained in **Appendix 3.**

The City's goals with respect to responding to SSOs are to:

- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Contain the spilled wastewater to the extent feasible;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO; and
- Meet the regulatory reporting requirements.

Each response vehicle contains a complete copy of the OERP and field documentation forms. A complete copy of the plan is also on file with City Maintenance. The response plan is a living document and is updated as necessary to reflect any changes in staffing or notification requirements, including contact numbers.

6.1. Summary of OERP Components

The components of the OERP are briefly explained below:

Definitions

The SSS WDR defines three categories of SSOs from the public sewer system and private lateral sewage discharges. The category of SSO determines specific regulatory requirements.

Employee and Contractor Training

City personnel and contractors who may have a role in responding to, reporting, and/or mitigating an SSO receive training on the contents of the OERP. New employees receive training before they are placed in a position of responsibility for SSO response and current employees receive annual refresher training on the procedures in the OERP. Training records are kept on file on the City server.

City Notification

The City has procedures for incoming sewer service calls during business hours and non-business hours. Incoming calls typically come from the public and either come directly to Public Works or through Police Dispatch. The City website notifies a property owner to call Police Dispatch for any sewer related complaint. Police Dispatch routes the call to Public Works during business hours and to on call staff during non-business hours. A message machine

always picks up at Public Works after a set number of rings. The message informs the incoming caller to call Police Dispatch for sewer related complaints. This approach connects the incoming caller with a live person at all times.

Response Procedures

The OERP describes in detail the procedures for responding to an SSO from responder dispatch through containment and mitigation of the overflow. The OERP addresses responder safety, response equipment, 2-hour regulatory reporting, posting of signs, and water quality sampling.

Regulatory Reporting

The OERP includes procedures, timelines and staff responsibilities for reporting SSOs to the State Water Board's online SSO database (CIWQS).

SSO Investigation and Documentation

The OERP contains a description and procedures for completing an SSO field form. The SSO field form documents the specifics of an SSO event and any follow up investigative actions (ex. CCTV). Each SSO event record contains completed field form(s), volume estimation and photographs (if applicable), a copy of the CIWQS certification record and OASIS work order. SSO event records are compiled into one file folder for the year unless the volume of the SSO is greater than 250 gallons in which case the record has a separate file folder labeled with the CIWQS event number.

SSO Water Quality Monitoring Program

The OERP must contain a water quality monitoring program (WQMP). The WQMP contains SSO response and reporting procedures for SSO events in which 50,000 gallons or more are spilled to surface waters.

ELEMENT 7 - FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

7.1. Purpose

The purpose of the City's FOG Control Program is to minimize the discharge of fats, oils and grease (FOG) to the sewer system to prevent the formation of blockages in sewer lines. The City's FOG Control Program consists of source control, preventive maintenance, food service establishment inspections and enforcement.

7.2. Program Implementation

AMC Chapter 15-5 and the California Plumbing Code provide the legal foundation for FOG control within the City. The City participates in a regional FOG Control Program administered by EBMUD. The scope of the FOG control activities and the roles and responsibilities of each agency are outlined in the "FOG Scope of Services Among EBMUD, City of Alameda, City of Albany, City of Berkeley, City of Emeryville, City of Oakland, City of Piedmont, Stege Sanitary District." The Scope of Services was adopted February 2, 2010 by the City through the Technical Advisory Board and is reevaluated annually. **Appendix 4** is a copy of the City's FOG Control Implementation Plan and includes a copy of the current Scope of Services.

7.3. Commercial

The commercial portion of the FOG Control Program consists of hotspot investigations, mainline camera work, gravity grease interceptor inspections, enforcement and reporting/database management. EBMUD maintains a list of approved grease haulers and provides a disposal facility for grease

Commercial outreach includes the distribution of materials, which may include bill inserts, billboards, and other direct forms of communication with Food Service Establishments (FSE). In addition, information related FSE Best Management Practices (BMPs) is distributed and accessible on the EBMUD website.

7.4. Residential

EBMUD and the City conducts educational outreach to City residents concerning proper handling and disposal of their kitchen food wastes using several methods: (1) the City newsletter, (2) the City website (https://www.albanyca.org/departments/public-works/operations-maintenance/sanitary-sewer-system/upper-sewer-lateral-program), (3) door hangers displaying FOG messages such as "Grease Alert, " and (4) other outreach materials distributed by EBMUD. A door hanger conveying a message to properly handle kitchen grease is left on the resident's door handle after the City's sewer crew responds to a sewer service call. The City's SSO Response Plan contains instructions for door hangers and SSO response vehicles are equipped with supplies of door hangers.

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ELEMENT 8 - CAPACITY MANAGEMENT

This section of the SSMP presents the City's System Evaluation and Capacity Assurance Plan (SECAP).

8.1. System Evaluation and Capacity Assurance Plan

Although there have been no recent capacity-related SSOs in the City, a comprehensive capacity evaluation using a dynamic hydraulic model was performed to quantify flows and capacities in all major sewers under current and future flow conditions. This evaluation and its findings are documented in the report: City of Albany Sewer Master Plan, April 2014 (Master Plan), and are summarized here. The Master Plan builds upon and enhances existing sewer programs, including inspection, condition assessment, rehabilitation and infiltration/inflow correction.

The modeling utilized InfoWorks™ CS, a fully dynamic hydraulic modeling software supported by a GIS-based modeling interface. The assessment focused on the trunk sewer network, the primarily 10-inch and larger pipes, plus some 6- and 8-inch pipes, that convey flow generated throughout the system to the EBMUD interceptor. Flow loads to the model were developed from customer water use data, estimates of additional flows from potential future development, and from flow monitoring programs conducted by the City and by EBMUD during the 2010/11 and 2011/12 wet weather seasons. The flow monitoring data were used to estimate the amount of I/I for various areas of the system and to confirm, through model calibration, that the hydraulic model reasonably simulates the actual performance of the system during both dry and wet weather conditions.

The capacity of the system was assessed with respect to a design storm condition, defined as a design rainfall event falling under saturated soil conditions with the timing of the storm such that the peak I/I flows occur at about the same time as the peak diurnal base wastewater flow in most areas. The design rainfall is a 7-hour historical storm (known as the "EBMUD design event"), which was defined for the 1980s I/I studies and has been used since that time by the Satellites and EBMUD for wet weather evaluations. The storm has an approximate *rainfall* return period of 5 years; however, based on the assumed timing of the storm under design event conditions, it is generally thought to create a return period of peak wastewater *flow* that is greater than the return period of the rainfall event.

The hydraulic model was run with the design event to identify areas of the trunk sewer system that would not have adequate capacity to convey the peak wet weather flows generated by that event. Capacity was considered inadequate whenever the model predicted that the peak flows would result in overflows from the system or surcharge (flow above the crown of sewer pipes) to within four feet of manhole rims.

The modeling indicated potential capacity deficiencies in some areas of the sewer system, the most significant being the 10-inch sewer in Marin Avenue from San Pablo Avenue to the Berkeley city limits. This sewer also receives flow from upstream areas of Berkeley that discharge into the

Albany sewer system. It is important to note that these model results reflect the predicted performance of the system under the design event for *current* conditions. However, the City is committed to a program of replacement of sewers (and associated manholes and lower laterals) in the system that have not yet been rehabilitated or replaced since the 1980s, as well as identification and elimination of direct inflow sources, and continued participation in a regional private sewer lateral compliance program that will also result in substantial replacement of upper laterals throughout the city. These programs are anticipated to result in significant reductions in I/I, on the order of 50 percent or more. Therefore, as confirmed by the model, identified capacity deficiencies will be substantially alleviated as a result of these I/I reduction efforts. For Albany, the model predicts that the only remaining deficiency would be the sewer in Marin Avenue. Accordingly, upsizing of this pipe is recommended as part of the Capital Improvement Plan (CIP). The CIP also includes accelerating the replacement of sewers upstream of identified current capacity deficiencies in order to minimize the risk of overflow during the interim period until maximum I/I reductions are achieved.

The Master Plan also contains the City's 10-year CIP (FY14/15 – FY 23/24), developed based on the following three primary criteria:

- Meet the minimum annual sewer rehabilitation footage requirements of the Consent Decree.
- Maintain consistency with the City's annual capital improvement budget based on the financial plan and sewer service charge schedule that has been adopted by the City Council.
- Prioritize mini basins for rehabilitation based on risk scores as calculated by the Pipe Rating Model.

ELEMENT 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

This section of the SSMP discusses how the City monitors implementation of the SSMP elements and measures the effectiveness of SSMP elements in reducing SSOs. Performance indicators have been selected to meet the SSMP goals of the City.

9.1. Performance Indicators

The indicators that the City will use to measure the performance of its wastewater collection system and the effectiveness of its SSMP are:

- SSO Rate - Sewer Main Lines (SSOs/100 miles/year);
- Number of SSOs by cause (roots, grease, debris, pipe failure, capacity, lift station failures, and other);
- Median SSO volume (gallons);
- Percentage of SSOs greater than 100 gallons;
- Percentage of sewage recovered compared to total volume spilled; and
- Percentage of total spilled sewage discharged to surface water.

9.2. System of Updating SSMP

The City will evaluate the performance of its wastewater collection system biennially using the performance measures identified in Section 9.1, above, as part of the biennial audit process (see Element 10). The City may use other performance measures in its evaluation.

The City will determine the need to update its SSMP based on the results of the biennial audit and the performance of its sanitary sewer system. In the event that the City decides that an update is warranted, the City will complete the update within six months following identification of the need for the update. The City may also choose to update its SSMP after any significant changes to its collection system operations or issues.

City Staff will seek approval of a revised SSMP by the City Council 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 Public Works Director/City Engineer and an SSMP revision is not needed for minor revisions such as these.

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ELEMENT 10 – SSMP AUDITS

The City will conduct a biennial audit of the SSMP (in June), as required by the SSS WDR. The SSMP Audit Checklist, based on the requirements in the WDR, will be used to guide the audit. The SSMP Audit Checklist is included in **Appendix 5**.

The results of the audit will be included in a SSMP Audit Report. The SSMP Audit Report will focus on the effectiveness of the SSMP program, compliance with WDR requirements, and identification of any deficiencies in the SSMP. The SSMP Audit Report will identify revisions that may be needed for a more effective program. Performance indicator data, discussed in Element 9, will be used reviewed and analyzed to report on the City's success in meeting its numeric targets for SSMP implementation.

Appendix 6 contains an SSMP Change Log, which documents subsequent changes made to the SSMP

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ELEMENT 11 – COMMUNICATION PROGRAM

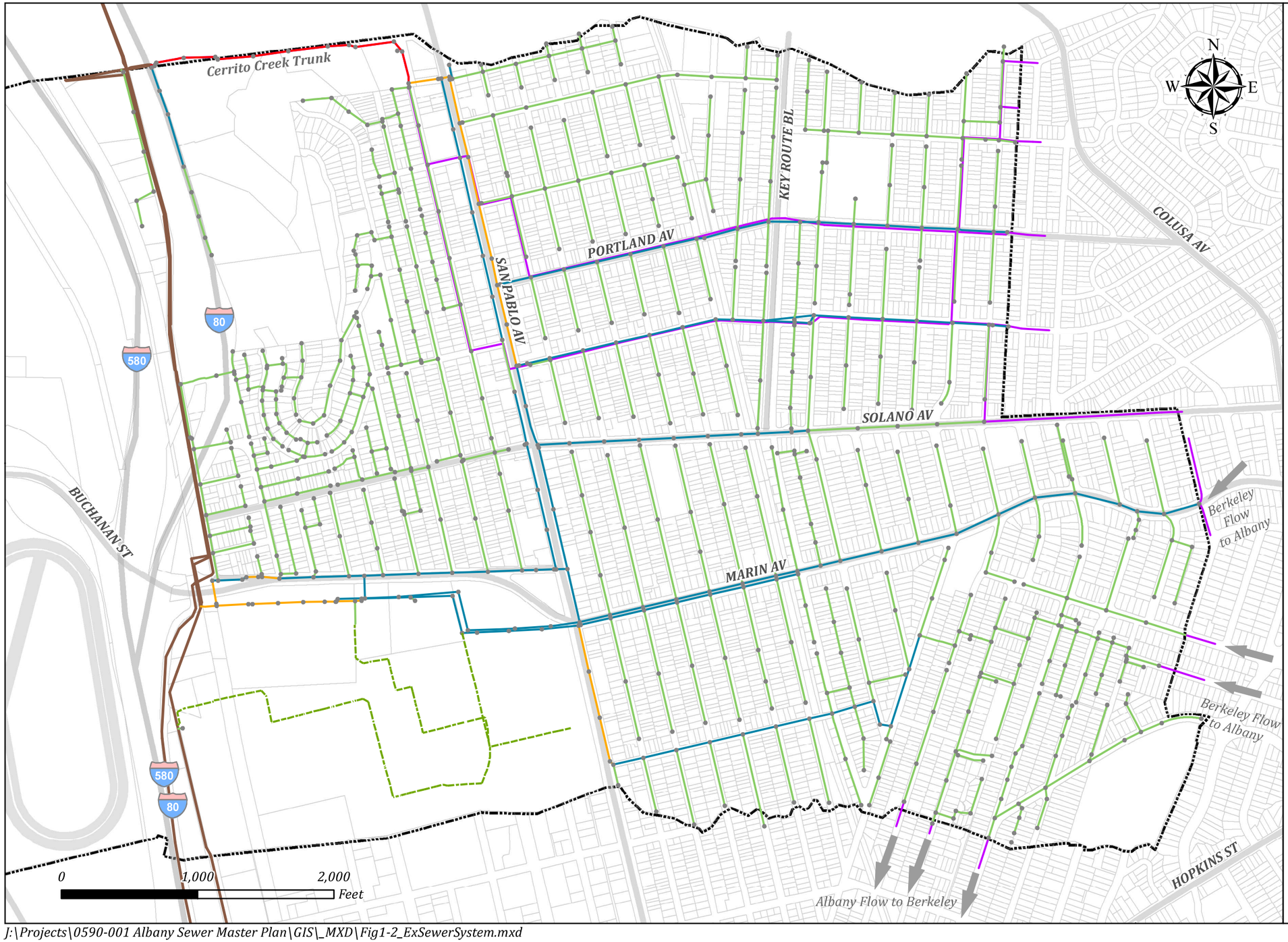
The City's website at https://www.albanyca.org/departments/public-works/operations-maintenance/sanitary-sewer-system/upper-sewer-lateral-program provides the community with information regarding sewer improvement projects, educational materials, FOG and other issues. The website also includes a link to the current SSMP (https://www.albanyca.org/Home/ShowDocument?id=23161).

The City hosts a booth annually at the Solano Stroll, the largest street fair in the East Bay. Information regarding FOG prevention, SSOs, upper lateral compliance, and preventing hazardous materials from entering the City's sanitary system is distributed to the public. The City will continue to hold events to educate the public on the goals and implementation of its SSMP.

The City notifies property owners in advance of any sewer construction work in their neighborhood. The City has, and will continue, to develop information for dissemination to local plumbers and contractors, as a guide to proper installation of sewer laterals and to ensure that plumbing practices are not exacerbating blockage issues in sewer mains or contributing infiltration/inflow to the sewer system. Flyers are available at the City for review. The City maintains literature describing backwater overflow devices and backflow prevention devices in the Community Development office. Information on these devices is also available on the City's website (https://www.albanyca.org/departments/building/useful-links).

Appendix 1

Sewer System Overview Map



Legend

Sewer Pipe

- *< 10-in*
- *10-in to 15-in*
- *18-in to 24-in*
- *42-in*
- *UC Village Sewer*
- *Berkeley Trunk*
- *EBMUD Interceptor*
- *Sewer Node*
- *City Limit*

City of Albany
Sewer Master Plan

Figure 1-2

Existing Sewer System

CITY OF ALBANY — URBAN VILLAGE BY THE BAY — CALIFORNIA

RMC water and environment

J:\Projects\0590-001 Albany Sewer Master Plan\GIS_MXD\Fig1-2_ExSewerSystem.mxd

Appendix 2

Sewer Lateral Program Roles and Responsibilities Agreement

STATEMENT OF ROLES AND RESPONSIBILITIES BETWEEN THE CITY OF ALBANY AND THE EAST BAY MUNICIPAL UTILITY DISTRICT FOR IMPLEMENTATION OF THE REGIONAL PRIVATE SEWER LATERAL PROGRAM

This Statement of Roles and Responsibilities ("Agreement") is entered into this ____ day of _____, 20__, by and between the East Bay Municipal Utility District ("the District") and the City of Albany ("the Satellite"). The District and the Satellite are collectively referred to in this Agreement as "the Parties".

1. DEFINITIONS

1.1. Reserved.

1.2. **Consent Decree** means the final judgment between the United States and the Parties in consolidated cases in the U.S. District Court, Northern District of California: *United States of America, et al. v. East Bay Municipal Utility District* (C 09-00186-RS) and *United States of America, et al. v. City of Alameda, et al.* (C 09-05684-RS), including all appendices, attachments and exhibits thereto.

1.3. **Enforcement** means measures taken against Property Owners by the District to achieve compliance with the Regional PSL Ordinance or by the Satellite to achieve compliance with the Satellite's Local Ordinance Requirements.

1.4. **Fiscal Year** means the period that begins on July 1 of a given year and continues through June 30 of the following year.

1.5. **High-Value Construction or Remodel Permit** means any permit or other approval needed from the Satellite, or from any public entity within the Satellite's service area, for new construction upon a parcel or for any significant improvement, addition, construction, reconstruction, remodeling, modification or alteration of or to an existing or previously existing structure upon a parcel, where the value of work authorized by such permit or approval exceeds $100,000.

1.6. **Lower Sewer Lateral** has the same meaning in this Agreement as given in the definition that appears in the Regional PSL Ordinance.

1.7. **Outreach Materials** means materials prepared by the District for the purposes of informing the public about (1) the Regional PSL Program, and/or (2) the benefits of obtaining a Compliance Certificate before the Regional PSL Program mandates action. Outreach Materials will be distributed to Property Owners, real estate and escrow professionals, contractors, and other interested parties and will describe the requirements, procedures, and fees associated with the Regional PSL Program as well as general information about the benefits of PSL replacement for Bay protection.

1.8. Reserved.

1.9. **PSL** has the same meaning in this Agreement as given in the definition that appears in the Regional PSL Ordinance.

1.10. **Regional PSL Ordinance** means the District's "Regional Private Sewer Lateral Ordinance" (Ordinance No. 359-13, as amended by Ordinance No. 362-14), as may be further amended from time to time by the District.

1.11. **Regional PSL Program** means the comprehensive, regional PSL management effort intended to reduce infiltration and inflow into the regional sanitary sewer system from PSLs. The Regional PSL Program requires Property Owners to (1) continuously maintain their Upper Sewer Laterals to standards specified in the Regional PSL Ordinance, (2) arrange for Verification Testing and certification of PSLs upon the occurrence of certain events specified in the Regional PSL Ordinance, and (3) repair or replace PSLs as needed to obtain a passing Verification Test result.

1.12. **Section** means a numbered paragraph, or series of paragraphs, in this Agreement, except where a different agreement is expressly referenced.

1.13. **Side Agreement** means the legal agreement among the Parties entitled "Defendants' Side Agreement to Facilitate Consent Decree Compliance," of which this Agreement is a part pursuant to Section 9.1.

1.14. **Upper Sewer Lateral** has the same meaning in this Agreement as given in the definition that appears in the Regional PSL Ordinance

1.15. This Agreement uses other capitalized terms defined in the Regional PSL Ordinance. Such terms shall have the meaning given therein.

2. OUTREACH MATERIALS

2.1. The District will produce Outreach Materials for the Regional PSL Program. Upon request, the District will provide the Satellite an opportunity to review and approve Outreach Materials before they are made publicly available. The District will provide the Satellite with Outreach Materials and will replenish the Satellite's supply as needed upon request.

2.2. The District will maintain a Regional PSL Program website containing appropriate referrals to the Satellite's relevant web pages and a telephone number and email address for the public to obtain information about the Regional PSL Program.

2.3. The Satellite will make available Outreach Materials at City Hall (except Stege Sanitary District), the Satellite's permit center, and other appropriate publicly accessible locations. The Satellite will maintain a website containing appropriate referrals and links to the District's Regional PSL Program website.

2.4. The Satellite and the District shall assist each other in outreach activities as needed.

3. VERIFICATION TESTING AND PERMITTING

3.1. The District's Responsibilities.

3.1.1. Performance of Verification Tests. The District will expeditiously perform PSL Verification Tests when such tests are required by the Regional PSL Ordinance or the Satellite's Local Ordinance Requirements. The District will also perform PSL Verification Tests when requested by a customer. This includes instances where the property is ineligible to receive a Compliance Certificate due to non-compliance with Local Ordinance Requirements but the property owner has elected to proceed with the Verification Test.

3.1.2. Waivers.

3.1.2.1. Waiver Exists. If there is a valid General Waiver or Limited Waiver with respect to a parcel at the time of a Verification Test, the District will witness the Verification Test for the Upper Sewer Lateral only and shall document compliance or non-compliance. The

District will honor Limited Waiver or General Waiver status under the circumstances set forth in Sections 4.4 and 4.5, respectively.

3.1.2.2. No Waiver Exists. If there is not a valid General Waiver or Limited Waiver with respect to a parcel at the time of a Verification Test, the District will witness the Verification Test for the Upper Sewer Lateral and, if required by the Satellite's Local Ordinance Requirements, also the Lower Sewer Lateral, and shall document compliance or non-compliance.

3.1.3. Attendance. The District will make reasonable efforts to promptly notify the Satellite if District representatives will be unable to attend a scheduled Verification Test.

3.1.4. Notification of Scheduled Inspections.

3.1.4.1. Notification of Same-Day Inspections. Each business day at 7:00 a.m., the District will provide the Satellite a list of all PSL inspections scheduled for that day and the time window when each inspection is scheduled to occur. The Satellite may use this list to schedule its staff's attendance at inspections as desired.

3.1.4.2. Notifications of Upcoming Inspections. Each business day at 7:00 a.m., the District will provide the Satellite a list of all PSL inspections scheduled for the following day and anytime thereafter. The District will update this list at 2:00 p.m. to include inspections scheduled after that morning's 7:00 a.m. notice. The Satellite may use these lists to review compliance with Local Ordinance Requirements.

3.1.4.3. The Satellite may ask the District in writing not to provide the inspection notifications described in this Section 3.1.4. However, if the Satellite chooses not to receive the notifications, or if after receiving a notification it fails to act in the manner described in Section 3.2, the District will consider the parcel's eligibility for a Compliance Certificate without regard to Local Ordinance Requirements.

3.1.5. Notification of Non-Compliance with Local Ordinance Requirements. When the District receives the Satellite's notice provided under Section 3.2.3.3 that a parcel scheduled for inspection is non-compliant with Local Ordinance Requirements, the District will notify the Property Owner and any representative of the Property Owner in communication with the District regarding PSL certification), by email with U.S. mail follow-up, that the Satellite has stated that a property is not in compliance with Local Ordinance Requirements and therefore is not eligible to receive a Compliance Certificate until the property is brought into compliance with the Satellite's requirements. The District shall provide the Property Owner or the representative with contact information for Satellite staff designated by Satellite for that purpose under Section 3.2.2. The notice in this Section is in addition to the separate notice provided by the Satellite under Section 3.2.4.1. If the property successfully passes a Verification Test, the District will refrain from issuing any Compliance Certificate until it receives notice from the Satellite under Section 3.2.4.3 that indicates (1) that the property has become compliant with Local Ordinance Requirements, and (2) whether or not a new Verification Test is required.

3.1.6. Material Modifications; New Verification Test. In the event that the Satellite notifies the District that material modifications were mandated to achieve compliance with Local Ordinance Requirements, the District will issue a Compliance Certificate when the PSL achieves a passing result on a new Verification Test.

3.1.7. After Hours and Weekend Inspections. The District will notify the Satellite of scheduled after-hours and weekend inspections at least 24 hours in advance.

3.1.8. Shared Laterals & Illicit Connections. The District will notify the Satellite if it becomes aware that contiguous parcels are sharing a lateral. The District will notify the Satellite of any illicit connections it finds during a Verification Test.

3.1.9. Potential Debris. The District will communicate any potential debris introduced into the sewer system during the course of the inspection and certification process, such as lost plugs, to the Satellite upon becoming aware.

3.2. The Satellite's Responsibilities – Local Ordinance Requirements.

3.2.1. The Satellite will comply with the provisions of this Section 3.2 if, and only if, the Satellite wishes the District to take into account a parcel's compliance or non-compliance with Local Ordinance Requirements when evaluating the parcel's eligibility for a Compliance Certificate. This Section 3.2 is the exclusive process by which the District will delay or withhold a Compliance Certificate on grounds of non-compliance with Local Ordinance Requirements.

3.2.2. Point of Contact. The District will include the Satellite contact information the Satellite provides under Section 3.3.1 in any notice of non-compliance with Local Ordinance Requirements it provides to a Property Owner or representative under Section 3.1.5..

3.2.3. Local Ordinance Requirements – Compliance Review.

3.2.3.1. Morning Review. Each business day, the Satellite will review the morning list of PSL inspections scheduled for the following day or anytime thereafter to identify any parcels it believes are non-compliant with Local Ordinance Requirements. The District will provide the morning list by 7:00 a.m. each business day pursuant to Section 3.1.4.2.

3.2.3.2. Afternoon Review. Each business day, the Satellite will review the updated list of PSL inspections scheduled for the following day or anytime thereafter to identify any parcels it believes are non-compliant with Local Ordinance Requirements. The District will provide the updated list by 2:00 p.m. each business day pursuant to Section 3.1.4.2.

3.2.3.3. Notification of Non-Compliance with Local Ordinance Requirements. If the Satellite believes any parcel that appears on the either the morning list or the updated list is non-compliant with Local Ordinance Requirements (for example, by failing to obtain a necessary permit from the Satellite), the Satellite will notify the District in writing no later than the business day before the scheduled inspection, by 2:00 p.m. in the case of

parcels appearing on the morning list, or by 4:00 p.m. in the case of parcels appearing on the afternoon list.

3.2.4. Local Ordinance Requirements – Gaining Compliance. For any parcel scheduled for inspection which the Satellite believes is non-compliant with Local Ordinance Requirements, the Satellite will do the following:

3.2.4.1. Immediately notify the Property Owner and any representative of the Property Owner indicated on the scheduled inspection list provided by the District, by email with U.S. mail follow-up, that the Satellite has determined that the property is not compliant with Local Ordinance Requirements and therefore is not eligible to receive a Compliance Certificate until the property is brought into compliance with the Satellite's requirements. The notification will specifically identify the cause of the non-compliance. The Satellite shall provide the Property Owner or the representative with contact information for appropriate Satellite staff. The notice in this Section is additional to the separate notice provided by the District under Section 3.1.5.

3.2.4.2. Manage all communications with the affected persons regarding the non-compliance and pursue any enforcement action deemed appropriate by the Satellite.

3.2.4.3. Notify the District in writing as soon as practicable after determining the parcel has become compliant with Local Ordinance Requirements. This notification will indicate whether material modifications were made to bring a PSL into compliance with Local Ordinance Requirements, such that the District should not rely on any existing Verification Test result as the basis for issuing a Compliance Certificate. Where material modifications were made, the Satellite shall send the Property Owner (or a representative of the Property Owner indicated on the scheduled inspection list provided by the District) a notification stating that (1) as a result of the material modification, any pre-existing Verification Test result is no longer valid, and (2) the

notice recipient should contact the District to schedule a new Verification Test, which the PSL must pass before a Compliance Certificate will be issued.

3.3. The Satellite's Responsibilities – General.

3.3.1. Point of Contact. The Satellite will provide the District with the name, title, direct phone line, and email address of appropriate Satellite staff for the District to provide to Property Owners and their representatives as needed. The Satellite will provide updated contact information as needed.

3.3.2. Permitting and Inspection. The Satellite will be the permitting agency for all PSL work in accordance with the Satellite's Local Ordinance Requirements. The Satellite will expeditiously issue sewer and encroachment permits for PSL work performed under the Regional PSL Program, unless the Satellite does not issue encroachment permits. The Satellite will perform construction and materials inspection for all PSL work.

3.3.3. Effect of Verification Test. The Satellite will accept the District's documentation of a passing Verification Test result as conclusive evidence that the PSL, or the portion of it subject to the Verification Test, is free from leaks.

3.3.4. Emergency. In an emergency condition, including when the District has notified the Satellite that its representatives will be unable to attend a scheduled Verification Test or when the District representatives fail to arrive within the scheduled inspection window and cannot be contacted, the Satellite may witness the Verification Test and provide the following information to the District: (1) length and diameter of the Upper Sewer Lateral and, if applicable, the Lower Sewer Lateral, (2) which portion of the PSL was tested and by which testing method, (3) which work was performed (for example, repair or replacement), (4) result of the pressure test, (5) if the PSL was replaced, the material of both the old and new PSLs, (6) whether or not a lower cleanout was present, (7) the location of the public Sewer Main, and (8) the contractor's name and phone number.

4. CERTIFICATES, WAIVERS, AND EXEMPTIONS

4.1. Compliance Certificates. The District will issue a single Compliance Certificate for a given parcel after all PSLs associated with the parcel have passed a Verification Test, except in the following circumstances:

4.1.1. No Compliance Certificate will be issued in connection with any parcel that is the subject of a Local Ordinance Requirements non-compliance notification provided by the Satellite under Section 3.2.3.3, until the non-compliance is resolved and the Satellite has so notified the District under Section 3.2.4.3.

4.1.2. No Compliance Certificate will be issued if either the Upper Sewer Lateral or the Lower Sewer Lateral fails to pass a Verification Test, unless the Upper Sewer Lateral passes and one of the following circumstances applies to the Lower Sewer Lateral:

4.1.2.1. a Lower Sewer Lateral does not exist (e.g. where an Upper Sewer Lateral connects to a Sewer Main via backyard easement); or

4.1.2.2. the Satellite has declared in the letter described in Section 4.3 that it does not legally require Property Owners within its jurisdiction to obtain a Compliance Certificate for Lower Sewer Laterals; or

4.1.2.3. the Satellite has informed the District as provided in Sections 4.4 and 4.5 that a valid General Waiver or Limited Waiver covers the parcel's Lower Sewer Lateral.

4.2. Liability. The District and its Directors, officers, agents and employees assume no liability by declining to issue a Compliance Certificate as a result of receiving notification from the Satellite of non-compliance with Local Ordinance Requirements. The Satellite will indemnify, defend and hold harmless the District and its Directors, officers, agents and employees from and against any claims, lawsuits, proceedings, damages, and/or losses of any kind (including legal costs and attorneys' fees) arising from or related to a District decision not to issue a Compliance Certificate where such decision is made in substantial accordance with Section 4.1.1.

4.3. Responsibility for Lower Sewer Laterals. The Satellite will inform the District in a letter signed by the Satellite's attorney or other authorized representative whether or not the Satellite legally requires Property Owners within its jurisdiction to obtain a Compliance Certificate for Lower Sewer Laterals. The District will rely on the Satellite's letter to determine the scope of the Regional PSL Program within the Satellite's jurisdiction. The Satellite agrees to promptly notify the District in writing when it substantially modifies legal requirements relating to Lower Sewer Laterals.

4.3.1. In the letter described in Section 4.3, the Satellite may optionally state the location of the boundary between the Upper Sewer Lateral and Lower Sewer Lateral that shall be used within its jurisdiction, if that boundary differs from the boundary described in the Regional PSL Ordinance by the definitions of "Upper Sewer Lateral" and "Lower Sewer Lateral." If the Satellite's letter states a jurisdiction-specific boundary, the District will certify a parcel upon on a passing Verification Test result for the portion of the PSL defined in the letter as part of the "Upper Sewer Lateral," and the Satellite will rehabilitate the entire portion of the PSL defined in its letter as the "Lower Sewer Lateral" at the time it rehabilitates the sewer main associated with the PSL. If the letter does not specify a boundary location, the District will use the definitions in the Regional PSL Ordinance for testing and certification purposes.

4.4. General Waivers (Satellite's Prior Work on Lower Sewer Lateral). If and when the District receives the spreadsheet or GIS data described in Section 5.2.2 from the Satellite, the District will apply General Waiver status to all parcels listed in the spreadsheet or GIS data and qualifying for General Waiver status under the Regional PSL Ordinance. The District will update its General Waiver database on an ongoing basis when the Satellite provides the District with an updated spreadsheet or additional GIS data. To document General Waiver status for individual parcels, the Satellite may complete a District form used for that purpose in lieu of providing an updated spreadsheet. Upon receiving the information from a Satellite, the District will honor the General Waivers for their period specified in the Regional PSL Ordinance.

4.5. Limited Waivers. A valid Limited Waiver excuses the Property Owner from any applicable Local Ordinance Requirement that mandates the performance of work on the Lower Sewer Lateral. A Satellite may issue a

Limited Waiver to a property owner to accommodate a paving moratorium or for any other reason except the Satellite's prior Repair or Replacement of the Lower Sewer Lateral. The Satellite shall provide the District a letter and spreadsheet with affected parcel numbers and associated expiration dates and may update the spreadsheet as needed. To document Limited Waiver status for individual parcels, the Satellite may complete a District form used for that purpose in lieu of providing an updated spreadsheet. Upon receiving the information from a Satellite, the District will honor the Limited Waivers for their period of validity.

4.6. Construction and Remodeling. Whenever a Property Owner submits an application for a High-Value Construction or Remodel Permit, the Satellite may open the permit but will not perform a final inspection or otherwise finalize the permit until the Satellite receives one of the following:

4.6.1. a copy of a valid Compliance Certificate or Exemption Certificate for the parcel at issue; or

4.6.2. written notification from the District that the Property Owner is eligible to defer certification pending compliance with Regional PSL Ordinance requirements for parcels or parcel groups with PSLs exceeding 1,000 feet or parcels within Homeowner's Associations that have assumed responsibility for PSL compliance.

4.7. Exemption Certificates. When a property owner requests an Exemption Certificate from the District, the District will confirm eligibility based on data provided to the District by the Satellite under Section 5.2.3 or, in cases of sales or transfers exempted from the Regional PSL Ordinance's definition of "Title Transfer," based on the District's verification of supporting documentation submitted by the Property Owner. The District will inform the Property Owner of the Property Owner's eligibility status as soon as reasonably possible.

4.8. Notification of Issued Compliance Certificates. Each business day, the District will notify the Satellite of Compliance Certificates issued the previous day.

5. DATA SHARING AND ANNUAL REPORTING

5.1. The District's Responsibilities.

5.1.1. Annual Reporting. The District will report on the Regional PSL Program in its Consent Decree Annual Report.

5.1.2. Regional Database. The District will develop and maintain a regional database of Regional PSL Program records that includes information related to parcel compliance status, including Verification Test records. The District will share the information maintained in the regional database with the Satellite in a timely fashion, upon reasonable request by the Satellite.

5.2. The Satellite's Responsibilities.

5.2.1. Data Regarding High-Value Construction & Remodel Permits. For each High-Value Construction & Remodel Permit, the Satellite shall document, in spreadsheet format, the permits issued during the Fiscal Year, the APN and address associated with the permit, and whether a Compliance Certificate was submitted prior to issuance of the certificate(s) of occupancy, and shall provide this spreadsheet to the District after each Fiscal Year by July 31.

5.2.2. Data Regarding Satellite-Performed Work on Lower Laterals. Unless the Satellite provides the letter described in Section 4.3 declaring Property Owners' non-responsibility for Lower Sewer Laterals, the Satellite will: (1) provide the District with a spreadsheet or GIS data containing the assessor's parcel number (APN) and date of Lower Sewer Lateral replacement for each parcel on which the Satellite replaced the Lower Sewer Lateral during the 20-year period prior to the effective date of the Regional PSL Program in the Satellite's jurisdiction to facilitate the District's issuance of parcel-specific General Waivers where appropriate, and (2) keep the spreadsheet or GIS data current to reflect the Satellite's ongoing Lower Sewer Lateral replacement work on additional parcels and provide the District with the updated spreadsheet monthly.

5.2.3. Data Regarding Satellite-Issued Compliance Certificates. Unless it has done so before the this Agreement's effective date, the Satellite will provide the District with a spreadsheet or GIS data containing

the assessor's parcel number (APN) and date of issuance of all valid, unexpired Compliance Certificates or comparable documents issued by the Satellite during the period prior to the effective date of this Agreement to facilitate the District's issuance of Exemption Certificates, where applicable. The Satellite will timely provide information upon the District's request confirming if a specific Property Owner obtained and finalized a permit for PSL work.

5.3. Staff Contacts. The Parties each agree to provide each other a list of staff contacts involved in the Regional PSL Program and to keep each other informed of relevant personnel changes on an ongoing basis.

6. ENFORCEMENT

6.1. District's Role. The District may enforce all provisions of the Regional PSL Ordinance. Enforcement of Regional PSL Ordinance provisions related to Compliance Certificates and Time Extension Certificates is the District's sole responsibility.

6.2. Satellite's Role. Enforcement of the Satellite's Local Ordinance Requirements is the Satellite's sole responsibility. When the Satellite identifies non-compliance with Local Ordinance Requirements, the District will decline to issue a Compliance Certificate in the manner and under the circumstances specified in this Agreement, but all further actions to gain compliance will be the Satellite's responsibility.

7. INSURANCE

7.1. The Satellite shall take out and maintain during the life of the Agreement all the insurance required in this Section 7 (Insurance), and shall submit certificates for review and approval by the District. The Satellite shall not commence work until such insurance has been approved by the District. The Satellite may comply with its obligations under this Section 7 (Insurance) by providing evidence of self-insurance to the District signed by a responsible official of Satellite with authority to provide proof of insurance coverage.

7.2. The Satellite shall take out and maintain during the life of the Agreement Workers Compensation Insurance for all of its employees on the project. In lieu of evidence of Workers Compensation Insurance, the District will accept a Self-Insured Certificate from the State of California. Workers'

Compensation insurance must contain a waiver of subrogation endorsement providing that each insurer waives any rights of recovery by subrogation, or otherwise, against the District, its directors, officers, officials, agents, volunteers, and employees.

7.3. The Satellite shall take out and maintain during the life of the Agreement Commercial General and Automobile Liability Insurance that provides protection from claims that may arise from operations or performance under this Agreement. The amounts of insurance shall not be less than the following:

7.3.1. $2,000,000/Occurrence, Bodily Injury, Property Damage – Automobile.

7.3.2. $2,000,000/Occurrence, Bodily Injury, Property Damage – General Liability.

8. TERM AND TERMINATION

8.1. This Agreement shall become effective on the first date it has been executed by both Parties. This Agreement will remain binding and effective until terminated in the manner provided in this Section 8.

8.2. The Parties may terminate this Agreement at any time by mutual written consent.

8.3. In the absence of mutual written consent, this Agreement may not be terminated before five years has elapsed from the Consent Decree's effective date.

8.4. Once at least five years has elapsed from the Consent Decree's effective date, the Satellite may unilaterally terminate this Agreement if the Satellite has completed the process required by the Consent Decree to cease its participation in the Regional PSL Program (including U.S. EPA approval of the Satellite's no-less-stringent application for its proposed PSL ordinance).

9. GENERAL PROVISIONS

9.1. The General Provisions set forth in Section 6 of the Side Agreement are incorporated by reference into and shall apply to this Agreement. This Agreement, immediately upon its full execution, will be automatically incorporated by reference into the Side Agreement.

* * * * *

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement the day and year below written.

EAST BAY MUNICIPAL UTLILITY DISTRICT

_____ Date: _____

EILEEN M. WHITE
Director of Wastewater

Approved as to form:

_____

for the Office of General Counsel

CITY OF ALBANY

Nicole Almaguer Date: 8/22/18

NICOLE ALMAGUER
City Manager

Approved As To Form on Behalf of the City of Albany

Craig Labadie

CRAIG LABADIE,
City of Albany Attorney

Date 8/20/2018

Appendix 3

Sanitary Sewer Overflow Emergency Response Plan

City of Albany
Public Works Department

Sanitary Sewer Overflow Emergency Response Plan
2019

CIWQS Agency ID: 2SSO10088

540 Cleveland Avenue
Albany, CA 94710
Phone: 510-524-9543
Fax: 510-524-9722

Table of Contents

Appendices

I. PURPOSE

The purpose of this Sanitary Sewer Overflow Emergency Response Plan (OERP) is to establish guidelines for the response, remediation and reporting of Sanitary Sewer Overflows (SSOs) in the City's service area.

II. SCOPE

These procedures are applicable to all SSOs from the publicly owned portion of the wastewater collection system.

III. DEFINITIONS

Three categories of SSO's are defined by the SWRCB:

Category 1 SSO:
Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a municipal separate storm sewer system and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the municipal separate storm sewer system is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin (e.g., infiltration pit, percolation pond).

Category 2 SSO:
Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a municipal separate storm sewer system unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

Category 3 SSO:
All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

IV. EMPLOYEE AND CONTRACTOR TRAINING

All City personnel and contractors who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this Emergency Response Plan. All new employees should receive training before they are placed in a position where they may have to respond. Current employees should receive annual refresher training on this plan and the procedures to be followed.

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

V. CITY NOTIFICATION OF OVERFLOW

V.A. BUSINESS HOURS PROCEDURES (8:00 AM AND 4:30 PM, M-F.)

1. Reporting Party contacts either the Police Department or the Public Works Department directly. Phone numbers are available on the City website.
2. Public Works Office Assistant receives the information and immediately opens a work order. The work order documents, at minimum, the location of the incident, the informant name and contact information, and the time the City was notified of the event.
3. The Office Assistant immediately contacts the Lead Maintenance Worker by phone and conveys the work order information verbally. The Lead Maintenance Works either designates him/herself as SSO Responder or dispatches another crew member as SSO Responder. The Office Assistant prints the work order and places it in the Lead Maintenance Worker box.
4. The SSO Responder arrives as soon as reasonably possible, but no later than 30 minutes from the time of notification

V.B. NON-BUSINESS HOURS

1. Reporting Party contacts Police Department.
2. Police contacts the on-call Public Works Maintenance Worker and notifies them of the location of the incident, the informant name and contact information of the Reporting Party.
3. The on-call Public Works Maintenance Worker is automatically designated the lead SSO Responder.
4. On-call Public Works Maintenance Worker contacts backup on-call staff member for support.
5. SSO Responder(s) arrives at incident as soon as reasonably possible but no later than1 hour from the time the call was received by the Police Department.

VI. SSO RESPONSE PROCEDURES

This section describes the response procedures for a SSO event.

VI.A. SSO RESPONDER PRIORITIES

The SSO Responder priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate equipment.
- To evaluate the cause of the overflow and determine responsibility.
- To restore the flow as soon as possible
- To contain the overflow whenever feasible.
- To minimize public access to and/or contact with the spilled sewage.
- To mitigate the impacts of the SSO
- To properly document the event on the appropriate forms.

VI.B. RESPONSE EQUIPMENT

Public Works has a designated response truck that is used to respond to SSO events. The Lead Maintenance Worker is responsible for ensuring that the response truck is maintained with the following supplies, at minimum:

- 6" to 10" air plug
- Air tank and air compressor
- Spill Kit (pads, gloves, etc.)
- Plastic sheeting
- Sewer and Storm Maps
- Sanitary Sewer Overflow Report Forms (**Appendix A**)
- Regulatory Reporting and Notification Flowchart (**Appendix B**)
- City of Albany Sanitary Sewer Overflow Emergency Response Plan

If the City VacCon is required and is out of service, the City Vactor can be used. If both combination sewer cleaners are out of service, **Appendix C** contains a response equipment contingency plan.

VI.C. SCENE ARRIVAL

The SSO Responder is required to arrive at the incident site with the response truck and equipment as soon as reasonably possible but no later than 30 minutes after the City was notified of the event (1-hour for non-business hours).

If the United States Department of Agriculture facility needs to be accessed, contact information is as follows:

<u>Monday-Friday (excluding Federal holidays), 6:00am-4:30pm</u>

1) Primary point-of-contact – Tara McHugh -(510) 552-5961
2) 1st Alternate – Chris Mehelis (925) 433-3604
3) 2nd Alternate – Dan Herbst (209) 814-8387

<u>Monday-Friday, 4:30pm-6:00am; Saturdays, Sundays, and Federal Holidays</u>

1) Primary point-of-contact – Tara McHugh (510) 552-5961
2) Alternate – Dan Herbst (209) 814-8387

When the SSO Responder arrives on the scene, he/she will:

- Note arrival time at overflow site;
- Assess whether backup staff is needed and make appropriate calls, if applicable;
- Estimate volume and use the Regulatory Reporting and Notification Flowchart (**Appendix B**) to determine if Office of Emergency Services (OES) must be contacted within 2-hours of becoming aware of the SSO;
- Contact OES, if applicable;
- Comply with all safety precautions;

- Contact the Public Works Director/City Engineer if the overflow appears to be in a sensitive area or there is doubt regarding the extent, impact, or how to proceed; and
- Photograph site (with emphasis on overflow volume).

VI.D. OVERFLOW CONTAINMENT

The SSO Responder must contain as much of the overflow as possible using the following steps, as applicable:

- Determine immediate destination of overflowing sewage;
- Plug storm drains using available equipment and materials;
- If sewage reached storm drainage system, plug downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam, sandbags, or other containment materials on hand;
- Use absorbent and vacuum;
- Pump around the blockage/pipe failure/pump station or vacuum flow from upstream of the blockage and dispose of downstream of the blockage to prevent further overflow.

VI.E. RESTORE THE OVERFLOW

The SSO Responder must determine if the overflow was caused by a blockage in the publically owned lower lateral and/or sewer main or a privately owned upper lateral. If it is determined to be on the private side, the SSO Responder must:

- Notify resident of their responsibility and that the City is not responsible for work on a private property;
- Instruct the resident to contact a qualified plumbing contractor to remove the blockage.

If the blockage is caused on the public side, the SSO Responder must:

- Relieve blockage and restore the flow;
- Set up downstream of the blockage and hydro-clean upstream from a clear maintenance hole;
- Observe flows to ensure that the blockage does not recur downstream;
- If blockage cannot be cleared within a reasonable time, or the sewer requires construction repairs to restore flow, initiate containment and/or bypass pumping.
- Photographs response activities, if feasible.

VI.F. SSO SIGNAGE AND PUBLIC ACCESS RESTRICTION

To minimize potential public health risks, the SSO Responder must do the following, as applicable:

a. Cone and barricade overflow area;
b. Use **Appendix D** to determine if Raw Sewage flyers are needed and if so, post around site to direct pedestrian and auto traffic around/away from overflow area;
c. Contact the City Police Department if street closure is necessary;
d. If sewage reached surface water or a drainage channel and was not fully recovered use **Appendix E** to determine if Contaminated Water signs should be posted and water quality samples taken. If so, call on additional staff to post so that the SSO Responder can continue with the procedures in this emergency response plan.
e. Use the sanitary sewer and storm drain maps to identify the potentially affected surface water.

VI.G. RECOVERY, CONTAINMENT AND CLEAN-UP

The recovery and clean up phase begins when the flow has been restored and the spilled sewage has been contained to the maximum extent possible.

The SSO Responder(s) should perform the following procedures:

- Vacuum up or pump the spilled sewage and discharge it back into the sanitary sewer system;
- Clean up and wash down area with dechlorinated water to reduce the potential for human health issues and adverse environmental impacts:
  i. Hard Surface Areas: Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms. Wash down area and collect and vacuum wash water down grade. Repeat the process if additional cleaning is required.
  ii. Landscaped and Unimproved Natural Vegetation: Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms. Allow the area to dry. Wash down area and collect and vacuum wash water down grade. Repeat the process if additional cleaning is required.
  iii. Natural Waterways: OES should be notified in the event an SSO impacts any creeks, gullies, or natural waterways. Clean up should proceed quickly in order to minimize negative impact. Any water that is used in the cleanup process should be de-chlorinated prior to use.
  iv. Private Property: City crews are responsible for the cleanup when the property damage is minor in nature and is outside of private building dwellings, such as in front, side and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the cleanup and restoration. If the overflow into property is the definite cause of City system failure, the property owner can call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, property owners may pick up City claim forms from the City Clerk's office at City Hall.

If a blockage was cleared from a lower lateral and the property owner was not home, the SSO Responder must complete the Note Card for Lower Lateral Work (**Appendix F**) and leave it on the door of the property.

VI.H. SURFACE WATER SAMPLING AND LAB TESTS

The collection of water quality samples is required for sanitary sewer overflows where an estimated 50,000 gallons or greater of unrecovered sewage has reached surface waters. Refer to **Appendix E** for the Standard Operating Procedure: Water Quality Sampling and Posting of Contaminated Waters in Connection with SSOs.

VII. SSO INVESTIGATION AND DOCUMENTATION

The following steps are to be performed by the SSO Responder(s) after the impacts of the SSO are mitigated:

- Photograph site after clean-up.

- Complete the Sanitary Sewer Overflow Report Form
- Perform, or delegate a responsible party, to do a CCTV inspection of the sewer following SSO mitigation but no later than the next business for mainlines or the next three days for lower laterals.
- Provide field form, any supporting documentation and the camera used to take the photographs to the designated Regulatory Reporter within 2 days for Category 1 and 2 overflows and within 5 days for Category 3 overflows.
- Perform, or delegate a responsible party (i.e. a contractor), to do a CCTV inspection of the sewer following SSO mitigation but no later than the next business for mainlines or the next three days for lower laterals.

The Regulatory Reporter is to submit the SSO event data to CIWQS within the time frames specified in Section VIII. The Public Works Director/City Engineer will review and certify the SSO event in CIWQS. The Regulatory Reporter will print the CIWQS certification record, input necessary data in OASIS to close the Work Order and print a copy of the work Order. All of the SSO information will be compiled into a single SSO event file. SSO event files for events less than 250 gallons are compiled and stored in a single folder by year of occurrence. If the SSO volume is 250 gallons or greater, the event file will be stored in a separate folder labeled with the CIWQS event number. All SSO documentation are located in the Regulatory Reporter's office.

VIII. SSO REGULATORY REPORTING PROCEDURES

The following staff members are designated Legally Responsible Officers in the California Integrated Water Quality System (CIWQS) and appear in the order of SSO reporting and certification responsibility. In the event a staff member is unavailable for CIWQS reporting and certification, the staff member listed next in chronological order will be responsible:

1) Mark Hurley, Public Works Director
2) Razzu Engen, Public Works Manager

In the event that CIWQS is not available, the LRO will fax all required information to the Regional Water Board at 510-622-2460. In such event, the City will submit the appropriate reports using CIWQS as soon as practical.

VIII.A. MULTIPLE APPEARANCE POINTS – SINGLE SSO

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

VIII.B. SSO REPORTING FOR CATEGORY 1

The SSO Responder will contact OES for all Category 1 SSOs 1,000 gallons or greater within 2 hours of the City becoming aware of the SSO. This is specified in the response procedures noted above.

Within 3 business days of becoming aware of the SSO, the Regulatory Reporter (Data Submitter) must submit the initial report to the SWRCB's CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs

Within 15 calendar days of the SSO end date, the Public Works Director/City Engineer (LRO) must review and certify the report in the CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs

VIII.C. SSO REPORTING FOR CATEGORY 2

Within 3 business days of becoming aware if the SSO, the Regulatory Reporter must submit the initial report to the SWRCB's CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs

Within 15 calendar days of the SSO end date, the Public Works Director/City Engineer must review and certify the report in the CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs

VIII.D. SSO REPORTING FOR CATEGORY 3

Within 30 calendar days of the end of the calendar month in which the SSO occurred, the Public Works Director/City Engineer must review and certify the report in the CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs

VIII.E. SSO REPORTING FOR PRIVATE LATERAL SEWAGE DISCHARGES

Private lateral sewage discharges (PLSD) that the City becomes aware of or responds to may be voluntarily reported in the CIWQS online SSO database. The Public Works Director/City Engineer if reporting the PLSD must specify that the sewage discharge occurred and was caused by a private line and identify the responsible party, if known. No LRO certification is required for PLSDs.

VIII.F. SSO TECHNICAL REPORT

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

i. Causes and Circumstances of the SSOs;
   a. Complete and detailed explanation of how and when the SSO was discovered.
   b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).
   c. Detailed description of the causes(s) of the SSO.
   d. Copies of the original field crew records used to document the SSO,
   e. Historical maintenance records for the failure location.

ii. Response to SSO:
   a. Chronological narrative description of all actions taken to terminate the overflow.

b. Explanation of how the OERP was implemented to respond to and mitigate the SSO.
c. Final corrective action(s) completed and/or planned to be completed, including a schedule or actions not yet completed.

iii. Water Quality Monitoring
a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
b. Detailed location map illustrating all water quality sampling points.

The Public Works Director/City Engineer is responsible for the development and certification of the SSO Technical Report as the City LRO.

VIII.G. No Spill Certification (Monthly)

Within 30 calendar days of the end of a calendar month that there are no SSO's, the Regulatory Reporter must submit and certify a "No Spill" certification to the CIWQS online SSO database.

VIII.H. CIWQS Not Available

In the event that the CIWQS online SSO database is not available, the Public Works Director/City Engineer will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the City will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO document file.

VIII.I. Amending SSO Reports

The Public Works Director/City Engineer is responsible for amending SSO reports. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the City must contact the State SSO Program Manager to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days. The SSO Program Manager contact information follows:

Armando Martinez
State Water Resources Control Board
Division of Water Quality
1001 I Street 15th Floor
Sacramento, CA 95814
E-mail: Armando.Martinez@waterboards.ca.gov
Phone: (916) 341-5586

IX. SSO WATER QUALITY MONITORING PROGRAM

The City of Albany SSO Water Quality Monitoring Program (WQMP) is attached as Appendix H and includes the following:

1. Protocols for water quality monitoring.

2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).

3. Requirement for water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Requirement for monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Water quality sampling (within 48 hours of discovery of SSO) for (at a minimum) Ammonia and any appropriate bacterial indicator(s) which may include total and fecal coliform, enterococcus, and e-coli.

X. EMERGENCY CONTACT PHONE NUMBERS

STAFF NAME	POSITION	PHONE NUMBER	LEGALLY RESPONSIBLE OFFICER
Police Department		510-525-7300	No
Mark Hurley	Public Works Director	510-559-7255	Yes
Razzu Engen	Public Works Manager	510-524-3751	Yes
Chris Ablaza	Assistant Engineer	510-559-4271	No
Jamira Johnson	Office Assistant	510-524-9543	No
Nick Brown	Building Inspector	510-528-5767	No
Mark Matherly	Maintenance Worker II	510-455-1877	No
Gary Mercer	Maintenance Worker II	510-455-1856	No
Angel Silva	Maintenance Worker II	510-455-1871	No
Michel Hoang	Maintenance Worker II	510-455-1842	No
Peter Tupou	Maintenance Worker I	510-455-9363	No

Appendix A

OASIS W/O ID:_____

CITY OF ALBANY, CA

SANITARY SEWER OVERFLOW REPORT

Problem reported by: _____ **Phone #** (_____) _____-_____

1. (G-1) Type of Spill: ☐ Mainline SID: _____ ☐ Lower Lat. ☐ Upper Lat.

a. (G-6) Spill Address: _____ Albany, CA ☐ 94706 ☐ 94710

b. **(G-7)** Latitude of spill: _____ ° _____ ' _____ " c. **(G-8)** Longitude of spill: _____ ° _____ ' _____ "

d. **(G-9)** County: Alameda . e. **(G-10)** Regional Water Quality Control Board: Region 2 – San Francisco Bay .

2. Estimated Spill Volume:

a. Gallons that **reached a separate storm drain** that flows to a surface water body? _____ Gal.

b. Gallons **recovered from the separate storm drain** that flows to a surface water body? (do not include water used for clean-up) _____ Gal.

c. Gallons that directly **reached a drainage channel** that flows to a surface water body? _____ Gal.

d. Gallons **recovered from a drainage channel** that flows to a surface water body? _____ Gal.

e. Gallons **discharged directly to a surface water body**? _____ Gal.

f. Gallons **recovered from surface water body**? _____ Gal.

g. Gallons **discharged to land**?(includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location. Also, includes backups to building structures) _____ Gal.

h. Gallons **recovered from the discharge to land**? (Do not include water used for clean-up) _____ Gal.

3. Did the spill discharge to a drainage channel and/or surface water? Y / N

4. Did the spill reach a storm drainpipe that is not part of a combined sewer system? Y / **N**

5. If spill reached a separate storm drainpipe, was all of the wastewater fully captured from the separate storm drain and returned to the sanitary sewer system? Y / N (N/A)

Spill Details

11. Location description: _____ **12. Number of appearance points**: ____

13. Spill Appearance Point: ☐ Gravity Mainline ☐ Building or Structure ☐ Upper lateral/bldg. Cleanout (Private) ☐ Lower lateral/curb Cleanout (Public) ☐ Manhole ☐ Other System Structure ☐ Other **14.** (Explanation): _____

_____

15. Final Destination of Spill: ☐ Building or Structure ☐ Paved Surface ☐ Storm drain system ☐ Street/Curb/Gutter ☐ Surface Water (creek, the bay, etc.) ☐ Unpaved surface ☐ Other **16.** (Explanation): _____

_____

Estimated spill DATE/ TIME: **17. Start**: _____@_____AM/PM **18. Notification**: _____@_____AM/PM

19. Operator Arrival: _____@_____AM/PM **20. Spill Ended**: _____@_____AM/PM

21. Spill cause: ☐ Debris-General ☐ Debris-Rags ☐ Flow Exceeded Capacity ☐ Grease/FOG ☐ Operator Error ☐ Pipe Problem/Failure ☐ Roots ☐ Vandalism ☐ Other **22.** (Explanation): _____

_____

23. **Where did failure occur**? ☐ Air Relief (ARV) / Blow Off Valve (BOV) ☐ Force Main ☐ Gravity Mainline ☐ Lower lateral (Public) ☐ Manhole ☐ Other **24.** (Explanation): _____

_____

25. **Was this spill associated with a storm event**? Y / N **26.** **Diameter of pipe at point of failure**: _____ inches.

27. **Material of pipe at point of failure**: _____ 28. Estimated age of sewer? _____ Years.

29. **Spill Response Activities** (check all that apply): ☐ Restored Flow ☐ Contained all/or portion of spill ☐ Inspected Sewer w/ CCTV ☐ Site Clean-up ☐ Barricades Placed ☐ Signs Posted ☐ Photos Taken ☐ Returned all/or portion of spill to sewer system ☐ Other **30.** (Explanation): _____

_____

31. **Spill Response Completion** DATE/ TIME: _____@_____AM/PM

32. **Spill corrective action taken** (check all that apply):

☐ Added sewer to preventative maintenance program ☐ Adjusted schedule/method of preventive maintenance ☐ Enforcement action against FOG source ☐ Inspected Sewer Using CCTV to Determine Cause ☐ Plan rehabilitation or replacement of sewer ☐ Repaired Facilities or Replaced Defect ☐ Other **33.** (Explanation):

_____

34a. Is there an ongoing investigation? Y /N **34b.** Reason of investigation? _____

35. Visual Inspection Results from Impacted Receiving Water: _____

36. Health warning posted? Y / N **37.** Did the spill result in a beach closure? Y / N

38. Name of Impacted beach(es) (Enter N/A if None) _____

39. Name of impacted surface water(s) (enter Un-named Tributary to XXXXX where XXXXX is the name of first named downstream tributary if receiving surface water body is un-named):_____

40. Water quality samples analized for (check all that apply): ☐ Dissolved oxygen ☐ Other Chemical indicator(s) (Specify):_____ ☐ Biological indicator(s)(Specify):_____ ☐ No water quality samples taken ☐ No applicable to this spill ☐ Other 41. (Specify):_____

42. Water quality sample results reported to (check all that apply): ☐ County Health Agency ☐ Regional Water Quality Control Board ☐ No water quality samples taken ☐ Not applicable to this spill ☐ Other 43. (Specify):_____

44. **Explanation of Volume estimation methods used**: ☐ Eyeballed ☐ Measured ☐ Duration of Flow rate ☐ Other (Specify):_____

Notification Details: **45.** Cal OES Control Number: _____ **46.** Called DATE/ TIME: _____@_____AM/PM

47a. **Contact person** who can answer specific questions about this SSO: _____

47b. **Contact Person Title** _____ **47c.** **Contact Person Phone #** (____) _____-_____

48. Work Order **Field Report and Notes**: _____

_____

49. **Crew Name(s)** and Hours: _____

50. **Form Completed By**: _____ Date: _____

Data Entry in OASIS By: _____ Date:_____ Report Entry in CIWQS By: _____ Date:_____

Certification in CIWQS By: _____ Date:_____ CIWQS Event ID:_____

Methods for Estimating Spill Volume

The person preparing the SSO volume estimate should use the method most appropriate to the sewer overflow in question and use the best information available. Please check the method used and include any calculations, drawings and notes.

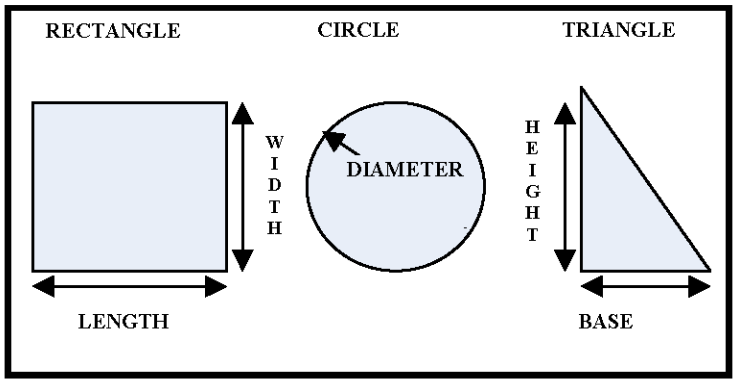
☐ Method 1 Eyeball Estimate

The volume of small overflows 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 overflow 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 overflows up to approximately 200 gallons

☐ Method 2 Measured Volume

This method can be used to estimate the volume of most small overflows that have been contained. The shape, dimensions, and the depth of the contained wastewater are needed. SHOW ALL WORK INVOLVED IN CALCULATION.

Common Shapes and Dimensions



Step 1 Sketch the shape of the contained sewage (see figure above).

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: Area = length (feet) x width (feet)

Circle: Area = diameter (feet) x diameter (feet) x 0.79

Triangle: Area = base (feet) x height (feet) x 0.5

Step 6 Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.

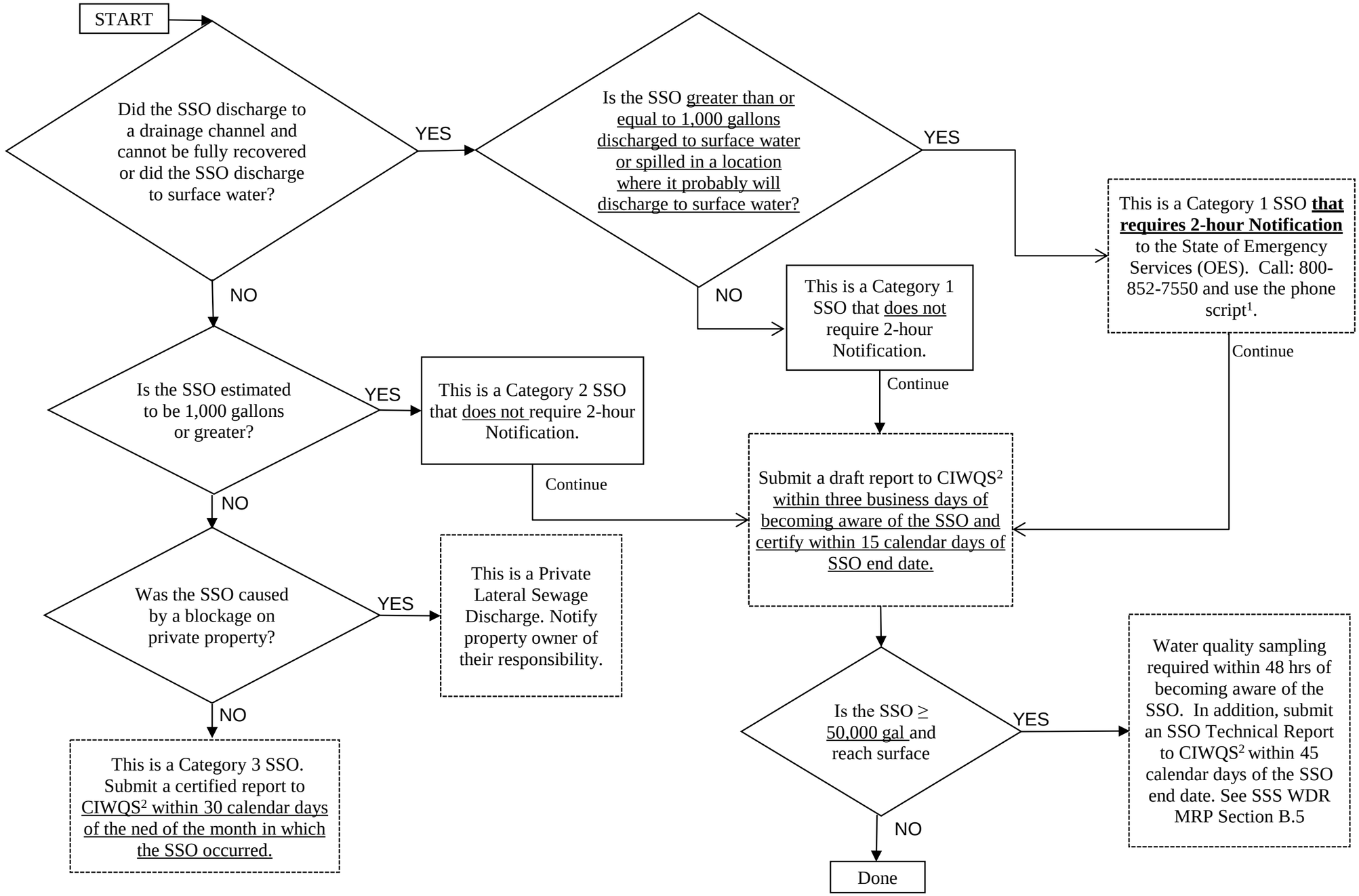
Step 7 Multiply the volume in cubic feet by 7.5 to convert it to gallons

Step 8 Write all computations down and attach them to this document.

☐ Method 3 Duration and Flowrate

Calculating the volume of larger overflows, where it is difficult or impossible to measure the area and depth,may require a different approach. See the separate Duration and Flow Rate Worksheet.

Sanitary Sewer Overflow Regulatory Notification and Reporting, effective September 9, 2013



NOTES:

1. Notification Phone Script: "This is (name) from the City of Albany. There has been a sanitary sewer overflow that requires notification to OES. The overflow occurred at (date, time, location) and the estimated amount of the overflow is (#gallons). A city crew was dispatched an on site at (time) to alleviate the stoppage and mitigate impacts." Make sure you obtain a OES control number for the call. Also, note if surface water was impacted ad a spill rate, if applicable.
2. Report SSOs to CIWQS at http://ciwqs.waterboards.ca.gov/.

APPENDIX C

CITY OF ALBANY
SANITARY SEWER OVERFLOW RESPONSE PLAN

Contingency Plan for Response Equipment

A non-formal agreement for mutual aid exists between the City of Albany and Stege Sanitary District. Each agency has granted verbal agreement to lend assistance across jurisdictional boundaries on an as-needed basis.

Stege Sanitary District has the following equipment available:

- HydroJetter
- 2 rodders
- CCTV van
- Multiple generators
- Technical experience

If the above equipment is needed, contact:

Stege Sanitary District 24-hour phone number: 510-524-4667

Stege Sanitary District Staff members available for assistance include Walt Lunn, Dennis Wright and Rex Delizo.

Appendix D

City of Albany
Sanitary Sewer Overflow Emergency Response Plan

STANDARD PROCEDURE:
Posting of Raw Sewage Signs in Connection with SSOs

This requirement applies to sanitary sewer overflows that have the potential to impact public health

1. Follow overflow emergency response procedures for overflow assessment, and containment.
2. When pedestrian and auto traffic need to be diverted around/away from the overflow area to minimize risk to public health, Raw Sewage signs should be posted.
3. Lead SSO Responder shall assign a crew to post Raw Sewage advisory signs in conspicuous locations to avert potential human exposure.
4. If applicable, the Lead SSO Responder shall inform Police and Parks and Recreation Department of SSO address/location, date, time and volume of spill, and the name of the impacted surface waters, if any.

Raw sewage signs should remain posted until risk any potential risk to public health is remediated.

DANGER

RAW SEWAGE

Keep Children and pets out of this area.

PELIGRO

AGUA CONTAMINADA

Mantenga niños y mascotas fuera de esta área.

For more information – Para más información

Contact: City of Albany
Department of Public Works

(510) 524-9543

Appendix E

City of Albany
Sanitary Sewer Overflow Emergency Response Plan

STANDARD PROCEDURE:
Posting of Contaminated Waters in Connection with SSOs

This requirement applies to sanitary sewer overflows that have impacted public creeks, and/or drainage channels and are accessible to the public.

1. Follow overflow emergency response procedures for overflow assessment, and containment.
2. If sewage entered surface waters and was not fully recovered, refer to Public Works Maintenance Maps and determine area of impact. Note name of surface waters and/or beaches on SSO Work Order Form.
3. Lead SSO Responder shall assign a crew to post contaminated water advisory signs at all predetermined locations downstream of SSO location.
4. Signs shall be posted in conspicuous locations to avert potential human water contact.
5. Lead SSO Responder shall inform Parks and Recreation Department of SSO address/location, date, time and volume of spill, and the name of the impacted surface waters.
6. Warning signs should remain posted until the risk of contamination has subsided to acceptable background levels.

DANGER

RAW SEWAGE

WATER CONTACT MAY CAUSE ILLNESS

Keep Children and pets out of this area.

PELIGRO

AGUA CONTAMINADA

CONTACTO CON EL AGUA
PUEDE CAUSAR ENFERMEDADES

Mantenga niños y mascotas fuera de esta área.

For more information – Para más información

Contact: City of Albany
Department of Public Works

(510) 524-9543

Appendix F

Urban Village by the Bay

ALBANY CALIFORNIA

CITY OF ALBANY
1000 SAN PABLO AVENUE
ALBANY, CA 94706
www.AlbanyCA.org

On _____our maintenance crew responded to a sewer problem in the lower lateral at this property: _____.

☐The problem has been resolved.

☐We will return to inspect the line.

_____
_____
_____

If you have any questions, please call the Public Works Department at 510-524-9543. Thank you.

APPENDIX G

CITY OF ALBANY
SANITARY SEWER OVERFLOW RESPONSE PLAN

Water Sampling and Analysis for Sanitary Sewer Overflows

The collection of receiving water samples is required for SSOs that are 50,000 gallons or greater and reached surface waters. If the weather is such that collecting samples poses a safety risk to staff or the accuracy of the receiving water samples would be significantly diluted, contact the Public Works Director/City Engineer for further direction. When sampling is not possible, document the details of the situation – this information will be included in the certified Category 1 SSO Report and the SSO Technical Report submitted to the CIWQS Online SSO Database. In addition to sampling, an SSO Technical Report is required for Category 1 SSOs greater than 50,000 gallons.

The City does not maintain equipment for sample collection and does not perform sample collection for the purposes of water quality monitoring through lab testing and analysis. The City has an agreement with EBMUD for field services, specified in Exhibit B of the Services Agreement for Sanitary Sewer Overflow Sampling and Analysis.

Sample Collection

1. Call the District's Field Services Section Supervisor if event occurs during normal business hours; call the Environmental Services Division Standby Supervisor if event occurs during off-hours. Provide the location of the SSO and a Field Contact. The Supervisor will direct District Inspectors to report to the location of the SSO and check-in with the Field Contact unless otherwise directed by the City.

2. Inspectors will collect samples of the receiving water within one foot of the water surface at the point where the SSO enters the receiving water, 100 feet upstream, and 100 feet downstream unless otherwise directed by the City.

3. Inspectors will perform visual monitoring of the receiving water where the SSO enters the receiving water and surrounding areas.

4. The District will perform one round of sampling and await direction from the City to perform any additional sampling rounds. Direction shall be provided orally and followed up by either email or similar method.

5. Take photographs of each sampling site – close up photos and the surrounding area.

Sample Testing

1. All collected samples will be analyzed in the laboratory for ammonia, total coliform, fecal coliform, and enterococcus.

2. Samples collected within the off-hours during the dry season will be analyzed during normal business hours. If the sample is analyzed outside of the regulatory holding time, the lab will note the analysis was performed 'past holding time.' For those samples held until the lab is open, the District will appropriately preserve the sample to less than 6 degrees Celsius thought above 0 degrees Celsius until it is analyzed.

Sampling Results

1. The City is responsible for all regulatory reporting and notifications including:
    - Office of Emergency Services (OES) notifications for Category 1 SSOs discharged to surface water that are greater than 1,000 gallons;
    - California Integrated Water Quality System (CIWQS) SSO Database reporting for all reportable SSOs;
    - SSO Technical Report for Category 1 SSOs greater than 50,000 gallons

2. The District will submit a report of the SSO response activities to the City within ten (10) business days of the SSO event.

3. The report will include the following information:
    - Date, location, and time of sampling measurement
    - Inspector(s) who performed the sampling or measurements
    - Date(s) analyses were performed
    - Individuals who performed the analyses
    - Results of the analyses

4. If laboratory results show the upstream and downstream samples equal to or below regulatory thresholds, the Public Works Director/City Engineer can authorize the posted warning signs to be removed.

5. If laboratory results show the upstream and downstream samples above regulatory thresholds, additional sampling may be necessary and requested by the Public Works Director/City Engineer. Do not remove posted warning signs under these circumstances.

6. The District will provide additional information as needed by the City to complete reports required under the City's Permits.

APPENDIX H

SSO Water Quality Monitoring Program

Introduction

This section of the Water Quality Monitoring Program (WQMP) provides the City's response activities and standard operating procedures utilized in the OERP. This program is reviewed on an annual basis and amended as necessary.

State Regulatory Requirements for the WQMP

To comply with sub-section *D.7(v) of the SSS WDR's, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSO's to surface waters in which 50,000 gallons or greater are spilled to surface waters. The WQMP shall, at a minimum:

- Contain protocols for water quality monitoring
- Account for spill travel time in the surface waters and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.)
- Require water quality monitoring analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory
- Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy
- Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, Ammonia and/or appropriate bacterial indicator(s) per the applicable Basin Plan Water Quality Objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli (attached as Reference 1)

For spills greater than 50,000 gallons an SSO Technical Report is required and must be submitted within 45 calendar days of the SSO end date. The City shall provide all of the information requested in the WRCB Order No. WQ 2013-0053-EXEC Monitoring and Reporting Program (MRP) located at Section C Reporting Requirements, Sub-section 5 SSO Technical Report items i- Causes and Circumstances of the SSO, ii-Enrollees response to the SSO and iii-Water Quality Monitoring. A copy of the MRP is attached as Reference 2.

Water Quality Monitoring

The City of Albany and EBMUD is establishing an agreement (Reference 3) to provide sampling services following the discharge of untreated or partially treated wastewater. These services include:

- On-call sampling
- Analysis of water including ammonia and total/fecal coliforms
- Report of SSO event, including:
    - Date, location, and time of sampling or measurement
    - Inspector(s) who performed the sampling or measurement
    - Date(s) analyses were performed
    - Individuals who performed the analyses
    - Results of the analyses

Spill Travel Time

The City does not currently perform spill travel methods. Spill Travel Times are determined by EBMUD inspectors in response to SSO events requiring water quality monitoring.

Safety

Scenarios where monitoring may not be possible may include (but not limited to), heavy rain/storm events where access points have been compromised, flooding around low level areas, raging water. City maintenance workers work in pairs to ensure safety when responding to SSO events.

Monitoring Equipment and Device Calibration

The City does not possess or maintain any monitoring equipment or devices. All SSO events requiring water quality monitoring will be performed by EBMUD personnel.

CHAPTER 3: WATER QUALITY OBJECTIVES

The overall goals of water quality regulation are to protect and maintain thriving aquatic ecosystems and the resources those systems provide to society and to accomplish these in an economically and socially sound manner. California's regulatory framework uses water quality objectives both to define appropriate levels of environmental quality and to control activities that can adversely affect aquatic systems.

3.1 WATER QUALITY OBJECTIVES

There are two types of objectives: narrative and numerical. Narrative objectives present general descriptions of water quality that must be attained through pollutant control measures and watershed management. They also serve as the basis for the development of detailed numerical objectives.

Historically, numerical objectives were developed primarily to limit the adverse effect of pollutants in the water column. Two decades of regulatory experience and extensive research in environmental science have demonstrated that beneficial uses are not fully protected unless pollutant levels in all parts of the aquatic system are also monitored and controlled. The Regional Board is actively working towards an integrated set of objectives, including numerical sediment objectives, that will ensure the protection of all current and potential beneficial uses.

Numerical objectives typically describe pollutant concentrations, physical/chemical conditions of the water itself, and the toxicity of the water to aquatic organisms. These objectives are designed to represent the maximum amount of pollutants that can remain in the water column without causing any adverse effect on organisms using the aquatic system as habitat, on people consuming those organisms or water, and on other current or potential beneficial uses (as described in Chapter 2).

The technical bases of the region's water quality objectives include extensive biological, chemical, and physical partitioning information reported in the scientific literature, national water quality criteria, studies conducted by other agencies, and information gained from local environmental and discharge monitoring (as described in Chapter 6). The Regional Board recognizes that limited information exists in some cases, making it difficult to establish definitive numerical objectives, but the Regional Board believes its conservative approach to setting objectives has been proper. In addition to the technical review, the overall feasibility of reaching objectives in terms of technological, institutional, economic, and administrative factors is considered at many different stages of objective derivation and implementation of the water quality control plan.

Together, the narrative and numerical objectives define the level of water quality that shall be maintained within the region. In instances where water quality is better than that prescribed by the objectives, the state Antidegradation Policy applies (State Board Resolution 68-16: Statement of Policy With Respect to Maintaining High Quality of Waters in California). This policy is aimed at protecting relatively uncontaminated aquatic systems where they exist and preventing further degradation. The state's Antidegradation Policy is consistent with the federal Antidegradation Policy, as interpreted by the State Water Resources Control Board in State Board Order No. 86-17.

When uncontrollable water quality factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, the Regional Board will conduct a case-by-case analysis of the benefits and costs of preventing further degradation. In cases where this analysis indicates that beneficial uses will be adversely impacted by allowing further degradation, then the Regional Board will not allow controllable water quality factors to cause any further degradation of water quality. Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the state and that may be reasonably controlled.

The Regional Board establishes and enforces waste discharge requirements for point and nonpoint source of pollutants at levels necessary to meet numerical and narrative water quality objectives. In setting waste discharge requirements, the Regional Board will consider, among other things, the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives.

In general, the objectives are intended to govern the concentration of pollutant constituents in the main water mass. The same objectives cannot be applied at or immediately adjacent to submerged effluent discharge structures. Zones of initial dilution within which higher concentrations can be tolerated will be allowed for such discharges.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from submerged outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum-induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

Compliance with water quality objectives may be prohibitively expensive or technically impossible in some cases. The Regional Board will consider modification of specific water quality objectives as long as the discharger can demonstrate that the alternate objective will protect existing beneficial uses, is scientifically defensible, and is consistent with the state Antidegradation Policy. This exception clause properly indicates that the Regional Board will conservatively compare benefits and costs in these cases because of the difficulty in quantifying beneficial uses.

These water quality objectives are considered necessary to protect the present and potential beneficial uses described in Chapter 2 of this Plan and to protect existing high quality waters of the state. These objectives will be achieved primarily through establishing and enforcing waste discharge requirements and by implementing this water quality control plan.

3.2 OBJECTIVES FOR OCEAN WATERS

The provisions of the State Board's "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan) and "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan) and any revision to them will apply to ocean waters. These plans describe objectives and effluent limitations for ocean waters.

3.3 OBJECTIVES FOR SURFACE WATERS

The following objectives apply to all surface waters within the region, except the Pacific Ocean.

3.3.1 BACTERIA

Table 3-1 provides a summary of the bacterial water quality objectives and identifies the sources of those objectives. Table 3-2 summarizes U.S. EPA's water quality criteria for water contact recreation based on the frequency of use a particular area receives. These criteria will be used to differentiate between pollution sources or to supplement objectives for water contact recreation.

3.3.3.1 Implementation Provisions for Water Contact Recreation Bacteria Objectives

Water quality objectives for bacteria in Table 3-1 shall be strictly applied except when otherwise provided for in a TMDL. In the context of a TMDL, the Water Board may implement the objectives in fresh and marine waters by using a "reference system and antidegradation approach" as discussed below. Implementation of water quality objectives for bacteria using a "reference system and antidegradation approach" requires control of bacteria from all anthropogenic sources so that bacteriological water quality is consistent with that of a reference system. A reference system is defined as an area (e.g., a subwatershed or catchment) and associated monitoring point(s) that is minimally impacted by human activities that potentially affect bacteria densities in the reference receiving water body.

This approach recognizes that there are natural sources of bacteria (defined as non-anthropogenic sources) that may cause or contribute to exceedances of the objectives for indicator bacteria. It also avoids requiring treatment or diversion of water bodies or treatment of natural sources of bacteria from undeveloped areas. Such requirements, if imposed by the Water Board, could have the potential to adversely affect valuable aquatic life and wildlife beneficial uses supported by water bodies in the region.

Under the reference system approach, a certain frequency of exceedance of the single-sample objectives shall be permitted. The permitted number of exceedances shall be based on the observed exceedance frequency in a selected reference system(s) or the targeted water body, whichever is less. The "reference system and antidegradation approach" ensures that bacteriological water quality is at least as good as that of a reference system and that no degradation of existing bacteriological water quality is permitted where existing bacteriological water quality is better than that of the selected reference system(s).

The appropriateness of this approach, the specific exceedance frequencies to be permitted under it, and the permittees to whom it would apply will be evaluated within the context of TMDL development for a specific water body, and decided by the Water Board when considering

adoption of a TMDL. These implementation provisions may only be used within the context of a TMDL addressing municipal stormwater (including discharges regulated under statewide municipal NPDES waste discharge requirements), discharges from confined animal facilities, and discharges from nonpoint sources.

3.3.2 BIOACCUMULATION

Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.

3.3.3 BIOSTIMULATORY SUBSTANCES

Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses. Changes in chlorophyll a and associated phytoplankton communities follow complex dynamics that are sometimes associated with a discharge of biostimulatory substances. Irregular and extreme levels of chlorophyll a or phytoplankton blooms may indicate exceedance of this objective and require investigation.

3.3.4 COLOR

Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.

3.3.5 DISSOLVED OXYGEN

For all tidal waters, the following objectives shall apply:

In the Bay:

Downstream of Carquinez Bridge	5.0 mg/l minimum
Upstream of Carquinez Bridge	7.0 mg/l minimum

For nontidal waters, the following objectives shall apply:

Waters designated as:

Cold water habitat	7.0 mg/l minimum
Warm water habitat	5.0 mg/l minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

Dissolved oxygen is a general index of the state of the health of receiving waters. Although minimum concentrations of 5 mg/l and 7 mg/l are frequently used as objectives to protect fish life,

higher concentrations are generally desirable to protect sensitive aquatic forms. In areas unaffected by waste discharges, a level of about 85 percent of oxygen saturation exists. A three-month median objective of 80 percent of oxygen saturation allows for some degradation from this level, but still requires a consistently high oxygen content in the receiving water.

3.3.6 FLOATING MATERIAL

Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

3.3.7 OIL AND GREASE

Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

3.3.8 POPULATION AND COMMUNITY ECOLOGY

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce significant alterations in population or community ecology or receiving water biota. In addition, the health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ significantly from those for the same waters in areas unaffected by controllable water quality factors.

3.3.9 pH

The pH shall not be depressed below 6.5 nor raised above 8.5. This encompasses the pH range usually found in waters within the basin. Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels.

3.3.10 RADIOACTIVITY

Radionuclides shall not be present in concentrations that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. Waters designated for use as domestic or municipal supply shall not contain concentrations of radionuclides in excess of the limits specified in Table 4 of Section 64443 (Radioactivity) of Title 22 of the California Code of Regulations (CCR), which is incorporated by reference into this Plan. This incorporation is prospective, including future changes to the incorporated provisions as the changes take effect (see Table 3-5).

3.3.11 SALINITY

Controllable water quality factors shall not increase the total dissolved solids or salinity of waters of the state so as to adversely affect beneficial uses, particularly fish migration and estuarine habitat.

3.3.12 SEDIMENT

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Controllable water quality factors shall not cause a detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life.

3.3.13 SETTLEABLE MATERIAL

Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses.

3.3.14 SUSPENDED MATERIAL

Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

3.3.15 SULFIDE

All water shall be free from dissolved sulfide concentrations above natural background levels. Sulfide occurs in Bay muds as a result of bacterial action on organic matter in an anaerobic environment.

Concentrations of only a few hundredths of a milligram per liter can cause a noticeable odor or be toxic to aquatic life. Violation of the sulfide objective will reflect violation of dissolved oxygen objectives as sulfides cannot exist to a significant degree in an oxygenated environment.

3.3.16 TASTES AND ODORS

Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

3.3.17 TEMPERATURE

Temperature objectives for enclosed bays and estuaries are as specified in the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California," including any revisions to the plan.

In addition, the following temperature objectives apply to surface waters:

- The natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.
- The temperature of any cold or warm freshwater habitat shall not be increased by more than 5°F (2.8°C) above natural receiving water temperature

3.3.18 TOXICITY

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. Acute toxicity is defined as a median of less than 90 percent survival, or less than 70 percent survival, 10 percent of the time, of test organisms in a 96-hour static or continuous flow test.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

Attainment of this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, or toxicity tests (including those described in Chapter 4), or other methods selected by the Water Board. The Water Board will also consider other relevant information and numeric criteria and guidelines for toxic substances developed by other agencies as appropriate.

The health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ significantly from those for the same waters in areas unaffected by controllable water quality factors.

3.3.19 TURBIDITY

Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU.

3.3.20 UN-IONIZED AMMONIA

The discharge of wastes shall not cause receiving waters to contain concentrations of un-ionized ammonia in excess of the following limits (in mg/l as N):

Annual Median	0.025
Maximum, Central Bay (as depicted in Figure 2-5) and upstream	0.16
Maximum, Lower Bay (as depicted in Figures 2-6 and 2-7):	0.4

The intent of this objective is to protect against the chronic toxic effects of ammonia in the receiving waters. An ammonia objective is needed for the following reasons:

- Ammonia (specifically un-ionized ammonia) is a demonstrated toxicant. Ammonia is generally accepted as one of the principle toxicants in municipal waste discharges. Some industries also discharge significant quantities of ammonia.

- Exceptions to the effluent toxicity limitations in Chapter 4 of the Plan allow for the discharge of ammonia in toxic amounts. In most instances, ammonia will be diluted or degraded to a nontoxic state fairly rapidly. However, this does not occur in all cases, the South Bay being a notable example. The ammonia limit is recommended in order to preclude any build up of ammonia in the receiving water.
- A more stringent maximum objective is desirable for the northern reach of the Bay for the protection of the migratory corridor running through Central Bay, San Pablo Bay, and upstream reaches.

3.3.21 OBJECTIVES FOR SPECIFIC CHEMICAL CONSTITUENTS

Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use. Water quality objectives for selected toxic pollutants for surface waters are given in Tables 3-3, 3-3A, 3-3B, 3-3C, 3-4 and 3-4A.

The Water Board intends to work towards the derivation of site-specific objectives for the Bay-Delta estuarine system. Site-specific objectives to be considered by the Water Board shall be developed in accordance with the provisions of the federal Clean Water Act, the State Water Code, State Board water quality control plans, and this Plan. These site-specific objectives will take into consideration factors such as all available scientific information and monitoring data and the latest U.S. EPA guidance, and local environmental conditions and impacts caused by bioaccumulation. The objectives in Tables 3-3 and 3-4 apply throughout the region except as otherwise indicated in the tables or when site-specific objectives for the pollutant parameter have been adopted. Site-specific objectives have been adopted for copper in segments of San Francisco Bay (see Figure 7.2-1-01), for nickel in South San Francisco Bay (Table 3-3A), and for cyanide in all San Francisco Bay segments (Table 3-3C). Objectives for mercury that apply to San Francisco Bay are listed in Table 3-3B. Objectives for mercury that apply to Walker Creek, Soulajule Reservoir, and their tributaries, and to waters of the Guadalupe River watershed are listed in Table 3-4A.

South San Francisco Bay south of the Dumbarton Bridge is a unique, water-quality-limited, hydrodynamic and biological environment that merits continued special attention by the Water Board. Controlling urban and upland runoff sources is critical to the success of maintaining water quality in this portion of the Bay. Site-specific water quality objectives have been adopted for dissolved copper and nickel in this Bay segment. Site-specific objectives may be appropriate for other pollutants of concern, but this determination will be made on a case-by-case basis, and after it has been demonstrated that all other reasonable treatment, source control and pollution prevention measures have been exhausted. The Water Board will determine whether revised water quality objectives and/or effluent limitations are appropriate based on sound technical information and scientific studies, stakeholder input, and the need for flexibility to address priority problems in the watershed.

3.3.22 CONSTITUENTS OF CONCERN FOR MUNICIPAL AND AGRICULTURAL WATER SUPPLIES

At a minimum, surface waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of constituents in excess of the maximum (MCLs) or secondary maximum contaminant levels (SMCLs) specified in the following provisions of Title 22, which are incorporated by reference into this plan: Table 64431-A (Inorganic Chemicals) of Section 64431,

and Table 64433.2-A (Fluoride) of Section 64433.2, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (SMCLs-Consumer Acceptance Limits) and 64449-B (SMCLs-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. Table 3-5 contains water quality objectives for municipal supply, including the MCLs contained in various sections of Title 22 as of the adoption of this plan.

At a minimum, surface waters designated for use as agricultural supply (AGR) shall not contain concentrations of constituents in excess of the levels specified in Table 3-6.

3.4 OBJECTIVES FOR GROUNDWATER

Groundwater objectives consist primarily of narrative objectives combined with a limited number of numerical objectives. Additionally, the Water Board will establish basin- and/or site-specific numerical groundwater objectives as necessary. For example, the Water Board has groundwater basin-specific objectives for the Alameda Creek watershed above Niles to include the Livermore-Amador Valley as shown in Table 3-7.

The maintenance of existing high quality of groundwater (i.e., "background") is the primary groundwater objective.

In addition, at a minimum, groundwater shall not contain concentrations of bacteria, chemical constituents, radioactivity, or substances producing taste and odor in excess of the objectives described below unless naturally occurring background concentrations are greater. Under existing law, the Water Board regulates waste discharges to land that could affect water quality, including both groundwater and surface water quality. Waste discharges that reach groundwater are regulated to protect both groundwater and any surface water in continuity with groundwater. Waste discharges that affect groundwater that is in continuity with surface water cannot cause violations of any applicable surface water standards.

3.4.1 BACTERIA

In groundwater with a beneficial use of municipal and domestic supply, the median of the most probable number of coliform organisms over any seven-day period shall be less than 1.1 most probable number per 100 milliliters (MPN/100 mL) (based on multiple tube fermentation technique; equivalent test results based on other analytical techniques as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21 (f), revised June 10, 1992, are acceptable).

3.4.2 ORGANIC AND INORGANIC CHEMICAL CONSTITUENTS

All groundwater shall be maintained free of organic and inorganic chemical constituents in concentrations that adversely affect beneficial uses. To evaluate compliance with water quality objectives, the Water Board will consider all relevant and scientifically valid evidence, including relevant and scientifically valid numerical criteria and guidelines developed and/or published by other agencies and organizations (e.g., U.S. Environmental Protection Agency (U.S. EPA), the State Water Board, California Department of Health Services (DHS), U.S. Food and Drug

Administration, National Academy of Sciences, California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA), U.S. Agency for Toxic Substances and Disease Registry, Cal/EPA Department of Toxic Substances Control (DTSC), and other appropriate organizations.)

At a minimum, groundwater designated for use as domestic or municipal supply (MUN) shall not contain concentrations of constituents in excess of the maximum (MCLs) or secondary maximum contaminant levels (SMCLs) specified in the following provisions of Title 22, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) of Section 64431, Table 64433.2-A (Fluoride) of Section 64433.2, and Table 64444-A (Organic Chemicals) of Section 64444. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)

Groundwater with a beneficial use of agricultural supply shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use. In determining compliance with this objective, the Water Board will consider as evidence relevant and scientifically valid water quality goals from sources such as the Food and Agricultural Organizations of the United Nations; University of California Cooperative Extension, Committee of Experts; and McKee and Wolf's "Water Quality Criteria," as well as other relevant and scientifically valid evidence. At a minimum, groundwater designated for use as agricultural supply (AGR) shall not contain concentrations of constituents in excess of the levels specified in Table 3-6.

Groundwater with a beneficial use of freshwater replenishment shall not contain concentrations of chemicals in amounts that will adversely affect the beneficial use of the receiving surface water.

Groundwater with a beneficial use of industrial service supply or industrial process supply shall not contain pollutant levels that impair current or potential industrial uses.

3.4.3 RADIOACTIVITY

At a minimum, groundwater designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the MCLs specified in Table 4 (Radioactivity) of Section 64443 of Title 22, which is incorporated by reference into this plan. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)

3.4.4 TASTE AND ODOR

Groundwater designated for use as domestic or municipal supply (MUN) shall not contain taste- or odor-producing substances in concentrations that cause a nuisance or adversely affect beneficial uses. At a minimum, groundwater designated for use as domestic or municipal supply shall not contain concentrations in excess of the SMCLs specified in Tables 64449-A (Secondary MCLs-Consumer Acceptance Limits) and 64449-B (Secondary MCLs-Ranges) of Section 64449 of Title 22, which is incorporated by reference into this plan. This incorporation-by-reference is

prospective, including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)

3.5 OBJECTIVES FOR THE DELTA

The objectives contained in the State Water Board's 1995 "Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary" and any revisions thereto shall apply to the waters of the Sacramento-San Joaquin Delta and adjacent waters as specified in that plan.

3.6 OBJECTIVES FOR ALAMEDA CREEK WATERSHED

The water quality objectives contained in Table 3-7 apply to the surface and groundwaters of the Alameda Creek watershed above Niles.

Wastewater discharges that cause the surface water limits in Table 3-7 to be exceeded may be allowed if they are part of an overall wastewater resource operational program developed by those agencies affected and approved by the Water Board.

TABLES

Table 3-1: Water Quality Objectives for Bacteria[a]

Beneficial Use	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Enterococcus (MPN/100ml)[g]
Water Contact Recreation	geometric mean < 200 90th percentile < 400	median < 240 no sample > 10,000	geometric mean < 35 no sample > 104
Shellfish Harvesting[b]	median < 14 90th percentile < 43	median < 70 90th percentile < 230[c]	
Non-contact Water Recreation[d]	mean < 2000 90th percentile < 4000		
Municipal Supply: - Surface Water[e] - Groundwater	geometric mean < 20	geometric mean < 100 < 1.1[f]	

Notes:

a. Based on a minimum of five consecutive samples equally spaced over a 30-day period.

b. Source: National Shellfish Sanitation Program.

c. Based on a five-tube decimal dilution test or 300 MPN/100 ml when a three-tube decimal dilution test is used.

d. Source: Report of the Committee on Water Quality Criteria, National Technical Advisory Committee, 1968.

e. Source: California Department of Public Health recommendation.

f. Based on multiple tube fermentation technique; equivalent test results based on other analytical techniques, as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21(f), revised June 10, 1992, are acceptable.

g. Applicable to marine and estuarine waters only. Numeric values are based on Section 7958 of Title 17 of the California Code of Regulations, 69FR 67217 et seq., and 40 CFR Part 131.41 (effective date December 16, 2004).

Table 3-2: U.S. EPA Bacteriological Criteria for Water Contact Recreation[1,2]
(in colonies per 100 ML)

	Fresh Water		Salt Water
	Enterococci	**E. Coli**	**Enterococci**
Steady State (all areas)	33	126	35
Maximum at:			
- designated beach	61	235	104
- moderately used area	89	298	124
- lightly used area	108	406	276
- infrequently used area	151	576	500

NOTES:

1. The criteria were published in the Federal Register, Vol. 51, No. 45 / Friday, March 7, 1986 / 8012-8016. The Criteria are based on:
(a) Cabelli, V.J. 1983. Health Effects Criteria for Marine Recreational Waters. U.S. EPA, EPA 600/1-80-031, Cincinnati, Ohio, and
(b) Dufour, A.P. 1984. Health Effects Criteria for Fresh Recreational Waters. U.S. EPA, EPA 600/1-84-004, Cincinnati Ohio.

2. The U.S. EPA criteria apply to water contact recreation only. The criteria provide for a level of production based on the frequency of usage of a given water contact recreation area. The criteria may be employed in special studies within this region to differentiate between pollution sources or to supplement the current coliform objectives for water contact recreation.

Table 3-3: Marine[a] Water Quality Objectives for Toxic Pollutants for Surface Waters (all values in ug/l)

Compound	4-day Average	1-hr Average	24-hr Average
Arsenic[b, c, d]	36	69	
Cadmium[b, c, d]	9.3	42	
Chromium VI[b, c, d, e]	50	1100	
Copper[c, d, f]			
Cyanide[g]			
Lead[b, c, d]	8.1	210	
Mercury[h]	0.025	2.1	
Nickel[b, c, d]	8.2	74	
Selenium[i]			
Silver[b, c, d]		1.9	
Tributyltin[j]			
Zinc[b, c, d]	81	90	
PAHs[k]			15

NOTES:

a. Marine waters are those in which the salinity is equal to or greater than 10 parts per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. Unless a site-specific objective has been adopted, these objectives shall apply to all marine waters except for the South Bay south of Dumbarton Bridge (where the California Toxics Rule (CTR) applies) or as specified in note h (below). For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the freshwater (Table 3-4) or marine objectives.

b. Source: 40 CFR Part 131.38 (California Toxics Rule or CTR), May 18, 2000.

c. These objectives for metals are expressed in terms of the dissolved fraction of the metal in the water column.

d. According to the CTR, these objectives are expressed as a function of the water-effect ratio (WER), which is a measure of the toxicity of a pollutant in site water divided by the same measure of the toxicity of the same pollutant in laboratory dilution water. The 1-hr. and 4-day objectives = table value X WER. The table values assume a WER equal to one.

e. This objective may be met as total chromium.

f. Water quality objectives for copper were promulgated by the CTR and may be updated by U.S. EPA without amending the Basin Plan. Note: at the time of writing, the values are 3.1 ug/l (4-day average) and 4.8 ug/l (1-hr. average). The most recent version of the CTR should be consulted before applying these values.

g. Cyanide criteria were promulgated in the National Toxics Rule (NTR) (Note: at the time of writing, the values are 1.0 µg/l (4-day average) and 1.0 µg/l (1-hr. average)) and apply, except that site-specific

marine water quality objectives for cyanide have been adopted for San Francisco Bay as set forth in Table 3-3C.

h. Source: U.S. EPA Ambient Water Quality Criteria for Mercury (1984). The 4-day average value for mercury does not apply to San Francisco Bay; instead, the water quality objectives specified in Table 3-3B apply. The 1-hour average value continues to apply to San Francisco Bay.

i. Selenium criteria were promulgated for all San Francisco Bay/Delta waters in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.0 ug/l (4-day average) and 20 ug/l (1-hr. average).

j. Tributyltin is a compound used as an antifouling ingredient in marine paints and toxic to aquatic life in low concentrations. U.S. EPA has published draft criteria for protection of aquatic life (Federal Register: December 27, 2002, Vol. 67, No. 249, Page 79090-79091). These criteria are cited for advisory purposes. The draft criteria may be revised.

k. The 24-hour average aquatic life protection objective for total PAHs is retained from the 1995 Basin Plan. Source: U.S. EPA 1980.

Table 3-3A: Water Quality Objectives for Copper and Nickel in San Francisco Bay Segments (ug/L)

Compound	4-day Average (CCC)[1]	1-hr Average (CMC)[2]	Extent of Applicability
Copper	6.9	10.8	The portion of Lower San Francisco Bay south of the line representing the Hayward Shoals shown on Figure 7.1. and South San Francisco Bay
Copper	6.0	9.4	The portion of the delta located in the San Francisco Bay Region, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, and the portion of Lower San Francisco Bay north of the line representing the Hayward Shoals on Figure 7.1.
Nickel	11.9	62.4*	South San Francisco Bay

[1]Criteria Continuous Concentration

[2]Criteria Maximum Concentration

*Handbook of Water Quality Standards, 2nd ed. 1994 in Section 3.7.6 states that the CMC = Final AcuteValue/2; 62.4 is the Final Acute Value (resident species database)/2; so the site-specific CMC is lower than the California Toxics Rule value because we are using the resident species database instead of the National Species Database.

Table 3-3B: Marine[a] Water Quality Objectives for Mercury in San Francisco Bay[b]		
Protection of Human Health	0.2 mg mercury per kg fish tissue	Average wet weight concentration measured in the edible portion of trophic level 3 and trophic level 4 fish[c]
Protection of Aquatic Organisms and Wildlife	0.03 mg mercury per kg fish	Average wet weight concentration measured in whole fish 3–5 cm in length

Notes:

a. Marine waters are those in which the salinity is equal to or greater than 10 parts per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the freshwater or marine objectives.

b. Objectives apply to all segments of San Francisco Bay, including Sacramento/San Joaquin River Delta (within San Francisco Bay region), Suisun Bay, Carquinez Strait, San Pablo Bay, Richardson Bay, Central San Francisco Bay, Lower San Francisco Bay, and South San Francisco Bay (including the Lower South Bay).

c. Compliance shall be determined by analysis of fish tissue as described in Chapter 6, Surveillance and Monitoring.

Table 3-3C: Marine [a] Water Quality Objectives for Cyanide in San Francisco Bay [b] (values in ug/l)		
Cyanide	Chronic Objective (4-day Average)	2.9
Cyanide	Acute Objective (1-hour Average)	9.4

Notes:

a. Marine waters are those in which the salinity is equal to or greater than 10 parts per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the freshwater or marine objectives.

b. Objectives apply to all segments of San Francisco Bay, including Sacramento/San Joaquin River Delta (within San Francisco Bay region), Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, Lower San Francisco Bay, and South San Francisco Bay.

Table 3–4: Freshwater[a] Water Quality Objectives for Toxic Pollutants for Surface Waters (all values in ug/l)

Compound	4-day Average	1-hr Average
Arsenic[b, c, d]	150	340
Cadmium[b, d]	e	e
Chromium III[f]		
Chromium VI[b, c, d, g]	11	16
Copper[b, c, d]	9.0[h]	13[h]
Cyanide[i]		
Lead[b, c, d]	2.5[j]	65[j]
Mercury[k]	0.025	2.4
Nickel[b, c, d]	52[l]	470[l]
Selenium[m]		
Silver[b, c, d]		3.4[n]
Tributyltin[o]		
Zinc[b, c, d]	120[p]	120[p]

Notes:

a. Freshwaters are those in which the salinity is equal to or less than 1 part per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. Unless a site-specific objective has been adopted, these objectives shall apply to all freshwaters except for the South Bay south of Dumbarton Bridge, where the California Toxics Rule (CTR) applies. For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the marine (Table 3-3) and freshwater objectives.

b. Source: 40 CFR Part 131.38 (California Toxics Rule or CTR), May 18, 2000.

c. These objectives for metals are expressed in terms of the dissolved fraction of the metal in the water column.

d. These objectives are expressed as a function of the water-effect ratio (WER), which is a measure of the toxicity of a pollutant in site water divided by the same measure of the toxicity of the same pollutant in laboratory dilution water. The 1-hr. and 4-day objectives = table value X WER. The table values assume a WER equal to one.

e. The objectives for cadmium and other noted metals are expressed by formulas where H = ln (hardness) as $CaCO_3$ in mg/l: The four-day average objective for cadmium is $e^{(0.7852\ H\ -\ 3.490)}$. This is 1.1 µg/l at a hardness of 100 mg/l as $CaCO_3$. The one-hour average objective for cadmium is $e^{(1.128\ H\ -\ 3.828)}$. This is 3.9 µg/l at a hardness of 100 mg/l as $CaCO_3$.

f. Chromium III criteria were promulgated in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 180 ug/l (4-day average) and 550 ug/l (1-hr. average). The objectives for chromium III are based on hardness. The values in this footnote assume a hardness of 100 mg/l $CaCO_3$. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective for chromium III is $e^{(0.8190H+1.561)}$. The 1-hour average for chromium III is $e^{(0.8190\ H+3.688)}$.

g. This objective may be met as total chromium.

h. The objectives for copper are based on hardness. The table values assume a hardness of 100 mg/l $CaCO_3$. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective for copper is $e^{(0.8545H-1.702)}$. The 1-hour average for copper is $e^{(0.9422H-1.700)}$.

i. Cyanide criteria were promulgated in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.2 ug/l (4-day average) and 22 ug/l (1-hr. average).

j. The objectives for lead are based on hardness. The table values assume a hardness of 100 mg/l $CaCO_3$. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective is $e^{(1.273H -4.705)}$. The 1-hour average for lead is $e^{(1.273H-1.460)}$.

k. Source: U.S. EPA Quality Criteria for Water 1986 (EPA 440/5-86-001), which established a mercury criterion of 0.012 ug/l. The Basin Plan set the objective at 0.025 based on considerations of the level of detection attainable at that time. The 4-day average value for mercury does not apply to Walker Creek and Soulajule Reservoir and their tributaries nor to waters of the Guadalupe River watershed; instead, the water quality objectives specified in Table 3-4A apply. The 1-hour average value continues to apply to waters specified in Table 3-4A.

l. The objectives for nickel are based on hardness. The table values assume a hardness of 100 mg/l $CaCO_3$. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective is $e^{(0.8460H + 0.0584)}$. The 1-hour average objective is $e^{(0.8460H + 2.255)}$.

m. Selenium criteria were promulgated for all San Francisco Bay/Delta waters in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.0 ug/l (4-day average) and 20 ug/l (1-hr. average).

n. The objective for silver is based on hardness. The table value assumes a hardness of 100 mg/l $CaCO_3$. At other hardnesses, the objective must be calculated using the following formula where H = ln (hardness): The 1-hour average objective for silver is $e^{(1.72H - 6.52)}$. U.S. EPA has not developed a 4-day criterion.

o. Tributyltin is a compound used as an antifouling ingredient in marine paints and toxic to aquatic life in low concentrations. U.S. EPA has published draft criteria for protection of aquatic life (Federal Register: December 27, 2002, Vol. 67, No. 249, Page 79090-79091). These criteria are cited for advisory purposes. The draft criteria may be revised.

p. The objectives for zinc are based on hardness. The table values assume a hardness of 100 mg/l $CaCO_3$. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective for zinc is $e^{(0.8473 H+0.884)}$. The 1-hour average for zinc is $e^{(0.8473 H+ 0.884)}$.

Table 3-4A: Freshwater Water Quality Objectives for Mercury in Walker Creek, Soulajule Reservoir, and Their Tributaries; and in Waters of the Guadalupe River Watershed, Except Los Gatos Creek and its Tributaries Upstream of Vasona Dam, Lake Elsman, Lexington Reservoir, and Vasona Lake

Protection of Aquatic Organisms and Wildlife[a]	0.05 mg methylmercury per kg fish	Average wet weight concentration measured in whole trophic level 3 fish 5–15 cm in length
	0.1 mg methylmercury per kg fish	Average wet weight concentration measured in whole trophic level 3 fish 15 – 35 cm in length

a. The freshwater water quality objectives for the protection of aquatic organisms and wildlife also protect humans who consume fish from the Walker Creek and Guadalupe River watersheds.

Table 3-5: Water Quality Objectives for Municipal Supply

Parameter	Objective (in MG/L)
Physical:	
Color (units)[a]	15.0
Odor (number)[a]	3.0
Turbidity (NTU)[a]	5.0
pH[b]	6.0 - 8.5
TDS[c]	500.0
EC (mmhos/cm)[c]	900
Corrosivity	non-corrosive
Inorganic Parameters:	
Aluminum[d]	1.0[d] / 0.2[a]
Antimony[d]	0.006
Arsenic[d]	0.05
Asbestos[d]	7 MFL[e]
Barium[d]	1.0
Beryllium[d]	0.004
Chloride[c]	250.0
Cadmium[d]	0.005
Chromium[d]	0.05
Copper[a]	1.0
Cyanide[d]	0.15
Fluoride[f]	0.6 - 1.7[g]
Iron[a]	0.3
Lead[b]	0.05
Manganese[a]	0.05
Mercury[d]	0.002
Nickel[d]	0.1
Nitrate (as NO_3)[d]	45.0
Nitrate + Nitrite (as N)[d]	10.0
Nitrite (as N)[d]	1.0
Selenium[d]	0.05
Silver[b]	0.1
Sulfate[c]	250.0
Thallium[d]	0.002
Zinc[a]	5.0
Organic Parameters:	
MBAS (Foaming agents)[a]	0.5
Oil and grease[b]	none
Phenols[b]	0.001
Trihalomethanes[b]	0.1
Chlorinated Hydrocarbons:	
Endrin[h]	0.002
Lindane[h]	0.0002
Methoxychlor[h]	0.03
Toxaphene[h]	0.003
2,3,7,8-TCDD (Dioxin)[h]	3×10^{-8}
2,4-D[h]	0.07
2,4,4-TP Silvex[h]	0.05

Parameter	Objective (in MG/L)
Synthetic Organic Chemicals:	
Alachor[h]	0.002
Atrazine[h]	0.001
Bentazon[h]	0.018
Benzo(a)pyrene[h]	0.0002
Dalapon[h]	0.2
Dinoseb[h]	0.007
Diquat[h]	0.02
Endothall[h]	0.1
Ethylene dibromide[h]	0.00005
Glyphosate[h]	0.7
Heptachlor[h]	0.00001
Heptachlor epoxide[h]	0.00001
Hexachlorecyclopentadiene[h]	0.001
Molinate[h]	0.02
Oxarnyl[h]	0.05
Pentachlorophenol[h]	0.001
Picloram[h]	0.5
Polychlorinated Biphenyls[h]	0.0005
Simazine[h]	0.004
Thiobencarb[h]	0.07 / 0.001
Volatile Organic Chemicals:	
Benzene[h]	0.001
Carbon Tetrachloride[h]	0.005
1,2-Dibromo-3-chloropropane[h]	0.0002
1,2-Dichlorobenzene[h]	0.6
1,4-Dichlorobenzene[h]	0.005
1,1-Dichloroethane[h]	0.005
1,2-Dichloroethane[h]	0.0005
cis-1,2-Dichloroethlyene[h]	0.006
trans-1,2-Dichloroethylene[h]	0.01
1,1-Dichloroethylene[h]	0.006
Dichloromethane[h]	0.005
1,2-Dichloropropane[h]	0.005
1,3-Dichloropropene[h]	0.0005
Ethylbenzene[h]	0.7
Methyl-tert-butyl ether[h]	0.013 / 0.005
Monochlorobenzene[h]	0.07
Styrene[h]	0.1
1,1,2,2-Tetrachloroethane[h]	0.001
Tetrachloroethylene[h]	0.005
1,2,4-Trichlorobenzene[h]	0.005
1,1,1-Trichloroethane	0.200
1,1,2-Trichloroethane[h]	0.005
Trichloroethylene[h]	0.005
Trichlorofluoromethane	0.15

Parameter	Objective (in MG/L)
Volatile Organic Chemicals (cont'd):	
1,1,2-Trichloro-1,2,2 trifluoromethane[h]	1.2
Toluene[h]	0.15
Vinyl Chloride[h]	0.0005
Xylenes (single or sum of isomers)[h]	1.750
Radioactivity:	
Combined Radium-226 and Radium-228[i]	5
Gross Alpha Particle Activity[i]	15
Tritium[i]	20,000
Strontium-90[i]	8
Gross Beta Particle Activity[i]	50
Uranium[i]	20

NOTES:

a. Secondary Maximum Contaminant Levels as specified in Table 64449- A of Section 64449, Title 22 of the California Code of Regulations, as June 3, 2005.

b. Table III-2, 1986 Basin Plan

c. Secondary Maximum Contaminant Levels as specified in Table 64449-B of Section 64449, Title 22 of the California Code of Regulations, as of June 3, 2005. (Levels indicated are "recommended" levels. Table 64449-B contains a complete list of upper and short-term ranges.)

d. Maximum Contaminant Levels as specified in Table 64431-A (Inorganic Chemicals) of Section 64431, Title 22 of the California Code of Regulations, as of June 3, 2005.

e. MFL = million fibers per liter; MCL for fibers exceeding 10 um in length.

f. Flouride objectives depend on temperature.

g. A complete list of optimum and limiting concentrations is specified in Table 64433.2-A of Section 64433.2, Title 22 of the California Code of Regulations, as of June 3, 2005.

h. Maximum Contaminant Levels as specified in Table 64444-A (Organic Chemicals) of Section 64444, Title 22 of the California Code of Regulations, as of June 3, 2005.

i. Maximum Contaminant Levels as specified in Table 4 (Radioactivity) of Section 64443, Title 22 of the California Code of Regulations, as of June 3, 2005.

j. Included Radium-226 but excludes Radon and Uranium.

MG/L Milligrams per liter
pCi/L pico Curries per liter

Table 3-6: Water Quality Objectives for Agricultural Supply[a] (in mg/l)

Parameter	Threshold	Limit	Limit for Livestock Watering
Physical:			
pH	5.5-8.3	4.5-9.0	
TDS			10,000.0
EC (mmhos / cm)		0.2-3.0	
Inorganic Parameters:			
Aluminum	5.0	20.0	5.0
Arsenic	0.1	2.0	0.2
Beryllium	0.1	0.5	
Boron	0.5	2.0	5.0
Chloride	142.0	355.0	
Cadmium	0.01	0.5	0.05
Chromium	0.1	1.0	1.0
Cobalt	0.05	5.0	1.0
Copper	0.2	5.0	0.5
Flouride	1.0	15.0	2.0
Iron	5.0	20.0	
Lead	5.0	10.0	0.1
Lithium		2.5[b]	
Manganese	0.2	10.0	
Molybdenum	0.01	0.05	0.5
Nickel	0.2	2.0	
$NO_3 + NO_2$ (as N)	5.0	30[c]	100.0
Selenium		0.02	0.05
Sodium adsorption ratio (adjusted)[d]	3.0	9.0	
Vanadium	0.1	1.0	0.1
Zinc	2.0	10.0	25

NOTES:

a. For an extensive discussion of water quality for agricultural purposes, see "A Compilation of Water Quality Goals," Central Valley Regional Water Quality Control Board, May 1993.

b. For citrus irrigation, maximum 0.075 mg/l.

c. For sensitive crops. Values are actually for NO_3-N + NH_4-N.

d. Adjusted SAR = $\{ Na /[(Ca + Mg)+2]^{0.5} \}\{1 + [8.4 – pHc]\}$, where pHc is a calculated value based on total cations, Ca + Mg, and CO_3 + HCO_3, in me/l. Exact calculations of pHc can be found in "Guidelines for Interpretation of Water Quality for Agriculture" prepared by the Univ. of California Cooperative Extension.

Table 3-7: Water Quality Objectives for the Alameda Creek Watershed Above Niles

SURFACE WATER QUALITY OBJECTIVES (ALAMEDA CREEK AND TRIBUTARIES)

TDS:	250 mg/l (90 day-arithmetic mean)
	360 mg/l (90 day-90th percentile)
	500 mg/l (daily maximum)
Chlorides:	60 mg/l (90 day-arithmetic mean)
	100 mg/l (90 day-90th percentile)
	250 mg/l (daily maximum)

GROUNDWATER QUALITY OBJECTIVES

(Concentration not to be exceeded more than 10 percent of the time during one year.)

Central Basin

TDS:	Ambient or 500 mg/l, whichever is lower
Nitrate (NO_3):	45 mg/l

Fringe Subbasins

TDS:	Ambient or 1000 mg/l, whichever is lower
Nitrate (NO_3):	45 mg/l

Upland and Highland Areas

California domestic water quality standards set forth in California Code of Regulations, Title 22 and current county standards.

Ambient water quality conditions at a proposed project area will be determined by Zone 7 of the Alameda County Flood Control and Water Conservation District at the time the project is proposed, with the cost borne by the project proponents. Ambient conditions apply to the water-bearing zone with the highest quality water.

Waters designated for use as domestic or municipal water supply shall not contain concentrations of chemicals in excess of natural concentrations or the limits specified in California Code of Regulations, Title 22, Chapter 15, particularly Tables 64431-A and 64431-B of Section 64431, Table 64444-A of Section 64444, and Table 4 of Section 64443.

STATE OF CALIFORNIA
WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

The State of California, Water Resources Control Board (hereafter State Water Board) finds:

1. The State Water Board is authorized to prescribe statewide general Waste Discharge Requirements (WDRs) for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code section 13263(i).

2. Water Code section 13193 *et seq.* requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) to gather Sanitary Sewer Overflow (SSO) information and make this information available to the public, including but not limited to, SSO cause, estimated volume, location, date, time, duration, whether or not the SSO reached or may have reached waters of the state, response and corrective action taken, and an enrollee's contact information for each SSO event. An enrollee is defined as the public entity having legal authority over the operation and maintenance of, or capital improvements to, a sanitary sewer system greater than one mile in length.

3. Water Code section 13271, *et seq.* requires notification to the California Office of Emergency Services (Cal OES), formerly the California Emergency Management Agency, for certain unauthorized discharges, including SSOs.

4. On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems"[1] (hereafter SSS WDRs) to comply with Water Code section 13193 and to establish the framework for the statewide SSO Reduction Program.

5. Subsection G.2 of the SSS WDRs and the Monitoring and Reporting Program (MRP) provide that the Executive Director may modify the terms of the MRP at any time.

6. On February 20, 2008, the State Water Board Executive Director adopted a revised MRP for the SSS WDRs to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state.

7. When notified of an SSO that reaches a drainage channel or surface water of the state, Cal OES, pursuant to Water Code section 13271(a)(3), forwards the SSO notification information[2] to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter

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[1] Available for download at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf

[2] Cal OES Hazardous Materials Spill Reports available Online at:
http://w3.calema.ca.gov/operational/malhaz.nsf/$defaultview and http://w3.calema.ca.gov/operational/malhaz.nsf

and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.

8. In the February 28, 2008 Memorandum of Agreement between the State Water Board and the California Water and Environment Association (CWEA), the State Water Board committed to re-designing the CIWQS[3] Online SSO Database to allow "event" based SSO reporting versus the original "location" based reporting. Revisions to this MRP and accompanying changes to the CIWQS Online SSO Database will implement this change by allowing for multiple SSO appearance points to be associated with each SSO event caused by a single asset failure.

9. Based on stakeholder input and Water Board staff experience implementing the SSO Reduction Program, SSO categories have been revised in this MRP. In the prior version of the MRP, SSOs have been categorized as Category 1 or Category 2. This MRP implements changes to SSO categories by adding a Category 3 SSO type. This change will improve data management to further assist Water Board staff with evaluation of high threat and low threat SSOs by placing them in unique categories (i.e., Category 1 and Category 3, respectively). This change will also assist enrollees in identifying SSOs that require Cal OES notification.

10. Based on over six years of implementation of the SSS WDRs, the State Water Board concludes that the February 20, 2008 MRP must be updated to better advance the SSO Reduction Program[4] objectives, assess compliance, and enforce the requirements of the SSS WDRs.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on September 9, 2013.

8/6/13
Date

Thomas Howard
Executive Director

[3] California Integrated Water Quality System (CIWQS) publicly available at http://www.waterboards.ca.gov/ciwqs/publicreports.shtml

[4] Statewide Sanitary Sewer Overflow Reduction Program information is available at: http://www.waterboards.ca.gov/water_issues/programs/sso/

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems" (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to $5,000 a day per violation pursuant to Water Code section 13350; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

CATEGORIES	DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
CATEGORY 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION **(see section B of MRP)**	• Within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water**, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING **(see section C of MRP)**	• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. • Collection System Questionnaire: Update and certify every 12 months.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by enrollee's Legally Responsible Official(s).
WATER QUALITY MONITORING **(see section D of MRP)**	• Conduct water quality sampling **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING **(see section E of MRP)**	• SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

    i. Name of person notifying Cal OES and direct return phone number.
    ii. Estimated SSO volume discharged (gallons).
    iii. If ongoing, estimated SSO discharge rate (gallons per minute).
    iv. SSO Incident Description:
        a. Brief narrative.
        b. On-scene point of contact for additional information (name and cell phone number).
        c. Date and time enrollee became aware of the SSO.
        d. Name of sanitary sewer system agency causing the SSO.
        e. SSO cause (if known).
    v. Indication of whether the SSO has been contained.
    vi. Indication of whether surface water is impacted.
    vii. Name of surface water impacted by the SSO, if applicable.
    viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
    ix. Any other known SSO impacts.
    x. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

C. REPORTING REQUIREMENTS

1. **CIWQS Online SSO Database Account:** All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. **SSO Categories**

   i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

      a. Reach surface water and/or reach a drainage channel tributary to a surface water; or

      b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

   ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

   iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**

   i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

      a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.

      b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.

iii. **"No Spill" Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, "No Spill" certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a "No Spill" certification statement for that month.

iv. **Amended SSO Reports** – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

i. **Causes and Circumstances of the SSO:**

a. Complete and detailed explanation of how and when the SSO was discovered.

b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

d. Detailed description of the cause(s) of the SSO.

e. Copies of original field crew records used to document the SSO.

f. Historical maintenance records for the failure location.

ii. **Enrollee's Response to SSO:**

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.

b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.

c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**

a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.

ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow 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 SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of spill response activities.
8. Spill response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.

10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. **Draft Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.

d. **Certified Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.

e. **Certified Category 3 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.

ii. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee's sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**

The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:

a. Submit an **electronic** copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. WATER QUALITY MONITORING REQUIREMENTS:

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.

2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).

3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
   i. Ammonia
   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS:

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).

2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
   i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not

result in SSOs. Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.

b. Date and time the complainant or informant first noticed the SSO.

c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.

d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

e. Final resolution of the complaint.

ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.

iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:

i. Supervisory Control and Data Acquisition (SCADA) systems

ii. Alarm system(s)

iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.

2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.

5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Resources Control Board.

7/30/13
Date

Jeanine Townsend
Clerk to the Board

SERVICES AGREEMENT FOR SANITARY SEWER OVERFLOW SAMPLING AND ANALYSIS

THIS AGREEMENT is effective as of this _____ day of _____, 2019, by and between **THE CITY OF ALBANY,** a municipal corporation, ("City") and East Bay Municipal Utility District, a utility district, ("District"), collectively referred to as the "Parties."

WHEREAS, the City desires assistance to meet its obligation to perform activities related to Sanitary Sewer Overflows (SSO) response in accordance with the City's sanitary sewer collection system NPDES permit #CA0038491 (NPDES Permit), the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order 2006-0003-DWQ (SSS WDRs), and the SSS WDRs Monitoring and Reporting Program Amendments Order No. WQ 2013-0058-EXEC (SSS WDRs Amendment); and

WHEREAS, the City finds that specialized knowledge, skills, and training are necessary to render the services necessary to do the work contemplated under this Agreement; and

WHEREAS, the City and the District are working collaboratively as part of the Wet Weather Consent Decree to reduce inflow and infiltration (I/I) resulting in the reduced likelihood of SSOs within the regional collection system, while also collaborating on the investigation of the regional collection system to identify locations of I/I entering the system; and

WHEREAS, the City has determined that the District is qualified by training and experience to render such services; and

WHEREAS, the District desires to provide such services; and

WHEREAS, the public interest will be served by this Agreement;

NOW, THEREFORE, the Parties hereto do mutually agree as follows:

I. SCOPE OF SERVICES AND TERMINATION DATE

A. Project Description

Following the discharge of untreated or partially treated wastewater, perform on-call sampling and analysis of waters of the United States as required in the City's NPDES Permit, SSS WDRs, and SSS WDRs Amendment.

B. Services

The services to be completed under this Agreement ("Services") are described in the Scope of Services (Exhibit A) and the Hourly Rates and Charges (Exhibit B), both attached hereto and incorporated herein. Services under this Agreement are subject to the Not to Exceed Amount set forth in Section III.B.

All tasks performed by District Inspectors will be in accordance with established District safety and SSO monitoring Standard Operating Procedures.

C. Schedule and Completion Date

The term of this Agreement shall be from the date indicated above until September 30, 2023.

II. WORK CHANGES

A. The City reserves the right to order changes in the work to be performed under this Agreement by altering, adding to or deducting from the work. All such changes shall be incorporated in written Amendments to the Scope of Services executed by the District and the City. Such Amendments shall specify the changes requested and any necessary adjustment of compensation and completion time. Any proposed changes shall be subject to the Scope of Services the District is willing and able to provide.

B. No additional work shall be performed nor additional compensation nor extension of time shall be recognized unless contained in an Amendment duly executed on behalf of the City and the District.

III. COMPENSATION AND METHOD OF PAYMENT

A. City agrees to pay the District for the Services performed and costs incurred by District upon certification by the City that the Services were actually performed and costs actually incurred in accordance with the Agreement. Compensation for services performed and reimbursement for costs incurred shall be paid to the District upon receipt and approval by the City of invoices setting forth in detail the services performed and costs incurred. The City shall pay the District within forty-five (45) days of receiving a proper invoice.

B. The compensation for Services listed in Exhibit A and performed shall be computed based upon hourly rates listed in Exhibit B.

Reimbursement for costs incurred shall be limited as follows: Long distance telephone and telecommunications, facsimile transmission, normal postage and express mail charges, and photocopying shall be at cost. Supplies and outside services, transportation, lodging, meals and authorized subcontracts shall be at cost plus a 10% administrative burden. Automobile mileage shall be no more than the current deductible rate set by the Internal Revenue Service.

In no event will the City's obligation to pay the District under this Agreement exceed $75,000 (the "Not to Exceed Amount"), unless this Agreement is first modified in accordance with its terms. In the absence of such a modification to this Agreement, if the Not to Exceed Amount is reached the District shall have no further obligation to perform any Services pursuant to this Agreement.

IV. COVENANTS OF THE DISTRICT

A. Assignment of Agreement

The District covenants and agrees not to assign or transfer any interest in, nor delegate any duties of this Agreement, without the prior express written consent of the City. As to subcontractors, the District shall be solely responsible for managing any such contractors, including but not limited to providing timely reimbursements No contractual relationship will exist between the City and any such subcontractors of the District.

B. Responsibility of District

The District covenants and agrees to take and assume all responsibility for the sampling and testing services rendered by it in connection with this Agreement. The District agrees to indemnify the City and hold harmless City and its officers, officials, employees, agents and volunteers (collectively, "Indemnitees") from and against all claims, liability, loss, damage, suits, and actions arising out of or resulting from the District's willful misconduct, negligence or omissions in its performance of any Services pursuant to this Agreement ("Claims"), and defend the Indemnitees against any Claims with counsel acceptable to the City, which acceptance will not be unreasonably withheld.

C. Independent Contractor

The District hereby covenants and declares that it is an independent public entity and agrees to perform the services as an independent public entity and not as the agent or employee of the City. The District agrees to be solely responsible for the instruments, tools, supplies and/or materials necessary to complete the services; hiring of consultants, agents or employees to complete the services; and the payment of employees, including compliance with Social Security, withholding and all other regulations governing such matters.

D. Insurance

During the term of this Agreement, the District shall carry Workers' Compensation and Employers' Liability Insurance as required by law, and General Liability and Automobile Liability insurance in the amount of at least one million dollars ($1,000,000) per occurrence, or shall be self-insured to at least the same extent. Written notification of the District's self-insurance shall be made to the City within thirty (30) days of a written request. Any change to self-insured status by the District shall be reported to the City in writing within thirty (30) days of such change.

E. Records, Reports and Audits

1. Records
    a. Records shall be established and maintained by the District with respect to all matters covered by this Agreement. Except as otherwise authorized, such records shall be maintained for a period of three years

on a rolling basis, up through three years from the date that final payment is made under this Agreement. Furthermore, records that are the subject of audit findings shall be retained for three years or until such audit findings have been resolved, whichever is later.

b. All costs shall be supported by properly executed payrolls, time records, invoices, contracts, or vouchers, or other official documentation evidencing in proper detail the nature and propriety of the charges. All checks, payrolls, invoices, contracts, vouchers, orders or other accounting documents pertaining in whole or in part to this Agreement shall be clearly identified and readily accessible.

2. Reports and Information:

Upon request, the District shall furnish to the City any and all statements, records, reports, data and information related to matters covered by this Agreement in the form kept by the District in the ordinary course of business.

3. Audits and Inspections:

At any time during normal business hours and as often as the City may deem necessary, there shall be made available to the City for examination all records with respect to all matters covered by this Agreement. The District will permit the City to audit, examine, and make excerpts or transcripts from such records, and to audit all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and or data relating to all matters covered by this Agreement.

F. Discrimination Prohibited

There shall be no discrimination in the performance of this contract, against any person, or group of persons, on account of race, color, religion, creed, national origin, ancestry, gender including gender identity or expression, age, marital or domestic partnership status, mental disability, physical disability (including HIV and AIDS), medical condition (including genetic characteristics or cancer), veteran or military status, family or medical leave status, genetic information, or sexual orientation.

G. Licenses, Certifications and Permits

The District covenants and declares that it has obtained all diplomas, certificates, licenses, permits or the like required of the District by any and all national, state, regional, county, city or local boards, agencies, commissions, committees or other regulatory bodies in order to perform the services contracted for under this Agreement. All work performed by District or its contractors under this Agreement shall be in accordance with applicable legal requirements and shall meet the standard of quality ordinarily expected of providers of the services covered by this Agreement.

H. Authority to Contract

The District covenants and declares that it has obtained all necessary approvals of its board of directors, stockholders, general partners, limited partners or similar authorities to simultaneously execute and bind District to the terms of this Agreement, if applicable.

I. Ownership of Work

All reports prepared or in the process of being prepared by District for the Services to be performed by the District shall be the property of the City and the City shall be entitled to full access and copies of all such materials. Any such reports remaining in the hands of the District upon completion or termination of the work shall be delivered immediately to the City. The District assumes all risk of loss, damage or destruction of or to such materials until they are delivered to the City. If any materials are lost, damaged or destroyed before delivery to the City, the District shall replace them at its own expense. Any and all copyrightable subject matter prepared by the District pursuant to this Agreement is hereby assigned to the City and the District agrees to execute any additional documents that may be necessary to evidence such assignment.

V. TERMINATION

A. Either party shall have the right to terminate this Agreement for any reason whatsoever by providing written notice thereof at least 90 calendar days in advance of the termination date.

B. All termination notice periods triggered pursuant to written notice shall begin to run from the date of the United States Postal Service postmark.

C. Upon termination, City shall provide for payment to the District for services rendered and expenses incurred prior to the termination date.

D. Upon receipt of a termination notice the District shall: (1) promptly discontinue all services affected, unless the notice directs otherwise; and (2) promptly deliver to the City all data, drawings, reports, summaries, and such other information and materials as may have been generated by the District in performing this Agreement, whether completed or in process, in the form specified by the City.

E. The rights and remedies of the City and the District provided in this Section are in addition to any other rights and remedies provided under this Agreement or at law or in equity.

VI. NO PERSONAL LIABILITY

No member, official or employee of the City shall be personally liable to the District or any successor in interest in the event of any default or breach by the City or for any amount

which may become due to the District or successor or on any obligation under the terms of this Agreement.

VII. ENTIRE AGREEMENT

This Agreement constitutes the complete Agreement between the parties and supersedes any and all other Agreements, either oral or in writing, between the parties with respect to the subject matter of this Agreement. No other Agreement, statement or promise relating to the subject matter of this Agreement not contained in this Agreement shall be valid or binding. This Agreement may be modified or amended only by a written document signed by representatives of both parties with appropriate authorization.

VIII. SUCCESSORS AND ASSIGNS

Subject to the provision of this Agreement regarding assignment, this Agreement shall be binding on the heirs, executors, administrators, successors and assigns of the respective parties.

IX. APPLICABLE LAW AND ATTORNEY'S FEES

If any action at law or in equity is brought to enforce or interpret the provisions of this Agreement, the rules, regulations, statutes and laws of the State of California will control.

X. SEVERABILITY

The caption or head note on articles or sections of this Agreement are intended for convenience and reference purposes only and in no way define, limit or describe the scope or intent thereof, or of this Agreement nor in any way affect this Agreement. Should any article(s) or section(s), or any part thereof, later be deemed unenforceable by a court of competent jurisdiction, the remainder of this Agreement shall remain in full force and effect, provided the remainder of this Agreement can be interpreted to give effect to the intentions of the parties.

XI. NOTICES

A. Communications Relating to Daily Activities

All communications relating to the day to day activities of the work shall be exchanged between the Supervisor of Maintenance for the City and the Supervising Wastewater Control Inspector for the District.

B. Official Notices

All other notices, writings or correspondence as required by this Agreement shall be directed to the City and the District, respectively, as follows:

CITY
Nicole Almaguer
City of Albany
1000 San Pablo Avenue
Albany, California 94706

DISTRICT
Eileen M. White
East Bay Municipal Utility District
375 11th Street, MS 702
Oakland, CA 94607

XII. WAIVER OF AGREEMENT

The City's failure to enforce any provision of this Agreement or the waiver in a particular instance shall not be construed as a general waiver of any future breach or default.

IN WITNESS WHEREOF the parties hereto each herewith subscribe the same in duplicate.

CITY OF ALBANY

By: _____ Date:_____
Nicole Almaguer, City Manager

Approved as to form:

_____
Craig Labadie, City Attorney

EAST BAY MUNICIPAL UTILITY DISTRICT

By: _____ Date:_____
Eileen M. White, Director of Wastewater

Approved as to form:

By: _____
For the Office of the General Counsel

EXHIBIT A

Scope of Services
Sanitary Sewer Overflow Sampling and Analysis
2019-2023

District will provide on-call Wastewater Control Inspectors (Inspectors) to provide sanitary sewer overflow sampling and analysis to assist the City of Albany (City) in implementing the City's Sanitary Sewer Collection System NPDES permit No.CA0038491, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order 2006-0003-DWQ, and the Monitoring and Reporting Program Amendments Order No. WQ 2013-0058-EXEC. The hourly rates for District provided services are listed in Exhibit B.

1. COVERAGE AND RESPONSE TIMES

- The District will provide Inspectors to perform on-call receiving water sampling and analysis during normal business hours and off-hours. Normal business hours for Inspectors are weekdays (excluding holidays) between 7:30am and 4:00pm. Inspectors will report to the location designated by the City within one hour of receiving the call-out during normal business hours and within two hours of receiving the call-out during off-hours.
- Typically, one Inspector will respond during daylight and normal business hours and two Inspectors will respond during nighttime hours. The City may request additional Inspectors to respond, but the number of Inspectors provided for response will be up to the sole discretion of District Supervisors.
- Coverage and response times are based on normal traffic conditions and typical District wet-weather operations.
- The District will provide appropriate lab personnel to analyze collected samples during normal business hours, as well as during off-hours during the rainy season, defined as between November 1st and April 30th. The District's lab operates seven days per week year round with standard operating hours from 8:00am to 4:30pm. The lab does not provide off-hour analysis during the dry season, defined as May 1st through October 31st. The lab is limited to analyzing a total of five samples during weekends, District holidays or rainy season off-hour periods.
- District holidays are as follows: New Year's Day, Martin Luther King Jr Day, Lincoln's Birthday, Washington's Birthday, Cesar Chavez Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, and Day after Christmas Day.

2. COMMUNICATION

- The City will call the District's Field Services Section Supervisor during normal business hours and the Environmental Services Division Standby Supervisor during off-hours.

- The City will provide the location of the sanitary sewer overflow (SSO) and a Field Contact. The Supervisor will direct Inspectors to report to the location of the SSO and check-in with the Field Contact unless otherwise directed by the City.
- District Supervisors are responsible for directing the work of Inspectors in the field except that the City may direct Inspectors to perform sampling and analysis of receiving waters or such tasks that are specifically related to performing sampling and analysis.

3. PROVISION OF EQUIPMENT AND MATERIALS

- The District will provide all equipment and materials it requires for sampling and analysis of sanitary sewer overflows.
- The City shall provide all equipment and materials it requires to perform the tasks listed below.

1. Traffic control.
2. Placing storm drain plugs or dikes.
3. Posting signs at receiving water locations.
4. Identifying the location of sanitary sewer overflows.
5. "Chasing" sanitary sewer overflows to assess if they have reached receiving waters.

4. RECEIVING WATER OBERVATIONS, SAMPLING AND ANALYSIS

- The City will provide access to SSO locations including those that are on private property or that require passing through private property. The City will indemnify the District for and against any and all claims, costs, damages, and liability due to unauthorized access.
- Inspectors will collect samples of the receiving water within one foot of the water surface at the point where the SSO enters the receiving water, 100 feet upstream, and 100 feet downstream unless otherwise directed by the City.
- All collected samples will be analyzed in the laboratory for ammonia, total coliform, fecal coliform, and enterococcus. The City may request additional constituents be monitored by notifying the District's Field Services Section Supervisor during normal business hours and the Environmental Services Division Standby Supervisor during off-hours. Notification may be provided orally, though must be followed up with a documented request provided via email or similar method. Although field testing (e.g., dissolved oxygen, pH if requested) may be done faster, the District shall have 48 hours to prepare kits and obtain samples for constituents other than those listed above.
- The City may request samples at other locations to be collected either for field analysis by the Inspector or analysis by the EBMUD Laboratory.
- Inspectors will perform visual monitoring of the receiving water where the SSO enters the receiving water and surrounding areas.

- The District will perform one round of sampling and await direction from the City to perform any additional sampling rounds. Direction shall be provided orally and followed up by either email or similar method.
- Samples collected within the off-hours during the dry season will be analyzed during normal business hours. If the sample is analyzed outside of the regulatory holding time, the lab will note that the analysis was performed 'past holding time.' For those samples held until the lab is open, the District will appropriately preserve the sample to less than 6 degrees Celsius though above 0 degrees Celsius until it is analyzed.

5. REPORTING

- The City is responsible for all regulatory reporting and notifications including;

    - Office of Emergency Services (OES) notifications for Category 1 SSOs discharged to surface water that are greater than 1,000 gallons
    - California Integrated Water Quality System (CIWQS) SSO Database reporting for all reportable SSOs
    - SSO Technical Report for Category 1 SSOs greater than 50,000 gallons

- The District will submit a report of the SSO response activities to the City within ten (10) business days of the SSO event.
- The report will include a summary of activities performed and observations made by Inspectors, and photos taken during the response. The summary will also include information regarding the sampling performed including:

    - The date, location, and time of sampling or measurement
    - The Inspector(s) who performed the sampling or measurements
    - The date(s) analyses were performed
    - The results of the analyses

- The District will provide additional information as needed by the City to complete reports required under the City's Permits.

EXHIBIT B

Hourly Rates and Charges
2019 - 2023

A. Hourly Rates

Staff	Cost/Hour
Inspector Activities*	$138
Supervisor Activities*	$181
Lab Tech III**	$290

* Hourly rate will be based on actual costs at the time of service. These hourly rates represent the current full cost rates at the time of agreement execution. Per Memoranda of Understanding with the respective unions and adjustments to internal overhead rate calculations, the actual hourly rate charged may change.

** Lab personnel charges are only in the event that personnel are requested for off-hours analysis during the rainy season.

B. Charges

	Charge
Field Analyses by Inspectors	$0 (included in hourly rate)
District Laboratory Analyses	Per Laboratory Price Schedule Below*

*Lab price schedule is applicable for analysis performed during normal business hours.

Product	Description	Method	Certified (Y/N)	Price
+REPORT	Signed Report Requested	N/A	N	$0.00
+SAMP KIT	Sample container kit preparation	N/A	N	$83.60
AMMONIA: TITR	Ammonia, total, distillation and titration	SM4500-NH3 B,C-2011	Y	$55.00
COLI SM 9221B	Total Coliform - MTF	SM 9221 B-2006	Y	$58.30
COLIF SM 9221E	Fecal coliform - MTF	SM 9221 E-2006	Y	$62.70
ENT: ENTEROLERT	Bacterial, enterococcus, Enterolert	Enterolert	Y	$41.80

Note: Provided products and their associated costs may change based on best available methodologies and current rates at the time of service.

Appendix 4

Fats, Oils, and Grease Control Program Implementation Plan

City of Albany

Alameda County, California

Fats, Oils, and Grease Control Program Implementation Plan

Standards & Procedures

June 2012

Table of Contents

List of Appendices

Section 1 – General

Fats, Oils, and Grease (FOG) discharged to the sanitary sewer can accumulate along sewer pipe walls coating pipes until wastewater flow through the line is restricted or blocked, increasing the risk of Sanitary Sewer Overflows (SSOs). These occurrences can result in property damage, environmental problems in nearby surface waters, and public health hazards.

In 2006, the State Water Resources Control Board adopted General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-003-DWQ) to facilitate the proper funding and management of wastewater collection systems. The Waste Discharge Requirements include the development and implementation of a Sanitary Sewer Management Plan (SSMP). The SSMP must include a program to control the discharge of FOG to the sewer system.

The City of Albany (City) SSMP was developed and approved by City Council according to the timeline specified in the Waste Discharge Requirements. Element IV of the SSMP contains the plan and commitment by the City to control FOG discharge to the sanitary sewer system. The primary goal of the FOG Control Program is to reduce the risk of blockages and SSOs in an effort to protect public health and the environment by minimizing public exposure to unsanitary conditions. By controlling the amount of FOG in the wastewater collection system, FOG buildup in sewer lines can be lessened, thereby increasing the system's operating efficiency and reducing the number of sewer line blockages and potential overflows. In addition, an effective FOG Control Program can minimize revenue losses associated with enforcement actions and the impacts of restricting public activities, such as beach closures.

The purpose of this Fats, Oils, and Grease Control Program Implementation Plan (Plan) is to establish fair and consistent policies and procedures for implementing Municipal Code Section 15-5, titled "Fats, Oils and Grease Entering the Sanitary Sewer System."

At the time of Plan adoption, the East Bay Municipal Utility District (EBMUD) is designated the City's Authorized Representative for implementing specific procedures contained herein. **Appendix A** contains the current FOG Scope of Services Among EBMUD, City of Alameda, City of Albany, City of Berkeley, City of Emeryville, City of Oakland, City of Piedmont, Stege Sanitary District. The City reserves the right, at any time, to amend or terminate this service.

Section 2 – Definitions

Additives – includes any product used to break down grease including, bit not limited to, enzymes or surfactants acting as grease emulsifiers or degradation agents.

Approved Grease Control Device - A device designed to intercept fats, oils, and grease from wastewater discharge. This includes the allowable devices referenced in Appendix D of this Plan.

Automatic Grease Removal Device - A device designed to retain fats, oils, and grease from wastewater discharge. An automatic grease removal device actively skims and/or removes FOG from the wastewater stream and transfers it to an external FOG container that food facility staff then empties into a collection container.

Building Official - The Community Development Director has the authority to act as the Building Official for the purposes of implementing this Plan.

City Authorized Representative - is an individual or organization selected by the City to implement and/or enforce one or all the provisions of the FOG Control Program.

City Manager - is appointed by the City Council as the administrative head of the City of Albany municipal government. The City Manager is responsible for policy implementation and management of the day-to-day operations of the City. This term is used interchangeably with "City Administrator" in Albany.

Director of Public Works- The Public Works Manager has the authority to act as the Director of Public Works for the purposes of implementing this Plan.

Food Service Establishment - includes but is not limited to any facility preparing and/or serving food for commercial use or sale. This includes restaurants; cafes; lunch counters; cafeterias; hotels; hospitals; convalescent homes; factory or school kitchens; catering kitchens; bakeries; grocery stores with food preparation, food packaging, meat cutting, and meat preparation (excluding grocery stores with only food warming operations); meat packing facilities, and other food handling facilities not listed above where fats, oil, and grease may be introduced into the community sewer system and cause line blockages and sewer overflows.

FOG - Refers to all fats, oils, and grease generated during food preparation, food service, and/or kitchen cleanup.

Grease Hauler – Licensed company that is contracted to periodically pump out and clean grease interceptors and traps. The hauler then disposes of the grease in an appropriate and legal manner.

Gravity Grease Interceptor– A large, partitioned vault made of various materials, installed to remove grease and food waste by trapping floatables and settleable solids so that they can be

separated and removed before discharge to the community sewer. It is usually installed underground, outside of the food handling establishment.

Grease Control Device (GCD) – See Approved Grease Control Device.

Grease Trap – A device designed to retain grease before it enters plumbing lines. It is usually installed indoors in kitchen floors or under counters.

Plumbing Fixture – A receptacle, device, or appliance, directly or indirectly connected to a drainage system such as the sanitary sewer, that supplies or receives water or liquid-borne wastes.

Section 3. Conditions Requiring a Grease Control Device at Food Service Establishments

A Grease Control Device is required to be installed and maintained, at the property owner's expense, to prevent FOG related overflows, blockages or increased maintenance in the sanitary sewer system. Grease Control Devices are required if a Food Service Establishment meets any of the following conditions:

a) New construction, including new construction or conversion from a non-food service establishment to a food service establishment. (City staff is responsible for completing and submitting to EBMUD a New Restaurant Notification Form (**Appendix B**) for each new Food Service Establishment)

b) Remodels, additions, alterations or repairs of Food Service Establishments valued at $75,000 or greater.

c) Multiple permits for remodels, additions, alterations or repairs by the same Food Service Establishment owner or operator within a three (3) year period and with a cumulative value over $75,000.

d) An existing Food Service Establishment caused or contributed to increased maintenance such that the cleaning frequency of the associated mainline sewer was 180 days or less, or a FOG-related sanitary sewer system overflow that required reporting in the California Integrated Water Quality System

The above criteria do not preclude the City from evaluating the need for a Food Service Establishment to control FOG discharge from the establishment. The stated criteria also do not preclude a property owner from controlling FOG discharged from their establishment on their own accord and at their expense.

Section 4. Waiver of Grease Control Device Requirements at Food Service Establishments

While the intent of this program is to set forth uniform requirements for Food Service Establishments to control the discharge of fats, oil, and grease to the sewer system, a Food Service Establishment determined to have no immediate adverse impact on the sewer system may be granted a conditional waiver from Grease Control Device installation requirements if specific conditions are met.

A. Grease Control Device Conditional Waiver:
A Grease Control Device may not be required if a facility can demonstrate that food preparation and service do not generate fats, oil, and grease in a quantity sufficient to require a Grease Control Device. A Food Service Establishment determined to have no immediate adverse impact on the collection system because of business type and grease generating capabilities may be granted a waiver from Grease Control Device installation requirements. The Building Official or his/her designee may, at any time, revoke a waiver and require the Food Service Establishment to install a Grease Control Device.

Grease Control Devices may not be required for business types listed below:

a) Establishments serving beverages and/or ready to eat, packaged or unpackaged items (with or without food warming);
b) Ice cream parlors without any baking or other food preparation;
c) Snack bar with no food preparation other than food warming;
d) Bakeries with no food preparation other than food warming;
e) Other establishments serving only ready to eat foods with or without food warming.

For a waiver to be granted, the Building Official or his/her designee must approve a completed Grease Control Device Conditional Waiver application form (**Appendix C**). The EBMUD Environmental Services Division, the designated City Authorized Representative for implementing specific program procedures, will assist in the review of the application form and make a recommendation to the Building Official or his/her designee.

The Building Official or his/her designee may, at any time, revoke a waiver and require the Food Service Establishment to install a Grease Control Device.

Section 5. Grease Control Device Approval Process

Appendix D contains a list of approved Grease Control Devices. Note: there may be a device not listed in Appendix D that is appropriate for site-specific conditions and may be approved.

The City does not permit the installation of passive grease traps. While these devices trap grease, they do not remove the grease to a separate container, making it difficult to measure the depth or fullness of the grease trap. As the passive grease trap's separation efficiency diminishes as the trap fills, timely cleaning and maintenance is critical for proper functioning. An Automatic

Grease Removal Device removes the skimmed grease to a separate container thereby eliminating this challenge and providing clarity for a maintenance frequency determination.

Grease Control Devices must be properly sized in conformance with the current edition of the California Plumbing Code. The volume of the interceptor must be determined by using Table 10-3 in 2010 CA Plumbing Code, reproduced below as **Table 1.** If the number of drainage fixture units (DFUs) is not known, the interceptor must be sized based on the maximum DFUs allowed for the pipe size connected to the inlet of the interceptor.

Table 1. (10-3 2010 CA Plumbing Code). Gravity Grease Interceptor Sizing

DFUs[1,3]	Interceptor Volume[2]
8	500 gallons
21	750 gallons
35	1,000 gallons
90	1,250 gallons
172	1,500 gallons
216	2,000 gallons
307	2,500 gallons
342	3,000 gallons
428	4,000 gallons
576	5,000 gallons
720	7,500 gallons
2112	10,000 gallons
2640	15,000 gallons

1. The maximum allowable DFUs plumbed to the kitchen drain lines that will be connected to the grease interceptor.
2. This size is based on: DFUs, the pipe size from this code; Table 7-5; Useful Tabled for flow in half-full pipes (ref: *Mohinder Nayyar Piping Handbook*, 3rd Edition, 1992). Based on 30-minute retention time (ref: George Tchobanoglous and Metcalf & Eddy. *Wastewater Engineering Treatment, Disposal and Reuse*, 3rd Ed. 1991 & Ronald Crites and George Tchobanoglous, *Small and Decentralized Wastewater Management Systems*, 1998). Rounded up to nominal interceptor volume.
3. When the flow rate of directly connected fixture(s) or appliance(s) have no assigned DFU values, the additional grease interceptor volume shall be based on the known flow rate (gpm) multiplied bu the 30-minutes.

Plans to install a Grease Control Device must be reviewed and approved by the Building Official prior to installation. Grease Control Devices must be installed by a licensed plumbing contractor.

Section 6. Grease Control Device Maintenance

Responsibility

The property owner is responsible for making all maintenance and repairs of the Grease Control Device.

Grease Control Device maintenance shall be done according to the manufacturer's specifications and in a manner that does not present potential risks to human health or cause a public nuisance.

If a Grease Interceptor is installed, the Food Service Establishment is responsible for the following maintenance:

i. Remove the entire contents of the interceptor each time the interceptor is pumped.
ii. Ensure proper operation, maintenance and performance during the entire period of wastewater discharge.
iii. Maintain a minimum pumping frequency of once per three-month period or more frequently to ensure that objectionable odors are not present and the discharge does not cause or contribute to FOG-related overflows, blockages, or increased maintenance in the sanitary sewer system.
iv. Maintain maintenance records with the following information for each Grease Interceptor:
    1) Date of hauling service
    2) Name of the licensed and permitted grease hauler
    3) Volume pumped (gallons)
    4) Waste disposal location

Maintenance Records shall be kept for a minimum of three (3) years from the date of service and shall be provided to the City upon request.

Section 7. Appeal of Building Official Decision

The decision of the Building Official or his/her designee may be appealed to a hearing officer of qualified judgment within ten (10) calendar days after written notice thereof. The City of Albany Master Fee Schedule contains the fee, to be paid by the property owner, that is associated with an appeal of a Building Official decision.

The appeal must be in writing and must state the basis of the appeal. The appeal will be acted upon by within thirty (30) days after receipt of the written appeal, except for good cause shown. An appeal of the Hearing Officer's decision may be made to the City Council in accordance with Council adopted procedures.

Section 8. Failure to Comply

Should any property owner fail to install, maintain or repair their Grease Control Device as set forth in the provisions of this Plan, a written notice of the violation will be issued by the City or City Authorized Representative. The notice will specify a period of time within which the property owner must correct the deficiency. Continual violation is subject to enforcement proceedings defined for violation of the Building Code.

Appendix A

FOG Scope of Services Among
EBMUD, City of Alameda, City of Albany, City of Berkeley, City of Emeryville, City of Oakland, City of Piedmont, Stege Sanitary District

Background

The wastewater collection system agencies in the East Bay Municipal Utility District (EBMUD)'s wastewater service area are the cities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and Stege Sanitary District (agencies). The State Water Resources Control Board Order No. 2006-0003-DWQ statewide requirements include implementation of Fats, Oils, and Grease (FOG) programs unless agencies demonstrate that they do not have FOG related sanitary sewer overflows (SSOs) in their community sewers. The agencies and EBMUD have developed a regional FOG control program, as part of the TAB programs, to reduce FOG related SSOs, and wish to continue working collaboratively on development and implementation of FOG control.

EBMUD has the experience, qualifications, staff and expertise to perform agreed-upon services effectively and efficiently. It is mutually beneficial for EBMUD to provide services to the agencies related to FOG control. Regional implementation of FOG control activities coordinated and supported by EBMUD is an efficient use of resources, including economies of scale and trained staff with a broad knowledge base of the activities that support a regional effort and that provide a systematic approach to managing wastewater discharges from food service establishments (FSEs). It is also mutually beneficial to maintain consistency in development and implementation of FOG control requirements throughout EBMUD's wastewater service area.

Scope of Services

The purpose of this Scope of Services is to continue ongoing FOG control activities to help reduce FOG related SSOs in the agencies' community sewer system. This Scope of Services clarifies the roles and responsibilities of EBMUD and the agencies in this collaborative effort and identifies the tasks to be conducted by each party.

The agencies authorize EBMUD to implement a regional FOG control program as described in this Scope of Services. To facilitate implementation of FOG control activities outlined in the scope of services, agencies will continue to provide EBMUD with the following information:

a) Completed grease SSO and blockage reporting forms for areas in which the agency wants EBMUD to conduct hotspot investigations;
b) Electronic and/or hard copies of community sewer maps that include manhole identification numbers and their locations, sewer pipes size, and flow direction.
c) Residential addresses, including apartment numbers, for hotspot areas in which the agency wishes FOG information to be delivered.

Each agency is responsible for the costs of implementing the FOG control program in its service area as established in Exhibit A: FOG Control Program Budget.

Termination

Any of the Parties may terminate its obligations under this Scope of Services by giving all other parties at least ninety (90) days written notice.

EBMUD's Scope of Services

EBMUD is the technical service provider for the agencies' FOG program requirements. EBMUD also leads inter-agency coordination for the regional FOG control program to maximize consistency and efficiency. EBMUD is responsible for the following activities:

1. FOG HOTSPOT INVESTIGATIONS

   (a) EBMUD will initiate an investigation after receiving a completed grease SSO and blockage reporting form from agency. The investigation will:

      1) Identify the sewer drainage basin contributing to the location of the blockage, SSO, or increased sewer maintenance (FOG hotspot area).
      2) Determine if the FOG hotspot area is in a residential, commercial, or combined residential/commercial drainage basin.
      3) Identify commercial FSEs that discharge in the sewer drainage basin.
      4) If FSEs are identified in the sewer drainage basin, the following field activities may be performed to identify FSEs that caused or contributed to the SSO, blockage, or increased sewer maintenance:
         - Field inspection of the FSEs
         - Dye testing
         - Gravity interceptor inspection
         - Sewer lateral camera inspection
         - Mainline camera inspection
         - Sampling at FSEs

   (b) EBMUD will maintain an electronic listing and perform a follow-up inspection to confirm that the required grease control device (GCD) has been installed and is properly maintained. Grease control devices include gravity grease interceptors and additional approved devices, such as automatic grease removal devices. The Parties shall develop a communications program for identifying and updating the GCD listing with EBMUD.

   (c) EBMUD may perform follow-up sewer lateral and/or main line camera inspections, upon request by agencies.

2. GRAVITY GREASE INTERCEPTOR INSPECTIONS
   (a) EBMUD will perform periodic gravity grease interceptor inspections for FSEs in hotspots as well as for FSEs that are not in hotspots.

3. RESIDENTIAL HOTSPOT RESPONSE
   (a) EBMUD will provide targeted outreach in identified residential FOG hotspots, within the limits of the funding provided in this Scope of Services (Exhibit A). Residential outreach information will be distributed based on the residential addresses, including apartment numbers, in identified hot spot areas based on agency's requests.

4. ENFORCEMENT SUPPORT
   (a) EBMUD will send notifications to FSEs based on agency-specific requirements. These notifications may include requirement letters, notices of non-compliance and other follow-up documents.
   (b) EBMUD will support agencies in any enforcement actions and proceedings taken by agencies (e.g. if agency initiates hearing, EBMUD will present findings of hotspot investigation).
   (c) EBMUD shall maintain a list of approved grease haulers and shall continue to provide a disposal facility for grease.

5. REPORTING
   (a) EBMUD will submit to agencies quarterly FOG hotspot investigation summary reports. These reports include:
      i. A summary of all FOG hotspots that were investigated during the quarter describing the activities performed and the FOG hotspot status at the end of the quarter.
      ii. The number of inspections performed, FSEs identified to cause or contribute FOG related blockages/SSOs, GCDs confirmed to have been installed, and a summary of residential outreach materials distributed during the quarter.
      iii. A summary by satellite agency detailing the level of effort for agency during the previous quarter. This report shall also include the full listing of all FOG hot spot investigation reports submitted by all agencies, their current status and those still remaining to be investigated.

6. FOG CONTROL DATABASE
   (a) EBMUD will develop and maintain a FOG control database that includes:
      i. FOG Hotspots identified by the agencies
      ii. FSEs identified in each FOG hotspot and grease control device/ gravity grease interceptor information for each FSE in the FOG hotspots
      iii. FSE, gravity grease interceptor, lateral camera and main line camera inspections performed at FSEs and FOG hotspots
      iv. Requirement and agency enforcement information for FSEs provided to EBMUD

7. RESIDENTIAL AND COMMERCIAL OUTREACH
   EBMUD will maintain commercial and residential outreach and public education program activities, which may include bill inserts, billboards, outreach events, website development, and periodic direct communication with FSEs. These activities are not included in the budget (Exhibit A).

8. COMPENSATION
   The agencies will compensate EBMUD for the work conducted under Scope of Services items 1 – 6 of this Scope of Services. Current FOG program funding will continue for FY11. Exhibit A details the budget for FY12 and FY13.

9. SCOPE OF SERVICES EVALUATION
   EBMUD and Satellites agree to reevaluate the Scope of Services contained herein annually not later than February of each year.

East Bay Municipal Utility District Environmental Services Division
P.O. Box 24055, MS 702
Oakland, CA 94623-1055
Telephone (510) 287-1651 Fax (510) 287-0621

New Food Service Establishment Notification Form

Establishment Name: _____

Owner Name: _____

Mailing Address: _____

Service Address: _____

Phone Number: _____

Grease Control Device Installation YES NO

Type of Grease Control Device:
_____

_____

Additional Comments: _____

_____

_____

Please fax or email to:
Nadia Borisova
Fax: 510-287-0621
nborisov@ebmud.com

Grease Control Device Conditional Waiver

I, _____
(Business Representative's Name Printed)

Representing _____
(Business Name and Address Printed)

certify that the business named above does not require a grease interceptor installation because it meets the definitions set forth in the *City of Albany Fats, Oils, and Grease Control Program Implementation Plan*. If at any time the business listed above does not meet the definition, I understand that I must notify the City within ninety (90) days of the change and work towards obtaining City approval to install a grease control device sized according to the provisions in the *City of Albany Fats, Oils, and Grease Control Program Implementation Plan*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The grease interceptor installation conditional variance is not transferable to a new owner or occupant.
The Grease Interceptor waiver is not transferable.

The person signing this variance waiver warrants that it has or has obtained the necessary consent and authority to execute this waiver variance and to make this variance binding upon itself.

SIGNED _____DATE _____

CONTACT PHONE NUMBER _____

Supporting documentation of business type must be submitted with application form

---

Please Do Not Write Below This Line

APPROVAL: _____EBMUD REP
PRINT SIGNATURE

DATE _____ CONTACT NO. _____

REASON FOR APPROVAL:

_____

_____

CITY/AGENCY REP _____ DATE _____

REJECTED: _____EBMUD REP
PRINT SIGNATURE

DATE _____ CONTACT NO. _____

REASON FOR REJECTION:

_____

_____

CITY/AGENCY REP _____DATE _____

CITY/AGENCY REP _____DATE _____

Appendix D

Manufacturer	Web Site	Product Name	Technology
ADS	http://www.ads-pipe.com/en/index.asp?ProdID=253	Grease Interceptor	Gravity device, pump out of captured grease and sediment by EBMUD approved grease hauler
API Industries, Inc.	http://www.apiindustriesinc.org/grease_trap.html	ECH20	Coalescing plates device, automatic draw-off of captured grease to external container
Goslyn Environmental Systems	http://www.goslyn.ca	Goslyn	Hydro-mechanical device, captured grease automatically drained to an external container
Green Turtle	http://www.proceptor.com/default.html	Proceptor	Gravity device, pump out of captured grease and sediment by EBMUD approved grease hauler
Highland Tank	http://www.highlandtank.com/	HT-AGI	Hydro-mechanical device, skimmer draws-off captured grease and transfers to an external container
		HT PGI	Gravity device, pump out of captured grease and sediment by EBMUD approved grease hauler
International GRD, Inc.	http://www.internationalgrd.com/	2000	Hydro-mechanical device, captured grease automatically drained to an external container
		2500 IB	Hydro-mechanical device, captured grease automatically drained to an external container
		2500 IBP	Hydro-mechanical device, captured grease automatically drained to an external container
		3500	Hydro-mechanical device, captured grease automatically drained to an external container
		5000	Hydro-mechanical device, captured grease

			automatically drained to an external container
Jay R Smith Mfg. Co.	http://www.jrsmith.com/	Grease+Guard	Hydro-mechanical device, skimmer draws-off captured grease and transfers to an external container
Jensen Precast	http://www.jensenprecast.com	Grease Interceptor	Gravity device, pump out of captured grease and sediment by EBMUD approved grease hauler
Josam Co	http://www.josam.com/	GI200A	Hydro-mechanical device, captured grease automatically pumped to an external container
		60100H - GRD	Hydro-mechanical device, captured grease automatically pumped to an external container
Schier Products	http://www.schierproducts.com/	Great Basin	Gravity device, pump out of captured grease and sediment by EBMUD approved grease hauler
Thermaco	http://www.big-dipper.com/index.php	Big Dipper	Hydro-mechanical device, skimmer draws-off captured grease and transfers to an external container
		Trapzilla	Gravity device, pump out of captured grease and sediment by EBMUD approved grease hauler
Zurn	http://www.zurn.com	Z1199	Hydro-mechanical device, captured grease automatically drained to an external container

Appendix 5

Sewer System Management Plan
Audit

City of Albany

Sewer System Management Plan (SSMP) - Audit
2017 & 2018

SSMP Audit

This audit reviews the City of Albany's (City) SSMP documentation and implementation for the period of calendar years 2017 and 2018. The audit is intended to meet State Water Resources Control Board (SWRCB) 2006 waste discharge requirements (WDR), State Water Board Order No. 2006-0003-DWQ, for agencies that own or operate wastewater collection systems. Consequently, this audit assesses the current state of compliance with WDR provisions, identifies "deficiencies" found in the SSMP and recommends corrective actions to remedy those deficiencies.

Humphrey Consulting (HC) performed this third party audit on behalf of the City through evaluation of SSMP documentation provided by the City, publicly available data sources such as the City website and California Integrated Water Quality System (CIWQS), and meetings and conversations with City staff involved in the implementation of the City SSMP. The following table lists the audit participants:

Table 1 - Audit Participants

Participant	Role	Agency
Doug Humphrey	Lead Auditor	Humphrey Consulting
Mark Hurley	Public Works Director	City of Albany
Chris Ablaza	Assistant Engineer	City of Albany

Humphrey met with Mr. Hurley and Mr. Ablaza on May 20, 2019 and provided Humphrey with SSMP information then and throughout the audit in response to requests from Humphrey.

Audit Schedule

The City's SSMP includes the WDR requirement of audits every two years which is currently is in effect. Consequently, audits reports are due for completion in June (based on the original SSMP adoption date) every other year and no submittal to the RWQCB or SWRCB is required. There is no record of previous audits completed for the City.

SSMP Effectiveness

The evaluation of effectiveness of each SSMP Element, including a brief narrative of audit findings, is provided on the attached SSMP Elements Audit Report for 2017-2018. Any deficiencies and subsequent corrective actions are noted in the narratives for each element. The SSMP has also been updated at this time in accordance with this audit and its findings.

SSO Rate and Volumes

The rate of SSOs, SSO volume, and SSO volume that reaches waters are the most common measurements of SSMP effectiveness and success. The following is a summary of these parameters for Albany for the audit period of calendar years 2017 and 2018.

- The SSO rate decreased in the second year of the audit period (2018), but was still higher than the San Francisco Bay Region 2 ("Regional") rates calculated from CIWQS data after being significantly higher than the Region's rate in 2017. Albany's rates were 34.3/100 miles/year (2017) and 15.6/100 miles/year (2018). That compares to Regional (Region 2, San Francisco Bay Region) rates of 6.80 in 2017 and 5.33 in 2018. While the 2018 rate decreased from the previous year, it is still much greater than the Regional rate and the City staff should analyze their operations and SSMP elements to ensure that the SSMP is effective in reducing the rate and occurrence of SSOs.

  It is important to note that 8 of the 11 SSOs (in 2017) and 3 of the 5 (in 2018) SSOs were associated with problems originating in lower laterals and consequently were very low volume SSOs.

SSO Rate (SSOs/100 miles/year)

Year	SSOs	City SSOs/100mi./year	Region 2 (SSOs/100 mi./year)
2017	**11**	34.3	6.80
2018	**8**	15.6	5.33

- Albany's SSO volume per 100 miles of system for 2017 is significantly lower than the Regional figure but slightly higher than the Regional figure for 2018. The total volume of City SSOs in 2017 was 2,275 gallons and in 2018 was 2,130 gallons. That is 7,635 gallons/100 miles/year in 2017 and 6,635 gallons/100 miles/year in 2018. Regional figures were 86,504 and 5985 for 2017 and 2018 respectively. The following table shows the City and Regional values for SSO in gallons per year, and gallons per 100 miles per year.

  It is important to recognize that almost 90% of the City's 2017 SSO volume was related to one SSO, which was caused by EBMUD work on their system.

SSO Volume (Gallons & Gallons/100 miles/year)

Year	SSO Volume (Gals.)	City Gals./100mi./year	Region 2 (Gals./100 mi./year)
2017	2,275	7,635	86,504
2018	2,130	6,635	5,985

- The SSO volume that reached surface water was 2,000 gallons or 87.9% and 0 gallons or 0% in 2017 and 2018 respectively. In comparison, the Regional values were 96% and 51% for these same years, as shown in the table below. Clearly, the City figure is lower than the Regional figure in 2017 and much lower in 2018. This is a very important indicator, since the primary goal of the SSMP is to operate and maintain the collection system so that water quality is maintained and impacts from SSOs are minimized. As identified earlier, the 2017 figure was the result of one SSO that was caused by EBMUD.

SSO Volume Reaching Surface Water (Gallons & SSO % Reaching Surface Waters)

Year	City SSO Volume (Gals.)	City SSO Volume (% reaching water)	Region SSOs (% reaching water)
2017	2,000	87.9	96
2018	0	0	51

Strengths

The following is a summary of the strengths of the City SSMP:

- The SSO volume is very low and the volume to surface water is usually extremely low, actually 0 (none) in 2018 and only the one event that reached surface waters in 2017, which was caused by EBMUD. This demonstrates that SSOS are generally minimized and when they have occurred, City staff have implemented the overflow emergency response plan effectively and provided efficient and, in most cases, timely SSO responses.

- SSO response times are usually very good, an average time of 20 minutes in 2017 and 60 minutes in 2018. The 2018 average increased significantly, reflecting the

  impact of the lengthy response to one SSO.

- The FOG control program is performed by EBMUD-contracted services and is a very active program. EBMUD staff perform inspections on an as-needed basis on food service establishments (FSEs). Only one FOG-related SSO occurred during this two year audit period and it was a very small volume, 20 gallons, which did not reach surface waters.

- The City has a thoughtful, comprehensive, planned preventive maintenance program. Implementation of the program is thorough and effective is accomplishing proper system operations and maintenance (O&M). The City employs condition assessment (CCTV work) in addition to preventive (regular cleaning) and reactive maintenance activities, and that assessment is an important diagnostic tool and resource that assists capital planning and can help to minimize catastrophic asset failures and minimize SSOs. It appears that staff has generally completed planned maintenance activities as planned.

- The City's Municipal Code (MC) provides adequate legal authority to meet the requirements of the WDR.

- The recordkeeping of collection system activities is good, is of high quality, and is very comprehensive and accessible. Information for this audit was easy to obtain and was readily available upon request.

- The current SSMP update is performed within the timelines required by the WDR and MRP. The previous SSMP was completed in June 2014.

Deficiencies & Corrective Actions

- The certification of SSO events has not been done within required timelines. Reporting and certification of all SSOs should be done in an accurate and timely manner, within all required timelines. All SSOs in this audit period were certified late and this was subject of a 9/10/2018 violation report from the State.
  Corrective Action: All future SSO should be reported and certified within specified deadlines. All LROs should review SSO reporting and certification requirements. Consider an annual training class as well for this purpose.

- The City currently has designated only one legally responsible official (LRO) that can certify SSO reports in the State CIWQS system. The City should designate at least two LROs to ensure that there is 24 hour coverage for SSO certification. The City should also remove ex-employees who are shown as Data Submitters, and add other individuals as data submitters that can submit data into CIWQS.
  Corrective Action: Albany should designate an additional LRO so there are at least 2 LROS, and they should certify any future SSO reports.
- Although it has decreased significantly in the last calendar year, 2018, the SSO rate is still much higher than the Regional rate. While this is somewhat reflective of the

fact that the origin of most SSOs are problems in lower laterals, the rate is higher than typical values in the region and are used by many as an indicator of maintenance success, and deserves attention.
Corrective Action: Investigate and undertake (reasonable and effective) potential maintenance and capital work to reduce SSOs.

- The average time to respond (in person) to SSO events or "response time" was one hour (60 minutes) in 2018 - a quick response helps to minimize volumes and volumes to surface water. While there were only five SSOs, a very small sample size, it's somewhat concerning that response to one event took 120 minutes from the time the call was received until crews were on-site to handle the SSO.
  Corrective Action: Meet with staff that respond to SSOs and emphasize the need for timely response to all SSOs - this may be done as part of SSMP/OERP training.

- SSMP audits are required to be completed every two years. There is no record of any audits previous to this one.
  Corrective Action: Revise the audit element in the SSMP, and post completed audits on the City website after completion.

- There presently is no annual SSMP/OERP training for staff that implements the SSMP (Concord, contracted staff).
  Corrective Action: Initiate annual SSMP refresher training for relevant staff.

- The SSMP Change Log, or "List of Revisions" as it was previously called, has not been kept up to date with significant SSMP revisions since the last SSMP update.
  Corrective Action: Maintain the change log in the future by adding any significant changes to the SSMP as they occur.

Compliance

This audit finds the City to be in general compliance with the WDR.

City of Albany
Sewer System Management Plan (SSMP) Audit
2017 & 2018

The purpose of the SSMP Audit is to evaluate the effectiveness of the City of Albany's (City's) SSMP and to identify any needed for improvement.

Directions: Please check YES or NO for each question. If NO is answered for any question, describe the updates/changes needed and the timeline to complete those changes.

		YES	NO
INTRODUCTION			
A.	**Is the current system description complete and up-to-date? Are infrastructure statistics current and complete?**		X
Discussion/Deficiencies/Corrective Actions: Some system information needs to be updated, when City has complete information on system.			
		YES	**NO**
ELEMENT 1 - GOALS			
A.	**Are the goals stated in the SSMP still appropriate and accurate?**		X
Discussion/Deficiencies/Corrective Actions: Goals are appropriate and the City monitors results relevant to their goals. The goals have been slightly revised, one goal was added.			
ELEMENT 2 - ORGANIZATION			
A.	**Is the List of City Staff Responsible for SSMP current?**		X
B.	**Is the Sewer Staff Contact List current?**	X	
C.	**Is the City Organization Chart included and current?**		X
D.	**Are the position descriptions an accurate portrayal of staff responsibilities?**	X	
E.	**Is the Table regarding the SSO Reporting and Response Chain of Communication accurate and up-to-date?**	X	
Discussion/Deficiencies/Corrective Actions: Both responsible staff and the City organization chart were revised. The organization chart has been revised to reflect the current City organization and will be included in an updated SSMP. City staff is well aware of their SSMP responsibilities and the staff is very capable in regards to carrying out these responsibilities.			

		YES	NO
ELEMENT 3 – LEGAL AUTHORITY			
Does the SSMP contain current references to the Clayton Municipal Code documenting the City's legal authority to:			
A.	**Prevent illicit discharges?**	X	
B.	**Require proper design and construction of sewers and connections**	X	
C.	**Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained b the City?**	X	
D.	**Limit discharges of fats, oils and grease?**	X	
E.	**Enforce any violation of its sewer ordinances?**	X	
F.	**Were any changes or modifications made in the past two years (this audit period) to City Sewer Ordinances, Regulations or standards?**	X	
Discussion/Deficiencies/Corrective Actions: No changes were made to the Albany Code that affects any of the legal authority aspects of the SSMP.			

ELEMENT 4 – OPERATIONS AND MAINTENANCE			
Collection System Maps			
A.	**Does the SSMP reference the current process and procedures for maintaining the City's wastewater collection system maps?**	X	
B.	**Are the City's wastewater collection system maps complete, current and sufficiently detailed?**	X	
C.	**Are storm drainage facilities identified on the collection system maps? If not, are SSO responders able to determine locations of storm drainage inlets and pipes for possible discharge to waters of the state?**	X	
Prioritized Preventive Maintenance			
C.	**Does the SSMO describe current preventive maintenance activities and the system for prioritizing the cleaning of sewers?**	X	
D.	**Based upon information in the Annual SSO Report, are the City's preventive maintenance activities sufficient and effective in minimizing SSOs and blockages?**	X	
Scheduled Inspections and Condition Assessments			
E.	**Is there an ongoing condition assessment plan sufficient to develop a capital improvement plan addressing the proper management and protection of infrastructure assets? ? Does the plan include a time schedule for implementing the short and long-term plans plus a schedule for developing the funds needed for the capital improvement plan?**	X	
Contingency Equipment and Replacement Inventory			
F.	**Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?**	X	

		YES	NO
G.	**Are contingency and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?**	X	
Training			
H.	**Does the SSMP document current training expectations and programs?**	X	
I.	**Are training records current?**	X	

Discussion/Deficiencies/Corrective Actions:

O&M details will be revised in the SSMP update to reflect current operational practices. System maps are updated regularly, and there currently is an effort underway to update the GIS system since there are some locations on maps that staff has indicated are not accurate. The SSMP and appendices document the O&M practices. Condition assessment is used in prioritizing rehabilitation and there's a CIP plan that addresses rehabilitation needs. Training is conducted on a regular basis - the City should continue to implement regular, annual SSMP training.

ELEMENT 5 - DESIGN AND PERFORMANCE STANDARDS			
A.	**Does the SSMP reference current design and construction standards for the installation for new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?**	X	
B.	**Does the SSMP reference current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and the rehabilitation and repair of existing sewer lines?**	X	

Discussion/Deficiencies/Corrective Actions:

No changes were needed as all City's design and performance standards are current, appropriate, and accurately reflected in the existing SSMP.

ELEMENT 6 – OVERFLOW AND EMERGENCY RESPONSE PLAN			
A.	**Does the City's Sanitary Sewer Overflow Emergency Response Plan (OERP) contain proper notification procedures so that primary responders and regulatory agencies are informed of all sanitary sewer overflows (SSOs) as required by the WDR and MRP?**	X	
B.	**Does the OERP have a program to ensure an appropriate response to all overflows?**	X	

		YES	NO
C.	**Does the OERP contain procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities of all SSOs that potentially affect public health or reach waters of the State in accordance with the MRP? Does the SSMP identify the officials who will receive immediate notification of such SSOs?**	X	
D.	**Are staff and contractor personnel aware of and appropriately trained on the procedures of the OERP?**	X	
E.	**Does the OERP contain procedures to address emergency operations such as traffic and crowd control and other necessary response activities?**	X	
F.	**Does the OERP ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge?**	X	
G.	**Was required training on SSMP and OERP completed and documented?**	X	
H.	**Does the OERP contain a water quality monitoring plan that is current? Have employees been trained on this plan and what is needed for an SSO with a large volume?**	X	
I.	**If applicable, was sampling performed within 48 hours for all SSOs greater than 50,000 gallons and was a Technical Report prepared and filed on the CIWQS website?**	X (NA)	
Discussion/Deficiencies/Corrective Actions: The OERP is still current and reflects the City's emergency response plan. All other sections are proper and address WDR requirements for emergency response.			
ELEMENT 7 – FATS, OILS AND GREASE (FOG) CONTROL PROGRAM			
A.	**Does the FOG Control Program include efforts to educate the public on proper handling and disposal of FOG?**	X	
B.	**Does the FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?**	X	
C.	**Are requirements for grease removal devices, best management practices (BMPs), record keeping and reporting established in the City's FOG Control Program?**	X	

		YES	NO
D.	**Does the City have sufficient legal authority to implement and enforce the FOG Control Program, including prohibition of discharges, measure to prevent SSOs and blockages caused by FOG?**	X	
E.	**Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?**	X	
F.	**Is there a plan and schedule for the disposal of FOG generated within the City?**		X
G.	**Does the FOG Control Program include development and implementation of source control measures for all sources of FOG discharged to the system for each sewer system subject to FOG blockages?**	X	
H.	**Does the FOG Control Program include the authority to inspect grease producing facilities, enforce when necessary, and does the City have sufficient staff to inspect and enforce its FOG ordinance**	X	

Discussion/Deficiencies/Corrective Actions:

The City has a comprehensive FOG control program (including contract services by EBMUD employees) that addresses all required items, with the possible exception of a FOG disposal plan. There was only one FOG-caused SSO, and that was only 20 gallons and did not reach surface waters.

ELEMENT 8 - SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN			
A.	**Does the City of Albany Sanitary Sewer Master Plan evaluate hydraulic deficiencies in the system and provide estimates of peak flows associated with condition similar to those causing overflow events, if applicable?**	X	
B.	**Does the City's Capital Improvement Plan (CIP) establish a schedule of approximate completion dates for both short and long- term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?**	X	

Discussion/Deficiencies/Corrective Actions:

No changes were needed as the City's system evaluation and capacity assurance plan is current and accurately reflected in the existing SSMP. There have been no capacity issues experienced and the City has effectively managed collection system capacity.

ELEMENT 9 - MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS			
A.	**Does the City maintain relevant information that can be used to establish and prioritize appropriate SSMP activities?**	X	

		YES	NO
B.	**Does the City monitor implementation and, where appropriate, measure the effectiveness of each element of the SSMP?**	X	
C.	**Does the City assess the success of the preventive maintenance program?**	X	
D.	**Does the City update program elements, as appropriate, based on monitoring or performance evaluations**		X
E.	**Does the City identify and illustrate SSO trends?**		X
	Discussion/Deficiencies/Corrective Actions: SSO data should be graphed and illustrated in order to help identify trends and provide a visual portrayal of performance. Monitoring, in real time, of operations performance should be implemented and used to consider revisions or updates to program elements.		
ELEMENT 10 – SSMP AUDITS			
A.	**Does the audit focus on evaluating the effectiveness of the SSMP?**	X	
B.	**Was the audit completed on time, every two years, and kept on file (preferably as an appendix to the SSMP)?**		X

Discussion/Deficiencies/Corrective Actions:

The SSMP has been revised to implement the biennial audit, as required by the SWRCB, in line with the 2012 direction from the Regional Board in Oakland. Future audits will be performed every two years as a result, and the last audit report should be retained as an appendix to the SSMP.

ELEMENT 11 – COMMUNICATION PROGRAM			
A.	**Does the City communicate with the public on a regular basis about the implementation and performance of the SSMP, and provide the public and opportunity for input? feedback?**		X
B.	**Did City staff communicate with satellite collection systems? Are all agreements with satellite systems current or are changes necessary to these agreements?**	X	

Discussion/Deficiencies/Corrective Actions:

The current SSMP and appendices should be posted on the City website. The updated SSMP should be posted on this page once completed and approved by Council**,** and staff should consider posting SSO data and graphs here as well.

Change Log			
A.	**Is the SSMP Change Log, current and up to date?**		X

Discussion/Deficiencies/Corrective Actions: The Change Log or "Revisions List" as it was previously termed was not current at the time of the audit. However, a new Change Log was completed and prepared that notes the major changes made in the SSMP update subsequent to the audit, and is now current. This Log should be kept current and used anytime there are significant changes made to SSMP items prior to the next audit and SSMP update.		

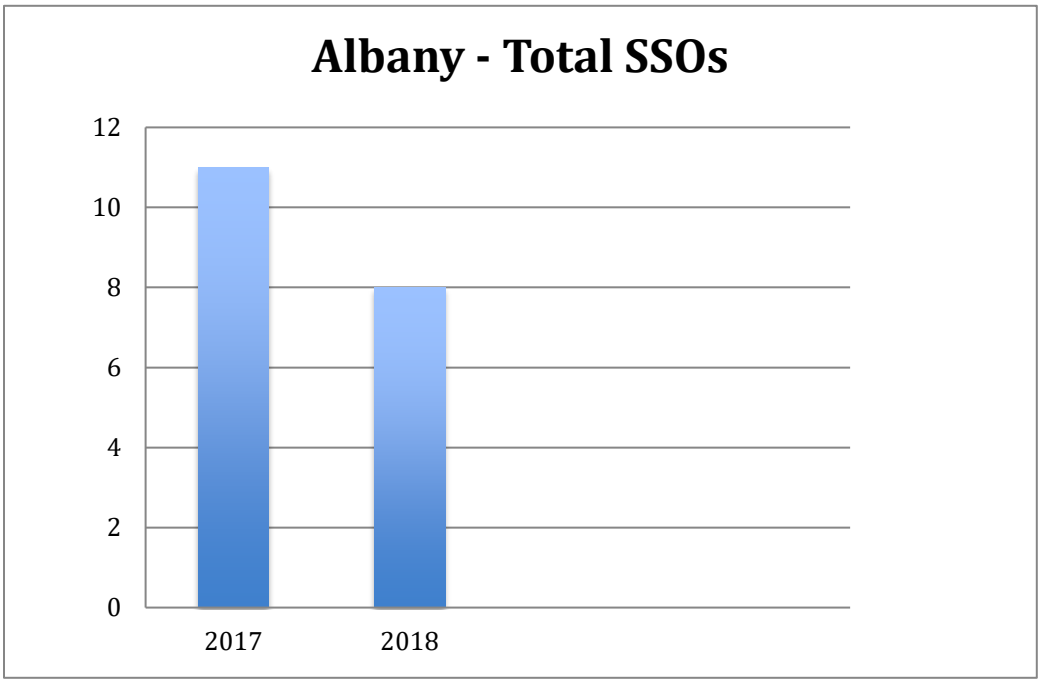
Prepared By: **Douglas Humphrey, Humphrey Consulting**

Reviewed By: **Mark Hurley, City of Albany**

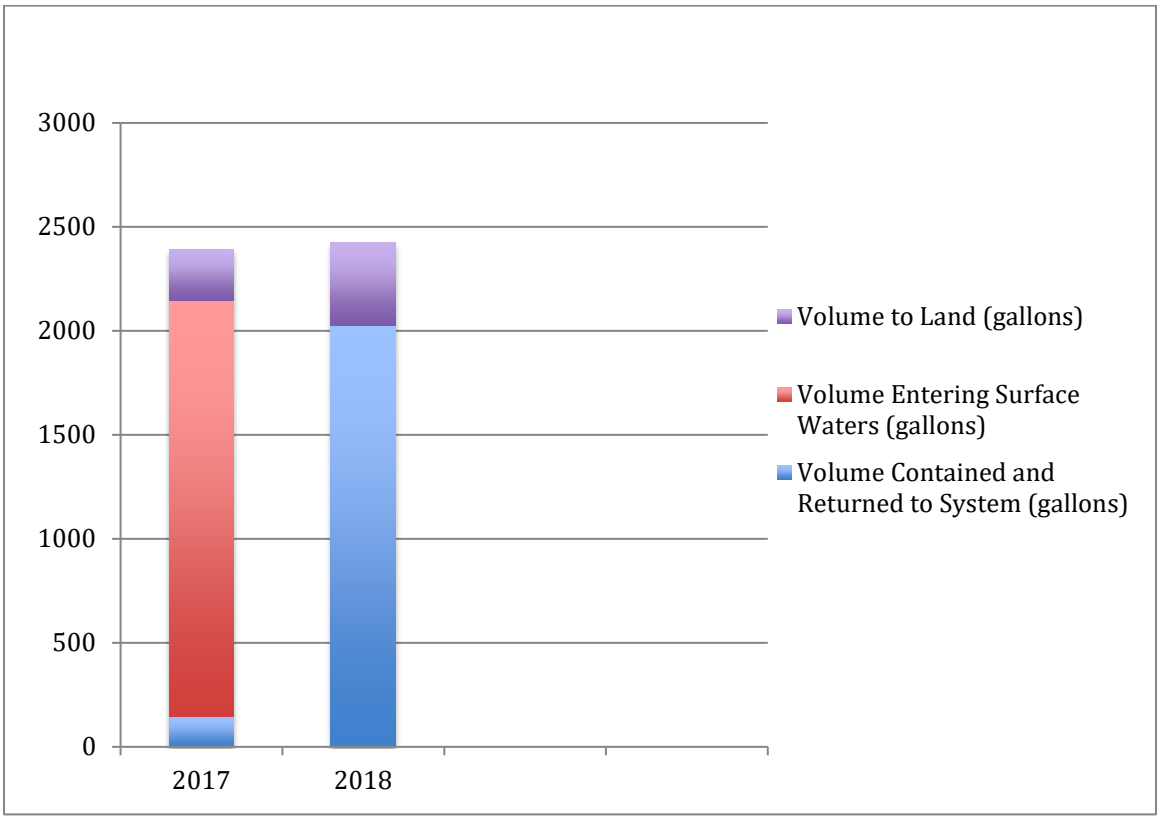
Chris Ablaza, City of Albany

Approved for Filing on: **October 7, 2019**

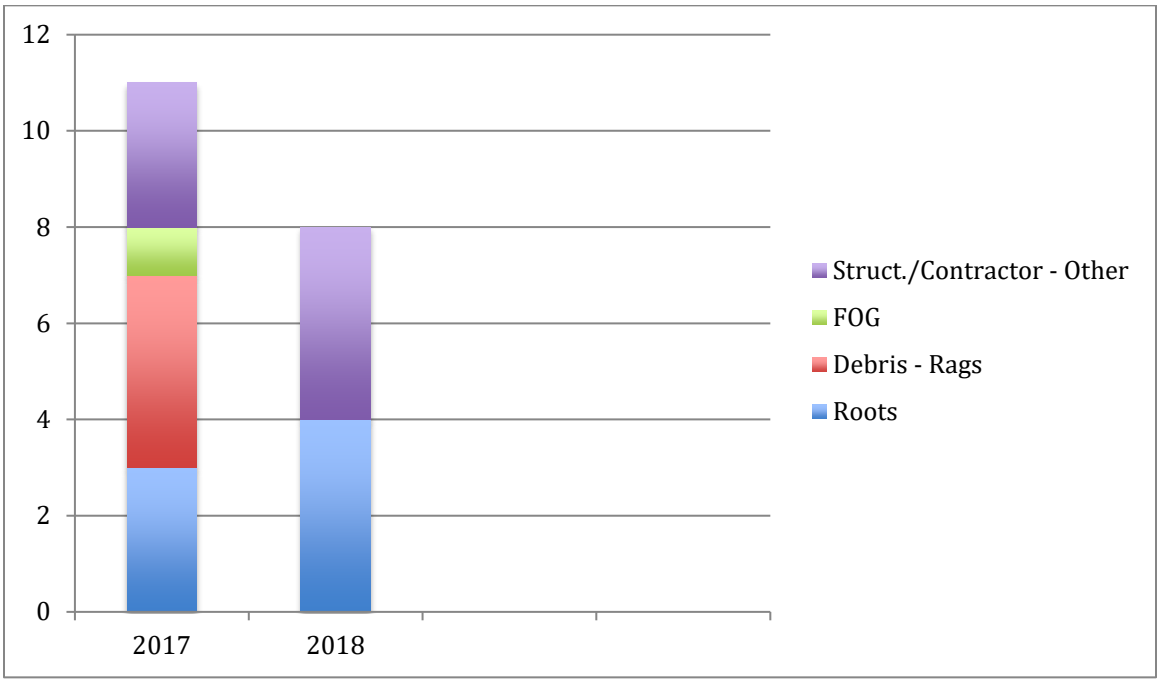
ATTACHMENT - SSO PERFORMANCE
SSO RATES, CAUSES, & VOLUMES TO WATERS



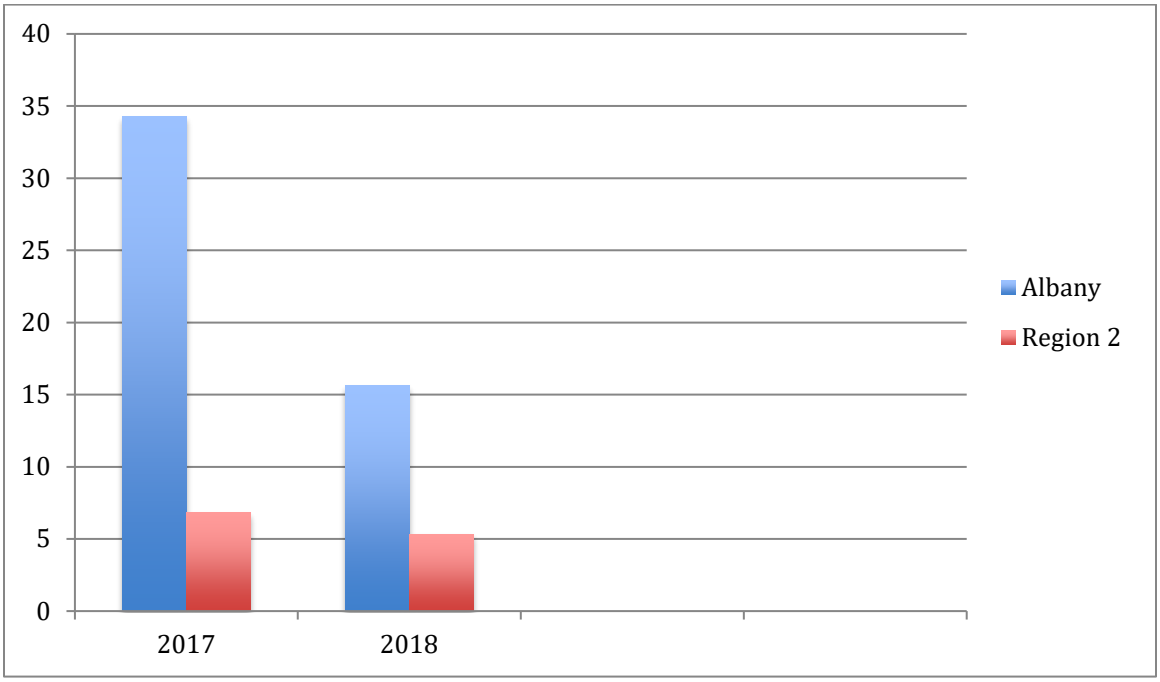
Albany - SSO Volumes
Returned to System, Entering Surface Waters



Albany - SSO Causes



Albany - Comparison to Region 2
SSO Rate (#/100 miles/year)



Appendix 6

Sewer System Management Plan
Change Log

City of Albany
Sewer System Management Plan
Change Log

Date	SSMP Element	Description of Change/Revision Made	Change Authorized By:
9/9/2019	Introduction	- Table I: Sewer System Inventory update to total length for 6" and 8" diameter pipe - Included updated Consent Decree information	Mark Hurley
9/9/2019	2 – Organization	- Updated LRO and Organization Chart	Mark Hurley
9/9/2019	4 – Operations and Maintenance	- Updated MUNSYS references since City is using Lynx Technologies - Updated numbers on financial plan - Updated Hot Spot Cleaning List	Mark Hurley
9/9/2019	6 - OERP	- Included Water Quality Monitoring Program within OERP	Mark Hurley

Appendix 7

City Council Adoption Documents

RESOLUTION NO. 2019-82

A RESOLUTION OF THE ALBANY CITY COUNCIL ADOPTING THE OCTOBER 2019 UPDATE TO THE CITY OF ALBANY'S SEWER SYSTEM MANAGEMENT PLAN

WHEREAS, the State Water Resources Control Board adopted Statewide General Waste Discharge Requirements (WDR) by Order No. 2006-003-DWQ on May 2, 2006 for all publicly owned sanitary sewer collection systems; and

WHEREAS, the WDR required the City of Albany to develop a Sewer System Management Plan (SSMP); and

WHEREAS, the WDR Monitoring and Reporting Program was amended by Order No. 2013-0058 EXEC, dated July 30, 2013 and effective September 9, 2013; and

WHEREAS, the WDR requires that the Sewer System Management Plan be presented for approval by the City's governing board at a public meeting; and

WHEREAS, on June 16, 2014 the Albany City Council adopted an updated SSMP by Resolution No. 14-55; and

WHEREAS, an update to the SSMP is required every five years, and must include any significant program changes, including a water quality monitoring program (WQMP).

NOW THEREFORE, BE IT RESOLVED, that the Albany City Council hereby adopts the October 2019 update to City's Sanitary Sewer Management Plan.

Rochelle Nason

ROCHELLE NASON, MAYOR

City of Albany

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(510) 528-5710 • www.albanyca.org

RESOLUTION NO. 2019-82

PASSED AND APPROVED BY THE COUNCIL OF THE CITY OF ALBANY,

The 7th day of October, 2019, by the following votes:

AYES: Council Members Barnes, Maass, McQuaid, Pilch and Mayor Nason

NOES: None

ABSENT: none

ABSTAINED: none

RECUSED: none

WITNESS MY HAND AND THE SEAL OF THE CITY OF ALBANY, this

8th day of October, 2019.

Eileen Harrington

Eileen Harrington
DEPUTY CITY CLERK