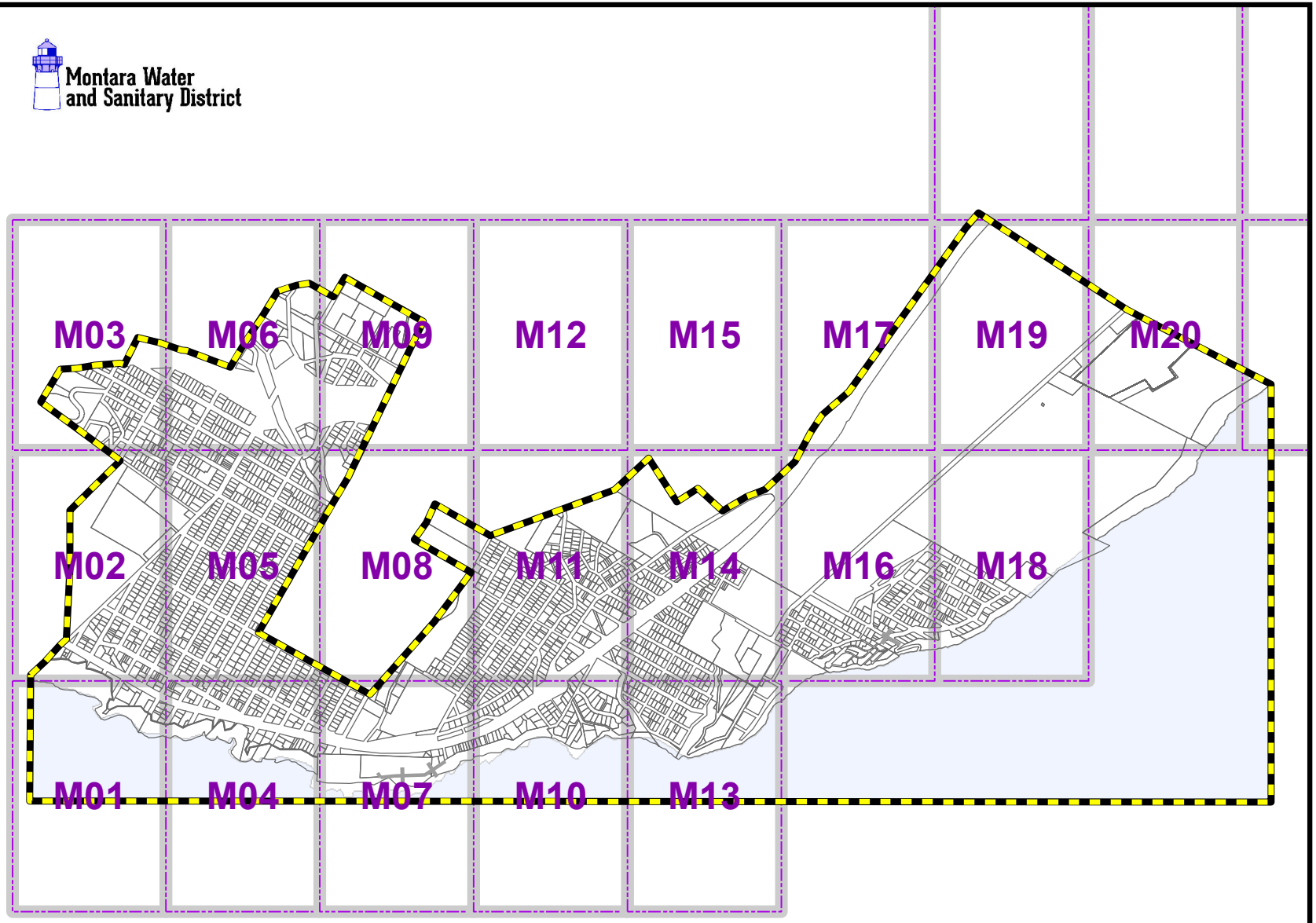
APPENDIX A

Montara Water and Sanitary District Sanitary Sewer Facility Maps

Nute Engineering

Montara Water and Sanitary District



N E S W

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

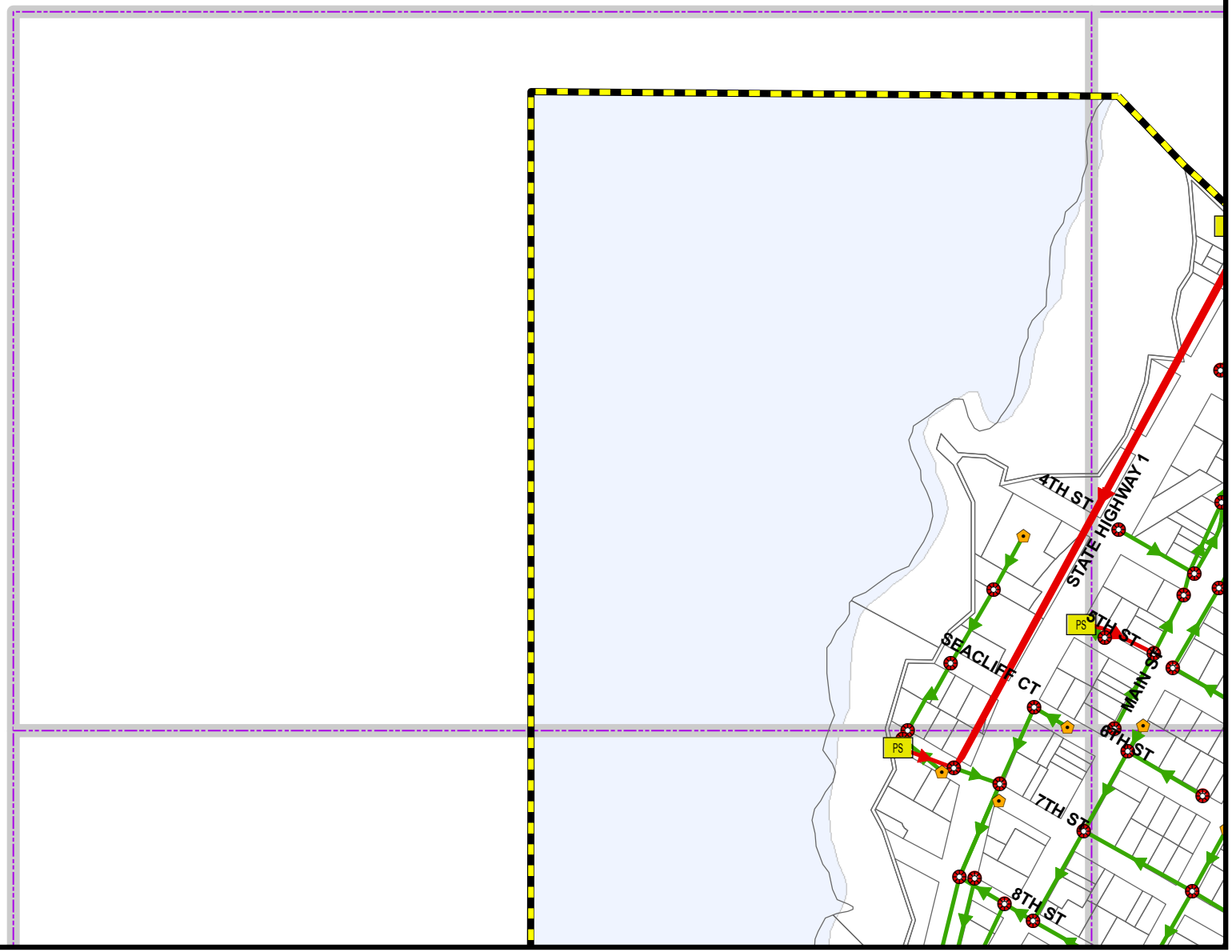
KEYMAP

NUTE Nute Engineering

Printed

Date: 8/29/2014

Montara Water and Sanitary District



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M01

Nute Engineering

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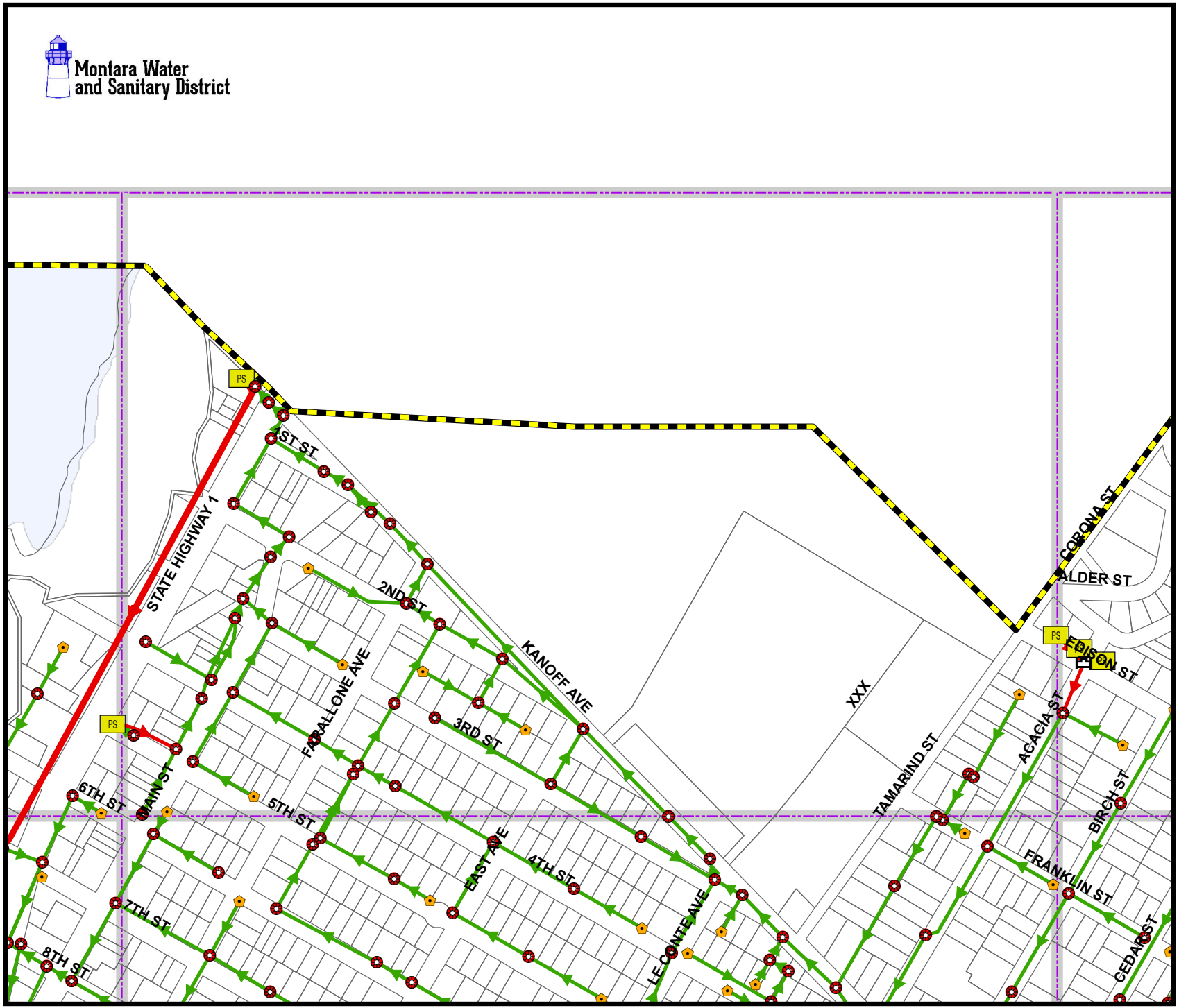
Date: 8/29/2014

Montara Water and Sanitary District



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

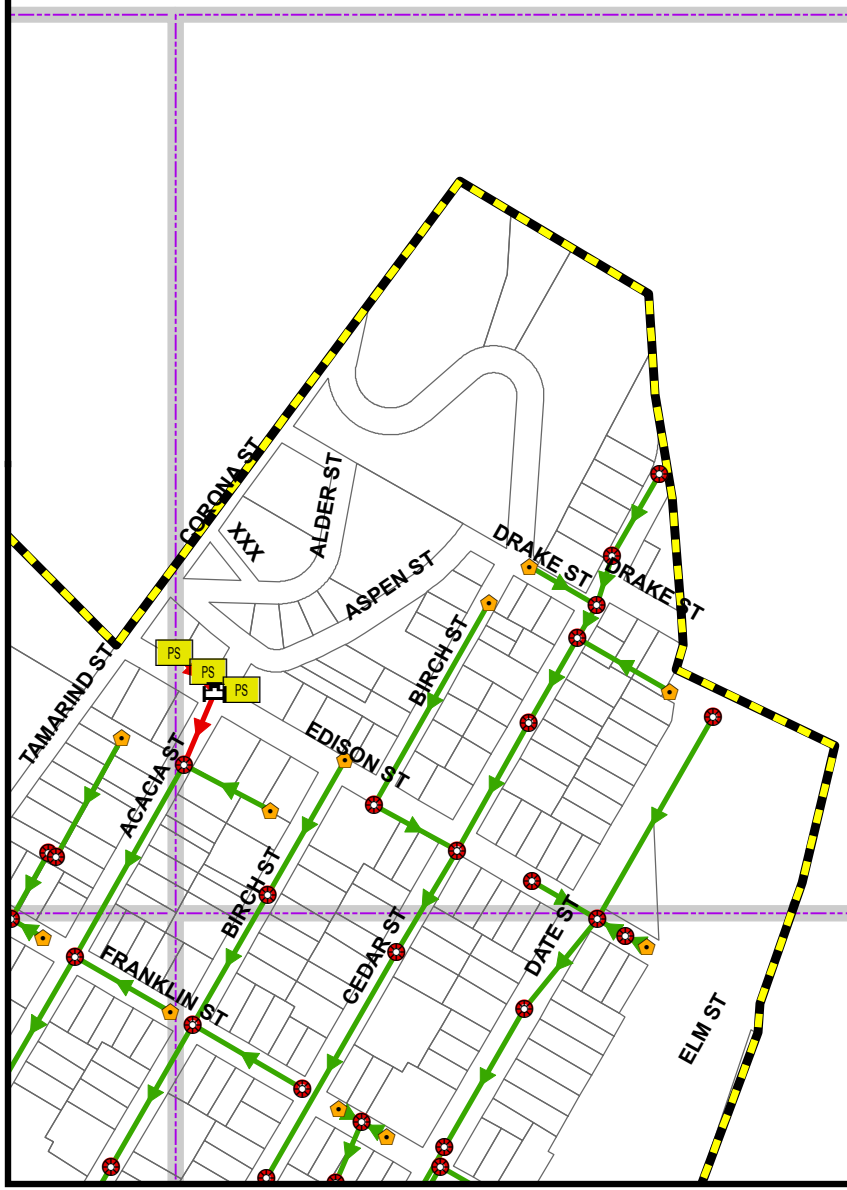
M02

Nute Engineering

Printed

Date: 8/29/2014

Montara Water and Sanitary District



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

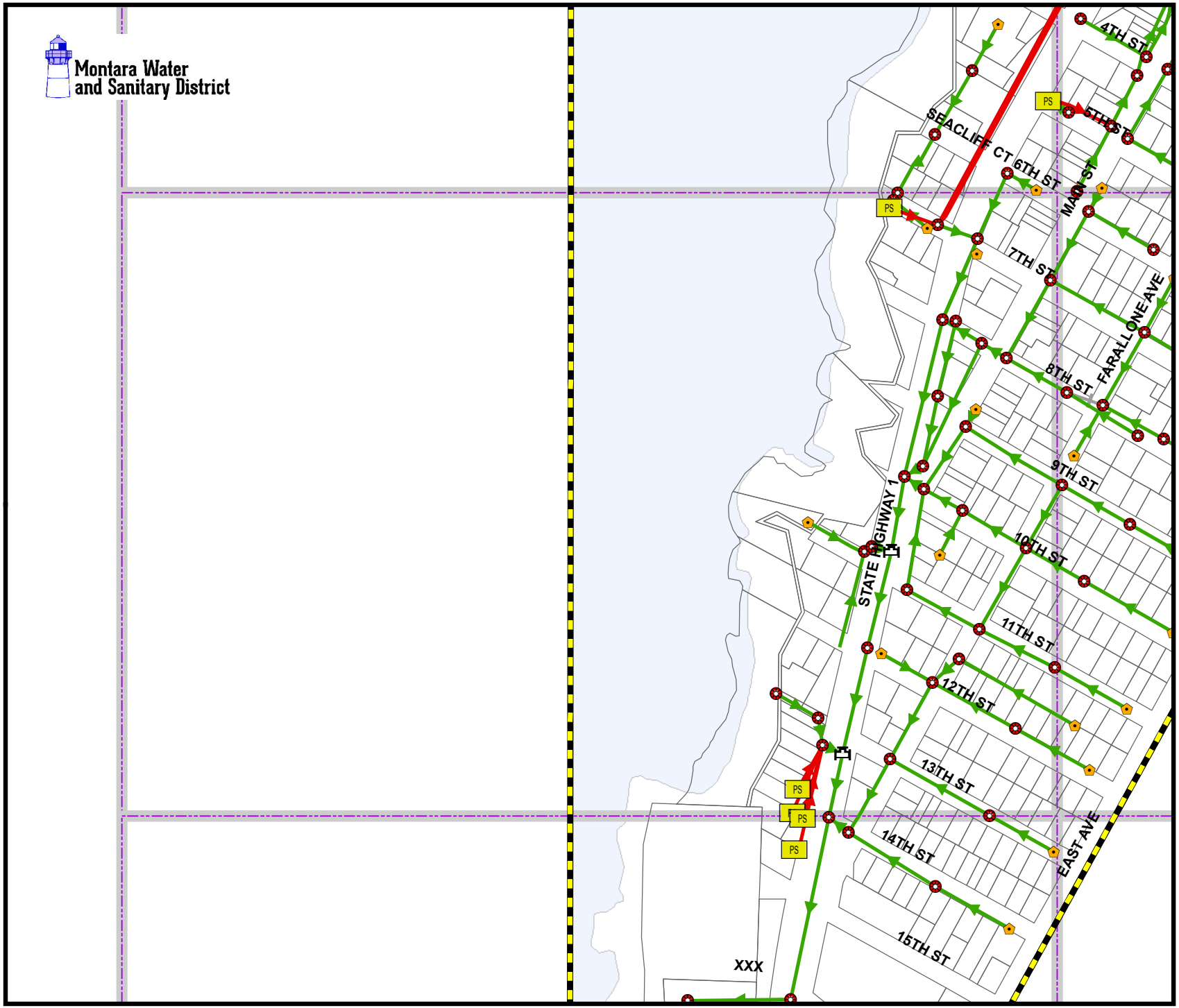
SAN MATEO COUNTY, CALIFORNIA

M03

Nute Engineering

Printed

Date: 8/29/2014



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

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Nute Engineering

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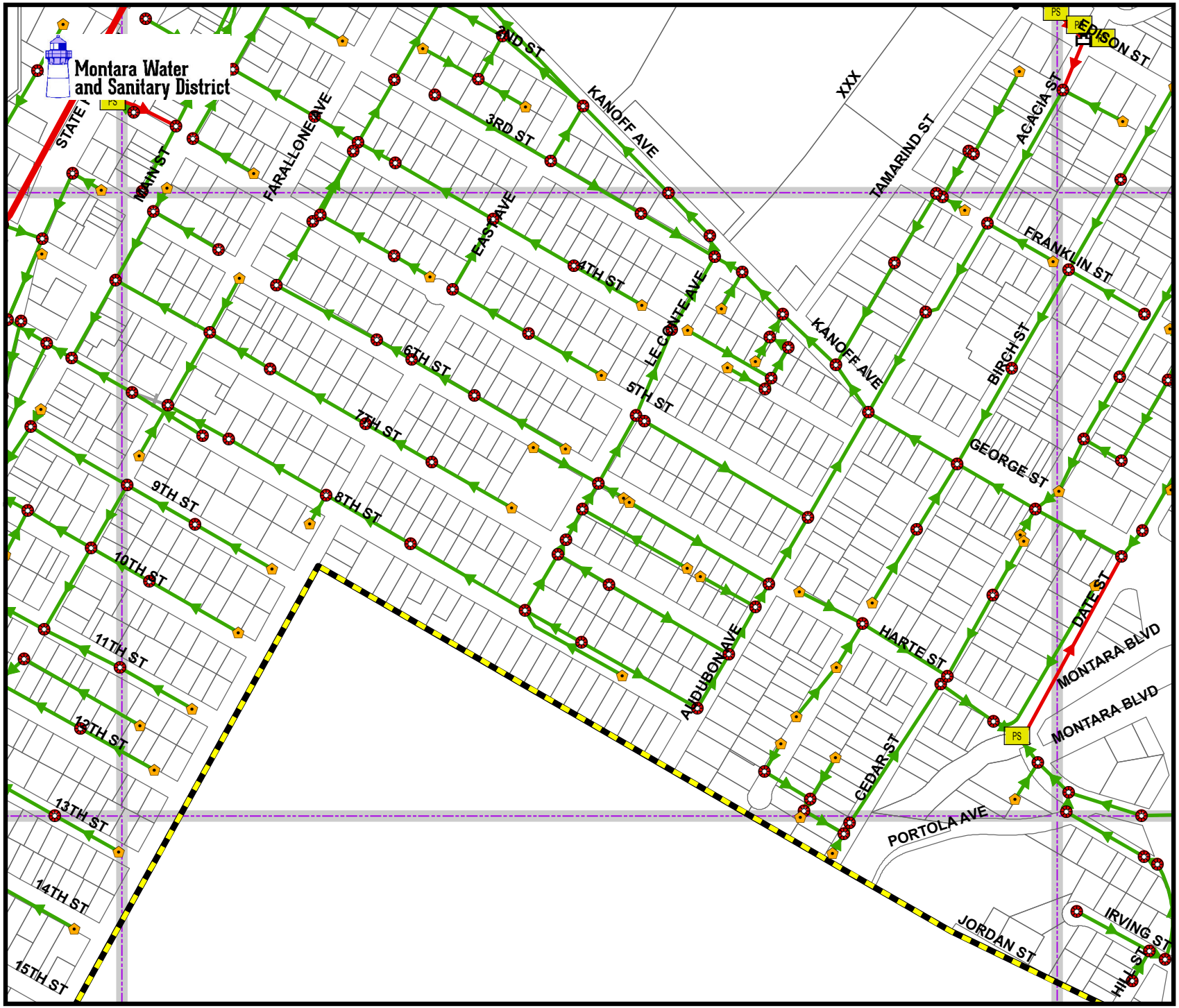
Date: 8/29/2014



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M05

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Nute Engineering

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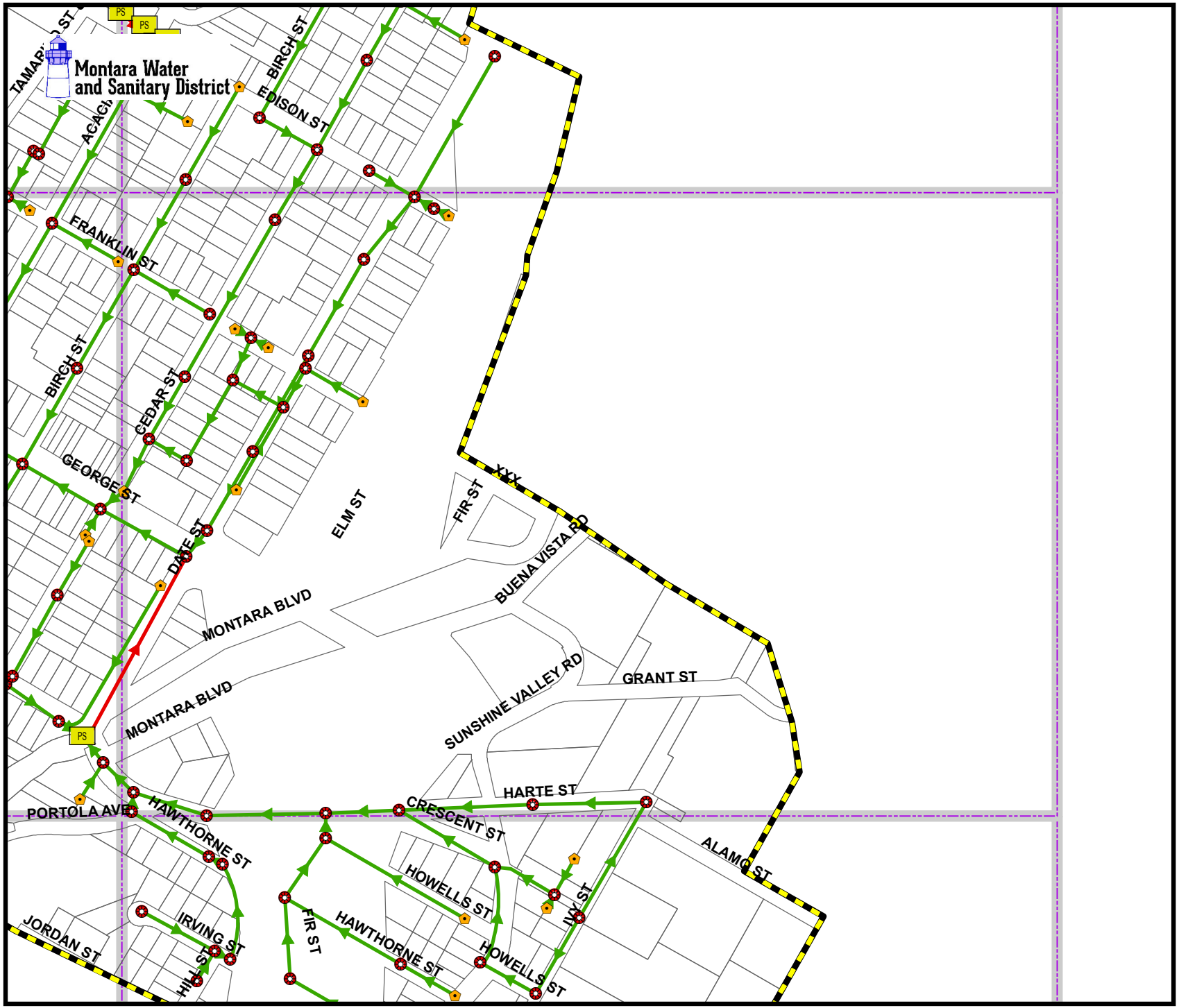
Date: 8/29/2014



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M06

Nute Engineering

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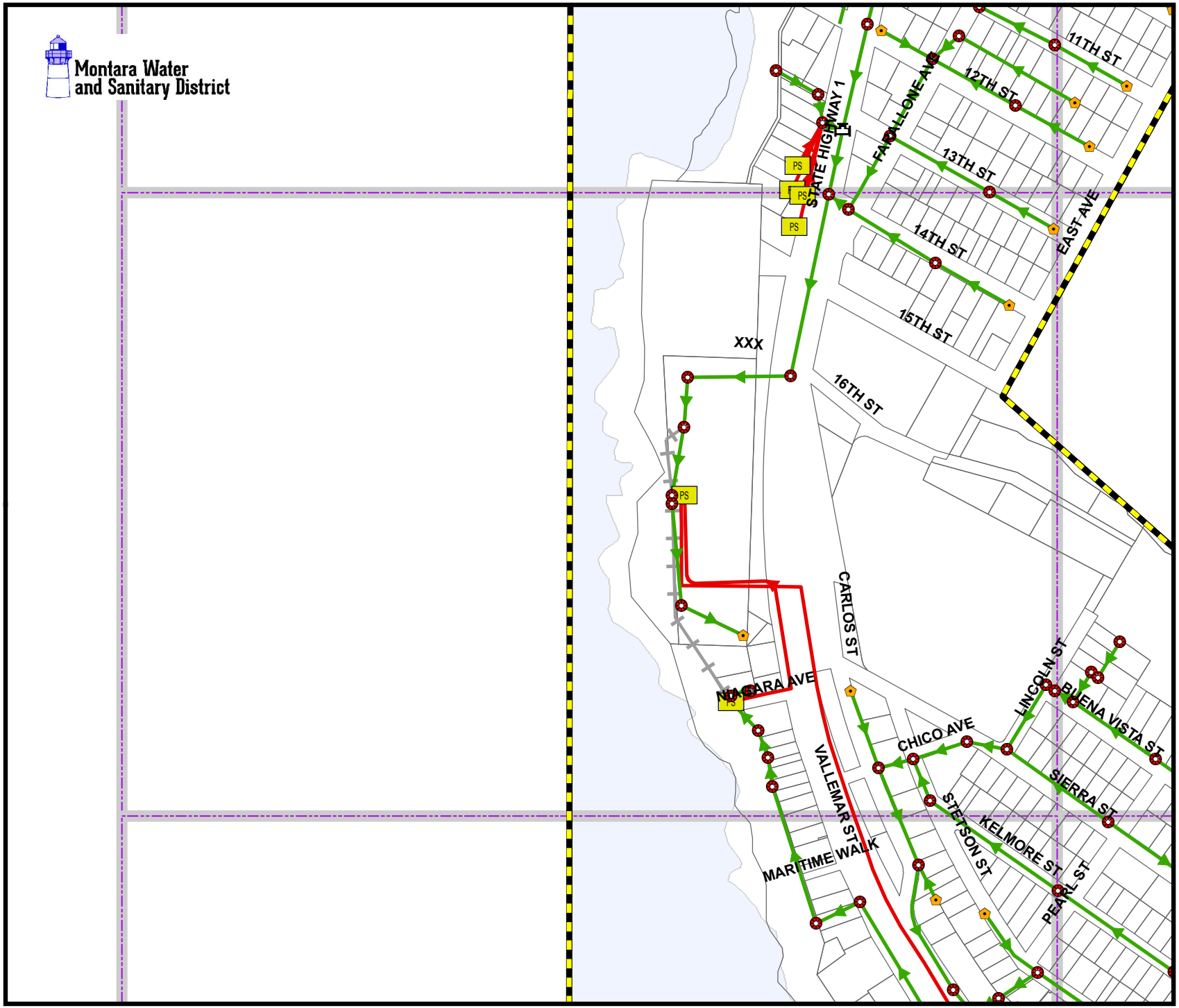
Date: 8/29/2014



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M07

Nute Engineering

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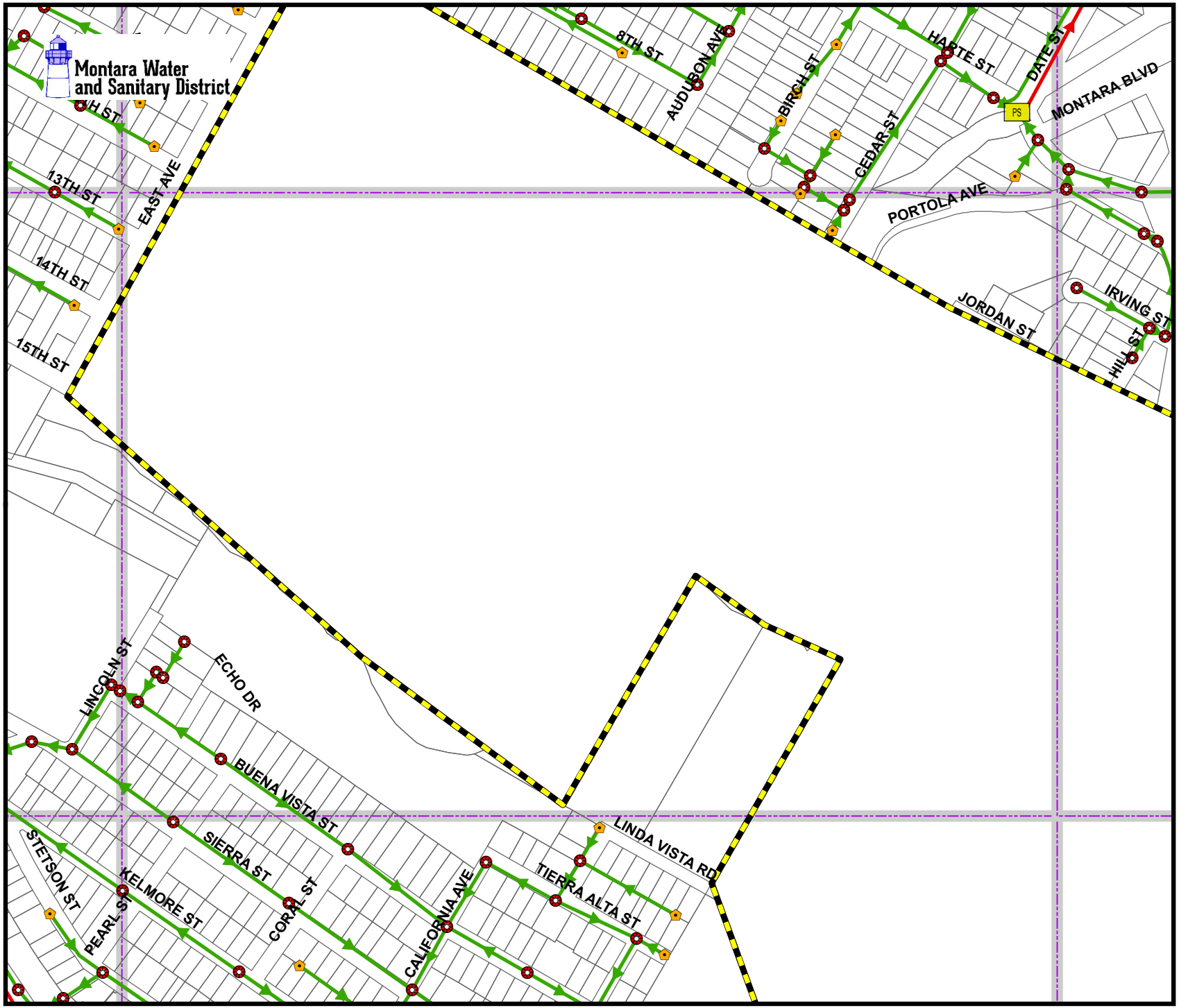
Date: 8/29/2014



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M08

Nute Engineering

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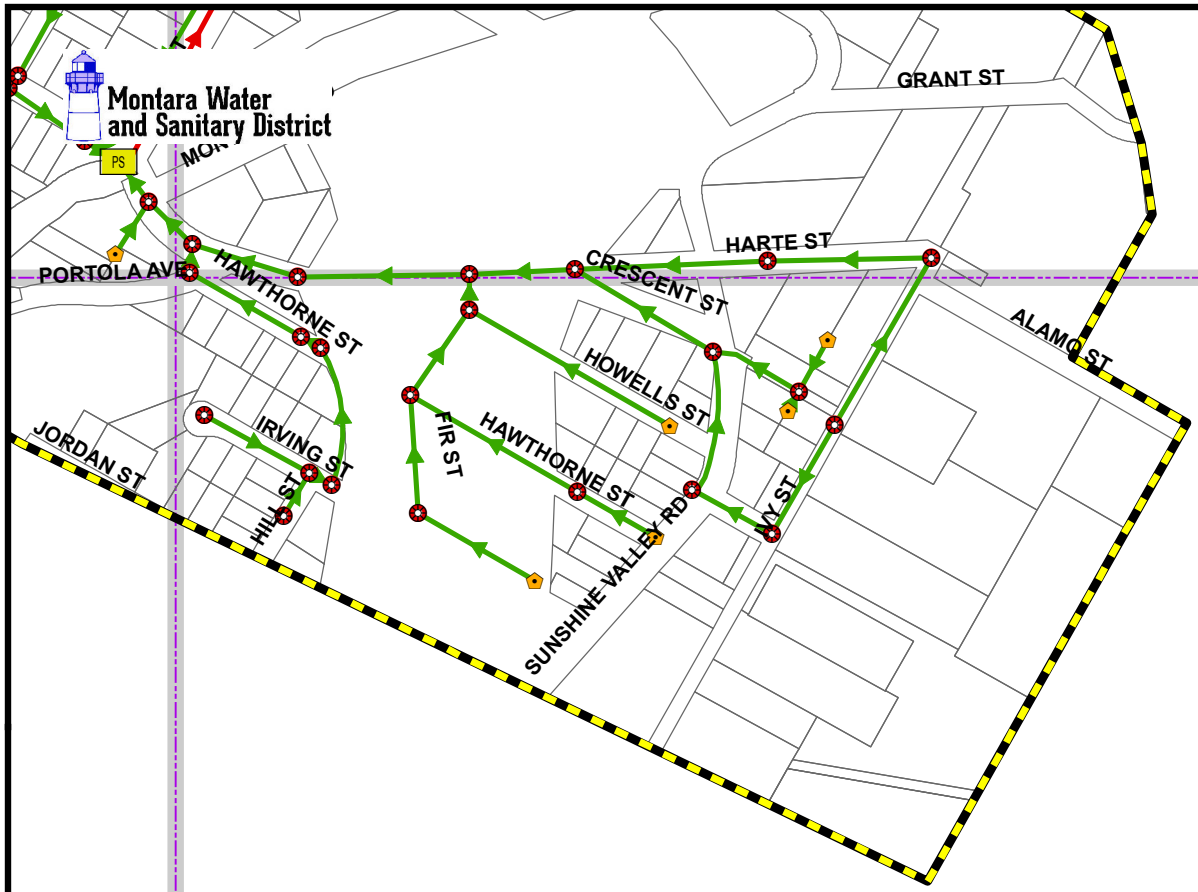
Date: 8/29/2014



N

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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

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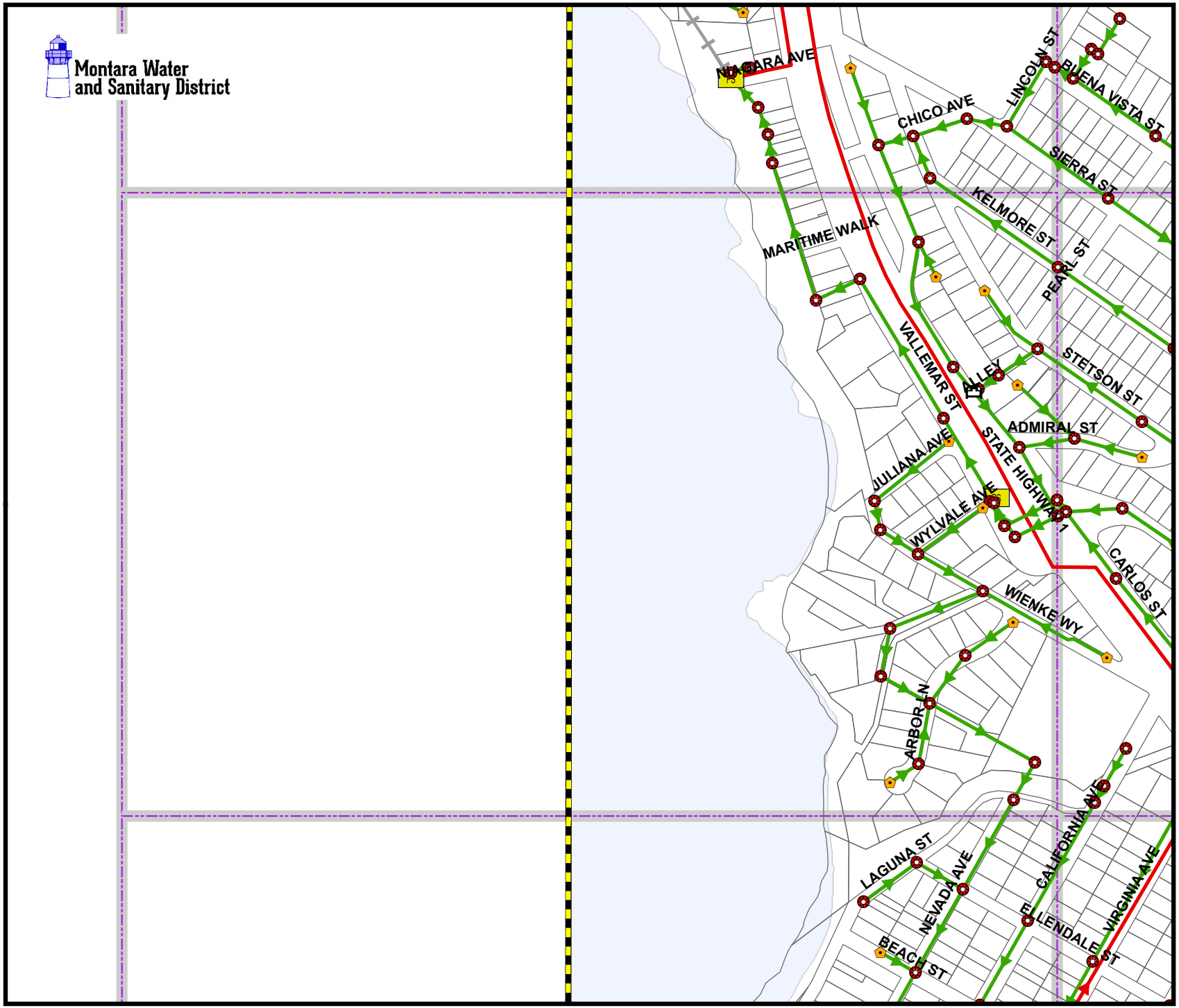

N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M10

Nute Engineering

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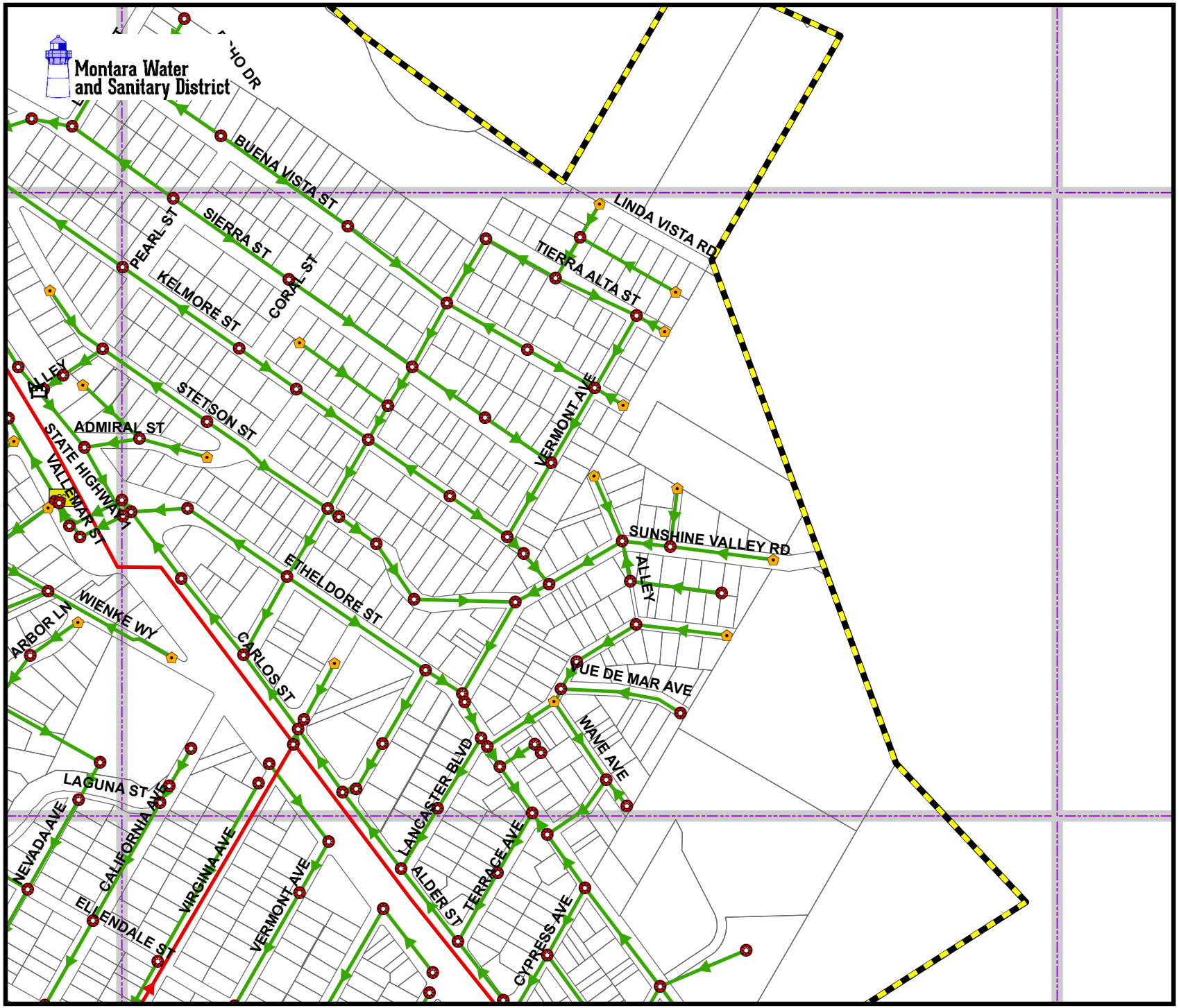
Date: 8/29/2014



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

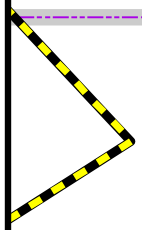
M11

Nute Engineering

Printed

Date: 8/29/2014

Montara Water and Sanitary District



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

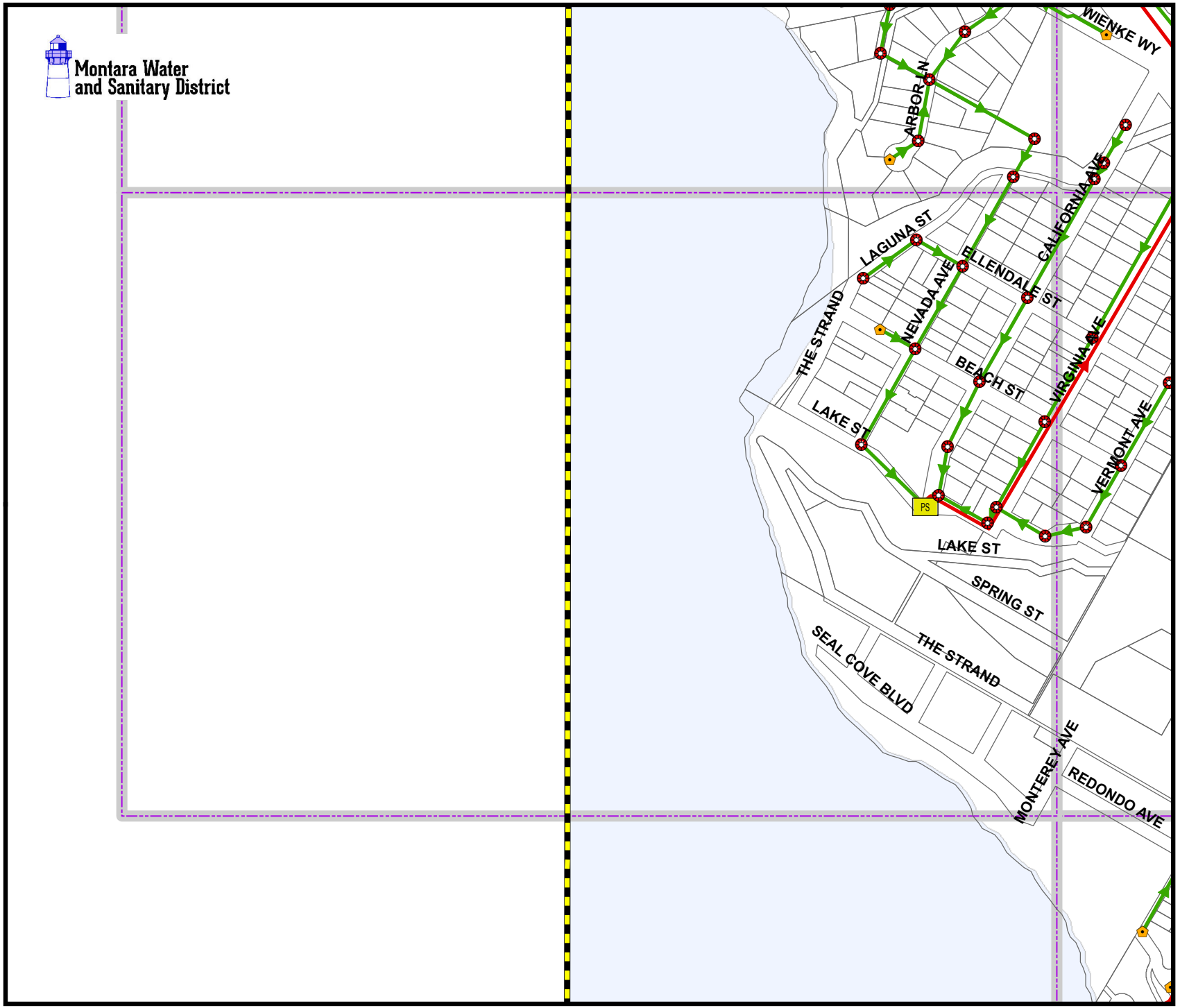
SAN MATEO COUNTY, CALIFORNIA

M12

Nute Engineering

Printed

Date: 8/29/2014



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

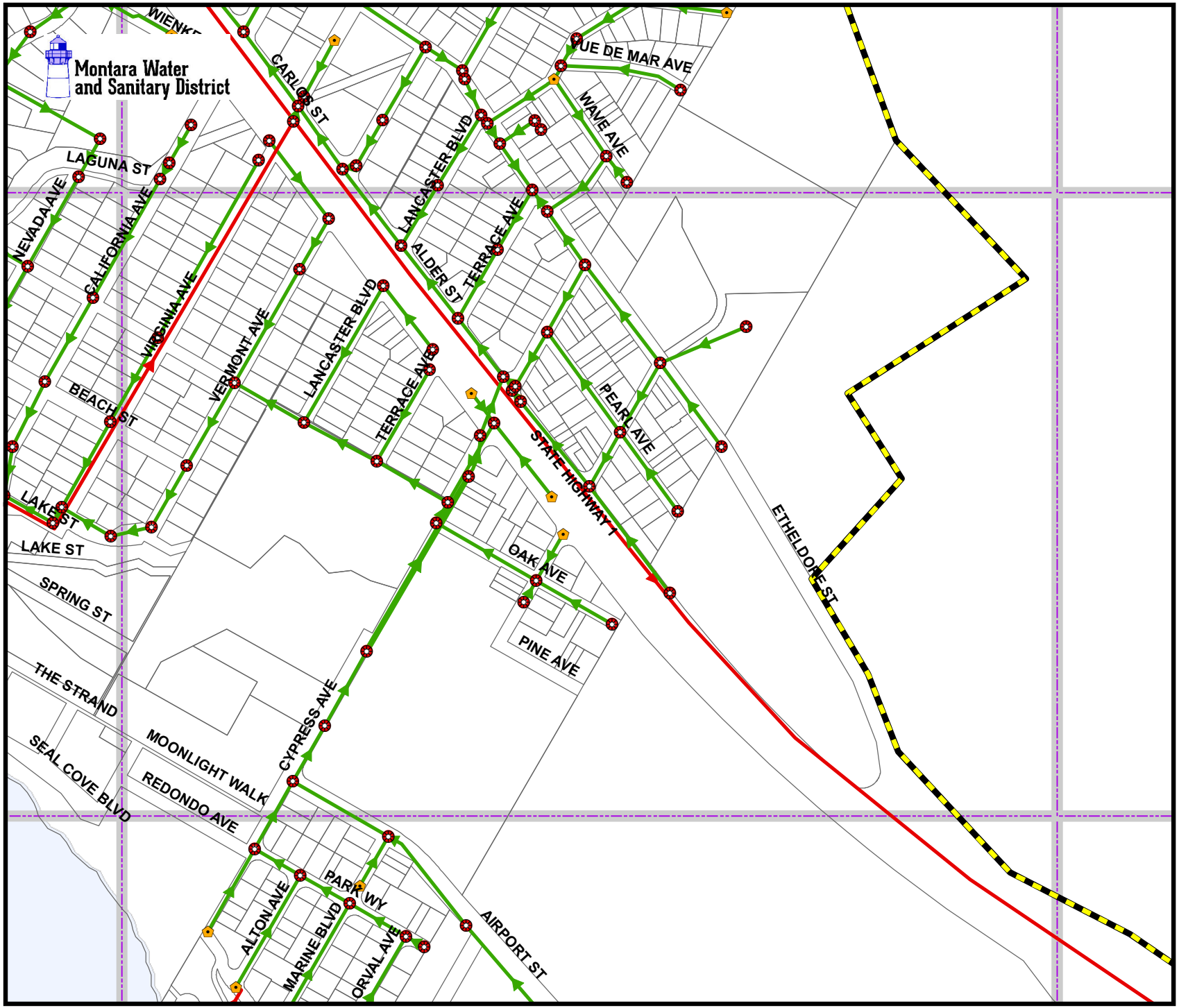
SAN MATEO COUNTY, CALIFORNIA

M13

Nute Engineering

Printed

Date: 8/29/2014


Montara Water
and Sanitary District
CARLOS ST
LAGUNA ST
NEVADA AVE
CALIFORNIA AVE
VIRGINIA AVE
VERMONT AVE
BEACH ST
LANCASTER BLVD
TERRACE AVE
ALDER ST
LAKE ST
SPRING ST
THE STRAND
MOONLIGHT WALK
SEAL COVE BLVD
REDONDO AVE
CYPRESS AVE
ALTON AVE
MARINE BLVD
PARK WY
ORVAL AVE
AIRPORT ST
OAK AVE
PINE AVE
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PEARL AVE
WAVE AVE
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1 inch = 428 feet
SANITARY SEWER SYSTEM
MONTARA WATER AND SANITARY DISTRICT
SAN MATEO COUNTY, CALIFORNIA
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Nute Engineering
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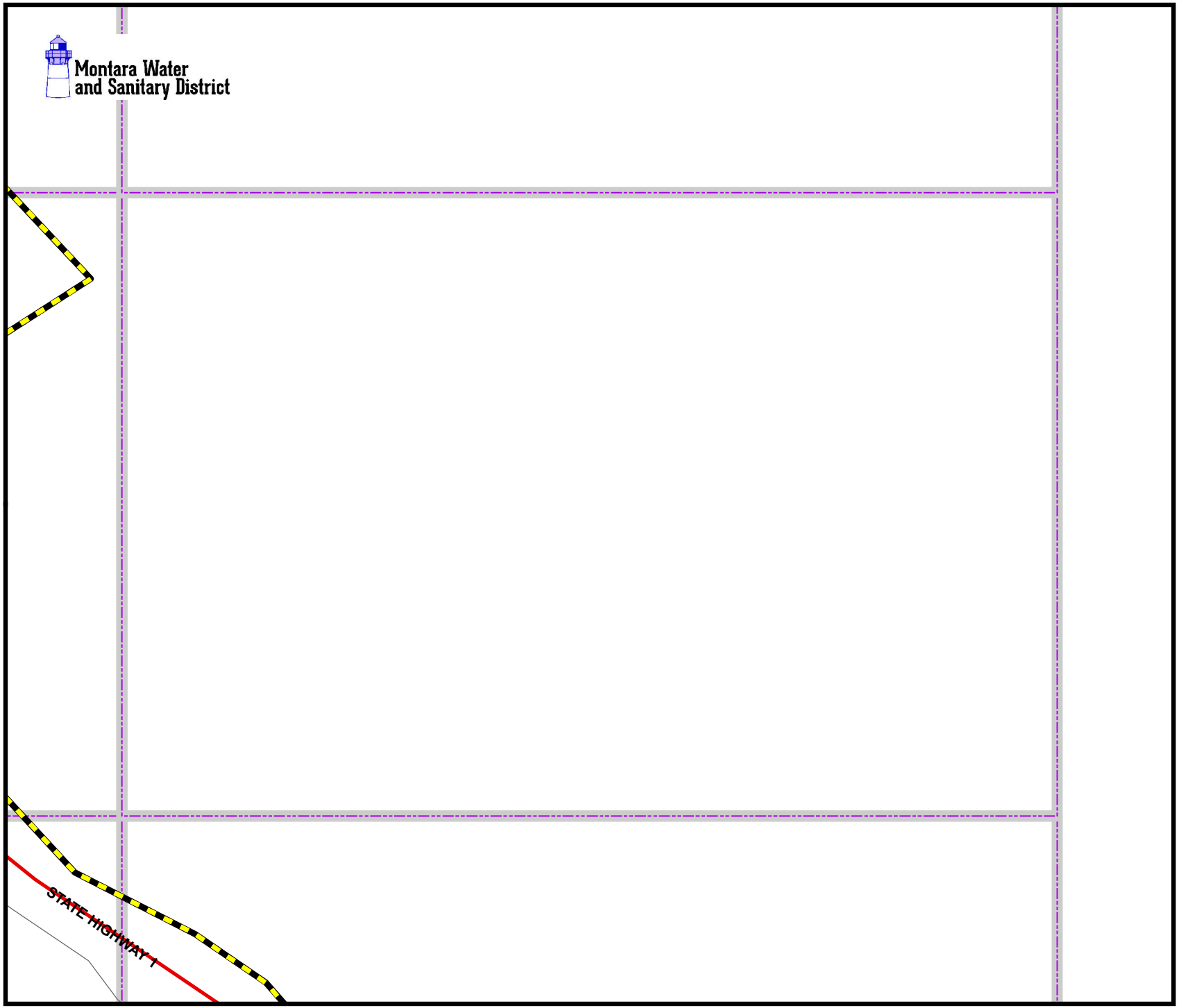
Date: 8/29/2014



N
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S

1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

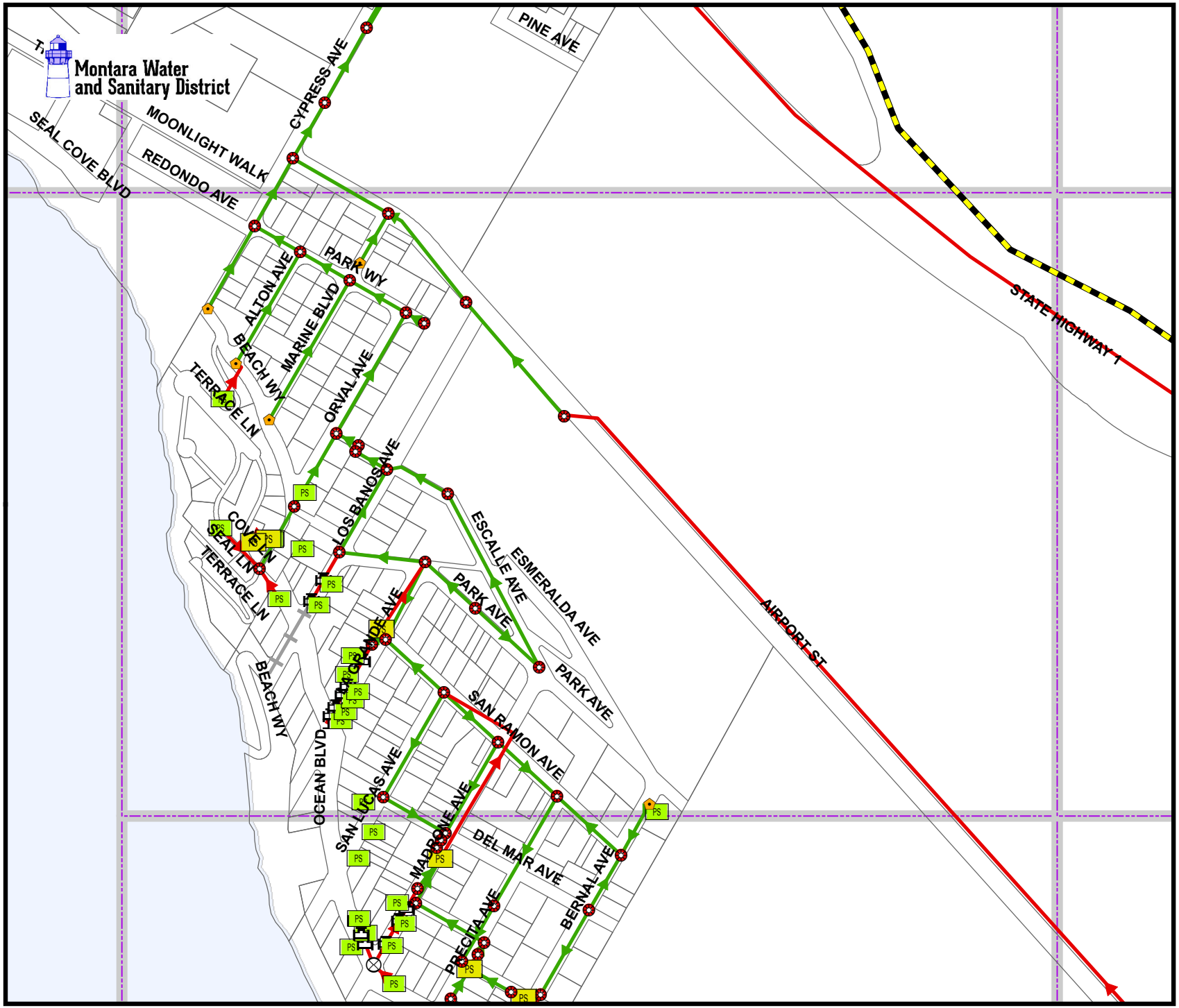
SAN MATEO COUNTY, CALIFORNIA

M15

Nute Engineering

Printed

Date: 8/29/2014



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M16

Nute Engineering

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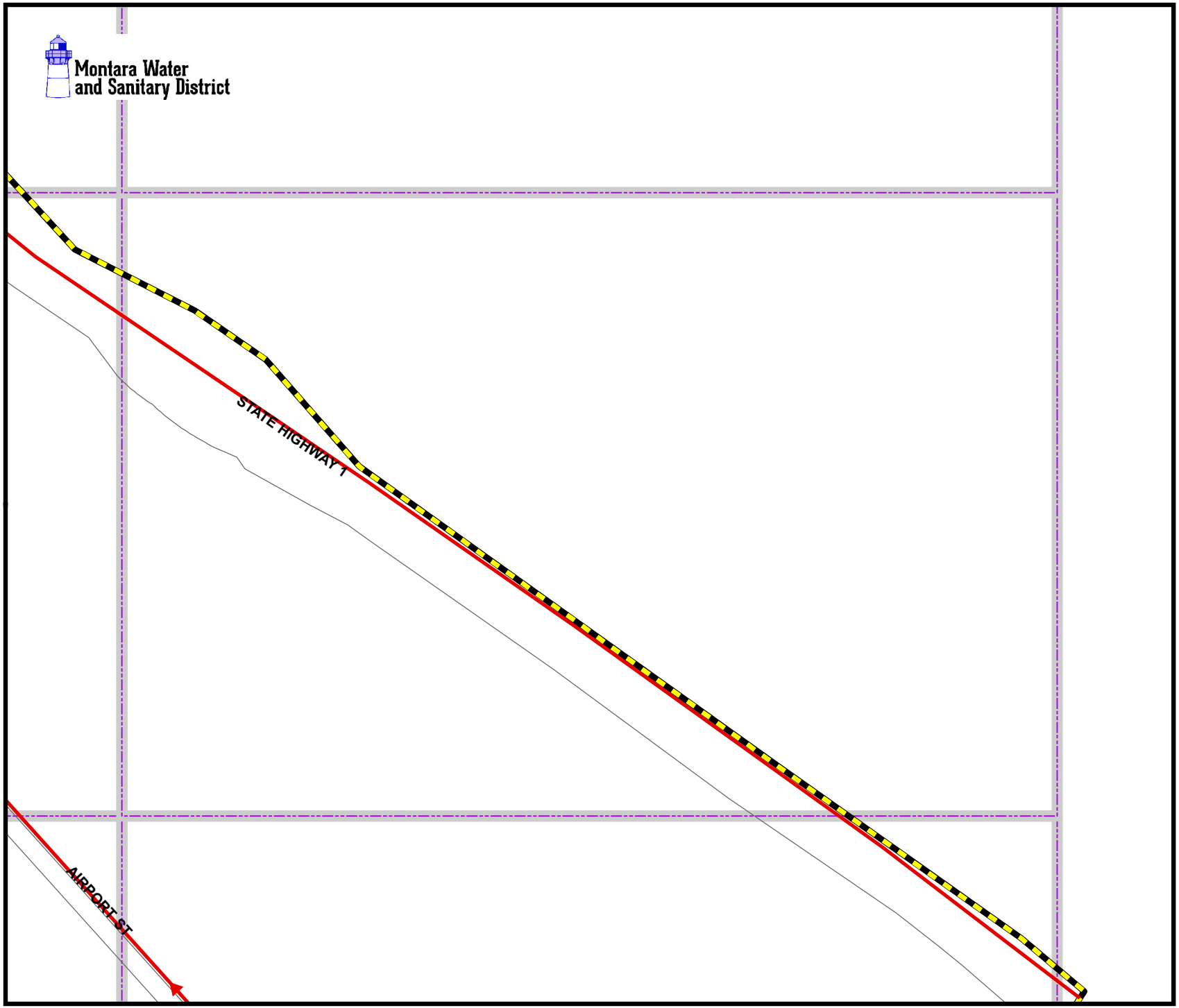
Date: 8/29/2014



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M17

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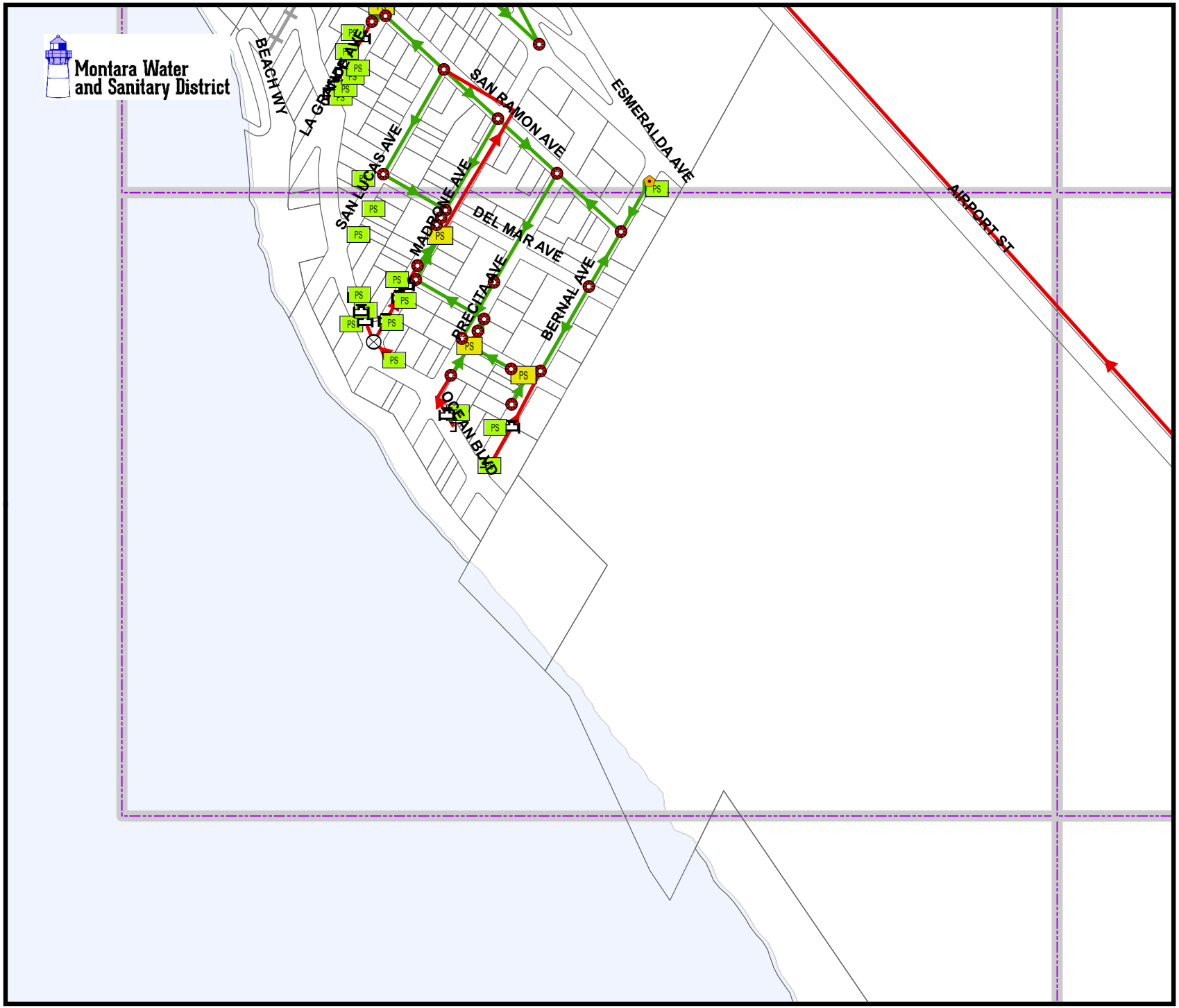
Date: 8/29/2014



N

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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M18

Nute Engineering

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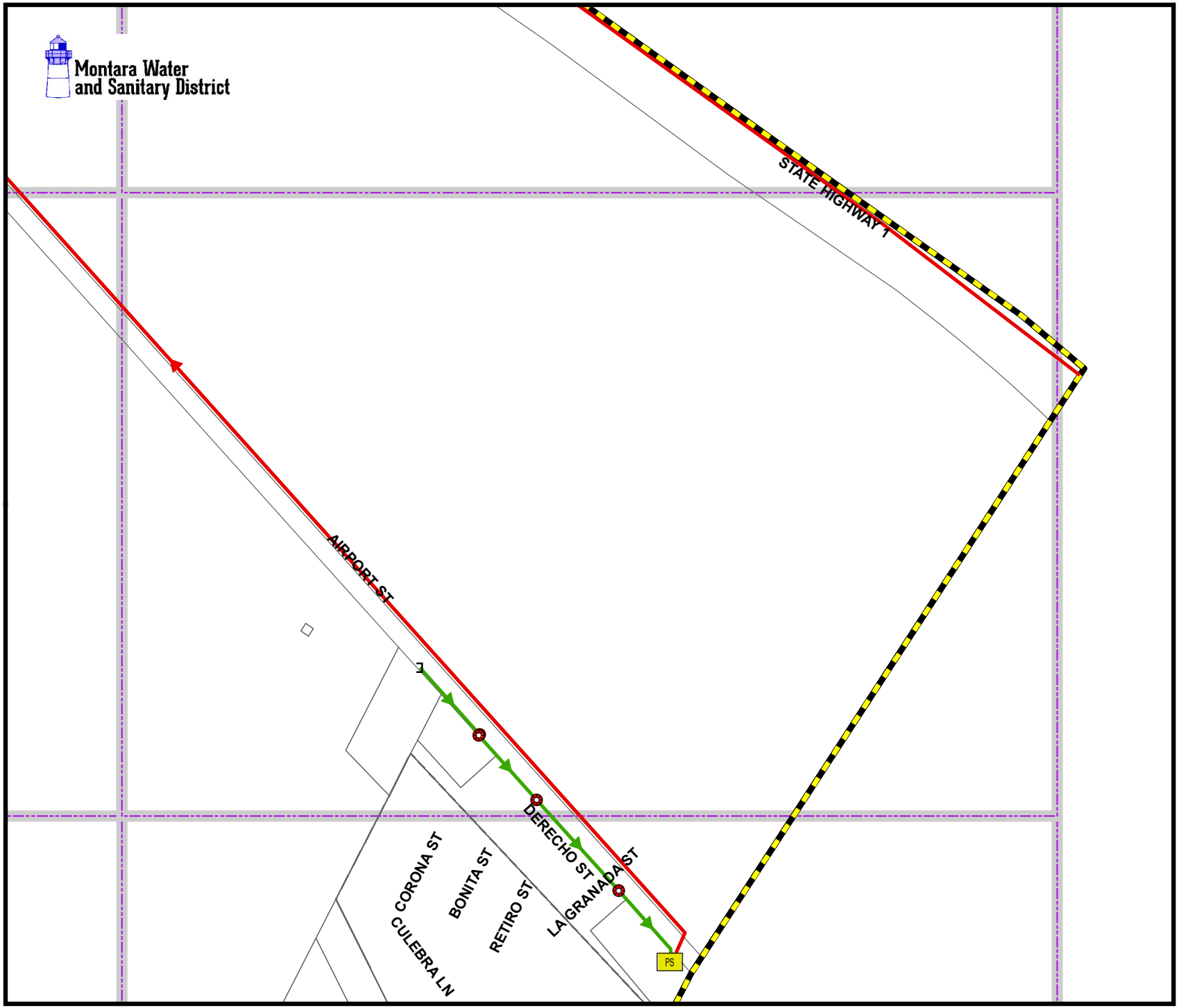
Date: 8/29/2014



N
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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

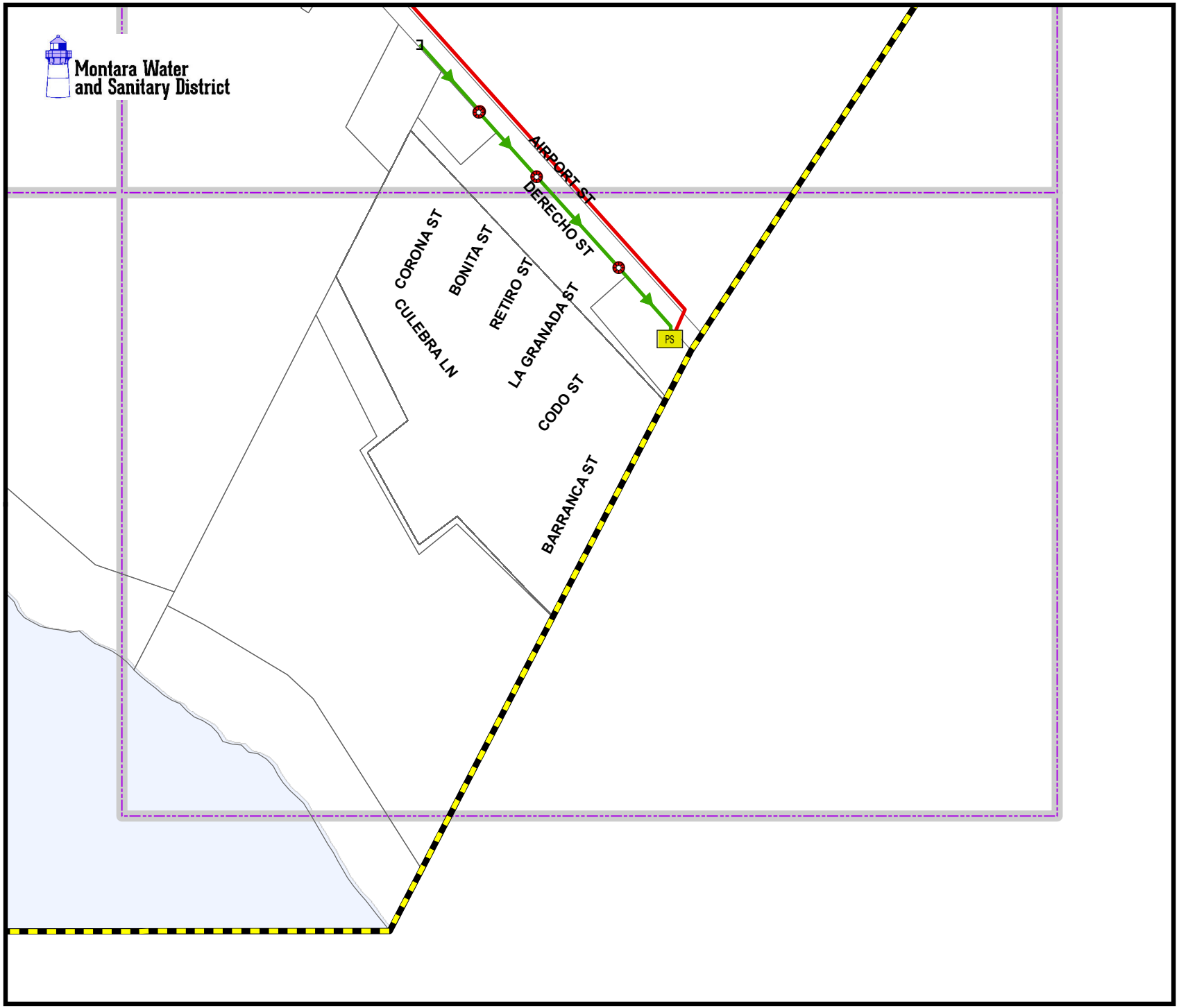
SAN MATEO COUNTY, CALIFORNIA

M19

Nute Engineering

Printed

Date: 8/29/2014



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1 inch = 428 feet

SANITARY SEWER SYSTEM

MONTARA WATER AND SANITARY DISTRICT

SAN MATEO COUNTY, CALIFORNIA

M20

NUTE
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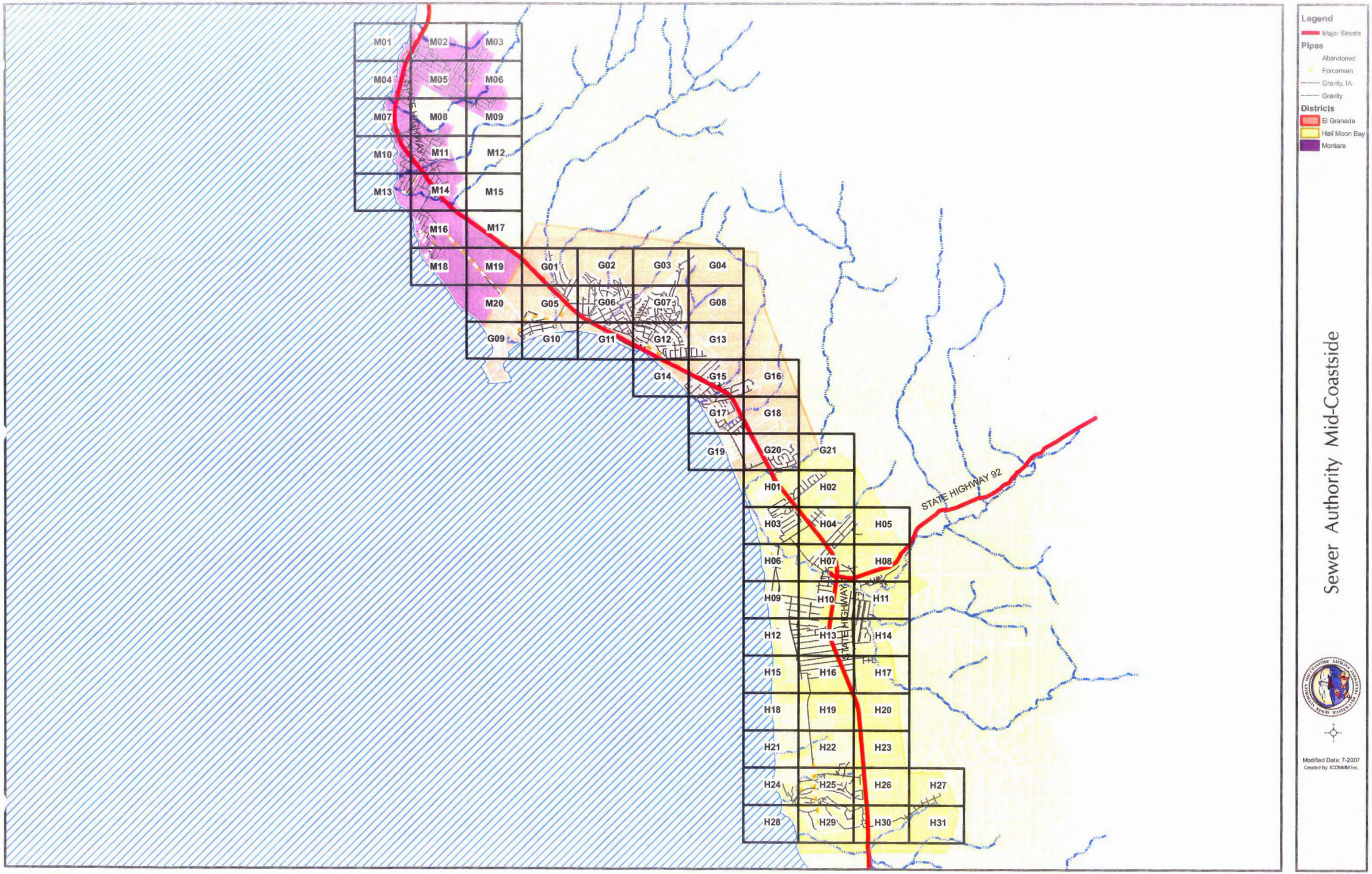
Date: 8/29/2014

APPENDIX B

Sewer Agency Mid-Coastside Sewer System Key Map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H31
STATE HIGHWAY 92
STATE HIGHWAY 1
STATE HIGHWAY 1
Legend
Major Streets
Pipes
Abandoned
Forcemain
Gravity, IA
Gravity
Districts
El Granada
Half Moon Bay
Montara
Sewer Authority Mid-Coastside
Modified Date: 7-2007
Created By: ICOMMM Inc.

APPENDIX C

State SSMP Requirements – 2005, 2006

Nute Engineering

California Regional Water Quality Control Board
San Francisco Bay Region

Alan C. Lloyd, Ph.D.
Agency Secretary

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.waterboards.ca.gov/sanfranciscobay

Arnold Schwarzenegger
Governor

Date: July 7, 2005
File No. 1210.57 (MTC)

TO: Sewer System Authorities (attached list)

SUBJECT: New Requirements for Preparing Sewer System Management Plans

This letter is to notify you, as a Sanitary Sewer Collection System Agency, that you are required to prepare a Sewer System Management Plan (SSMP) pursuant to Section 13267 of the California Water Code. The enclosed SSMP Development Guide should be used to develop your plan, which will contain the following ten elements:

1. Goals
2. Organization
3. Overflow Emergency Response Plan
4. Fats, Oils, and Grease (FOG) Control Program
5. Legal Authority
6. Measures and Activities
7. Design and Construction Standards
8. Capacity Management
9. Monitoring, Measurement, and Program Modifications
10. SSMP Audits

As indicated in the attached guide, if you believe any element of this program is not applicable to your agency, your SSMP does not need to address it, but an explanation in the SSMP should be provided, indicating why that element of the SSMP is not applicable. Failure to prepare and maintain an SSMP will subject you to monetary liabilities that may be imposed by the San Francisco Bay Regional Water Quality Control Board (Regional Water Board). The following paragraphs provide some background and further details on the requirements and liabilities.

Background
This requirement is the result of a collaborative effort between the Bay Area Clean Water Agencies (BACWA) and the Regional Water Board to reduce and prevent sanitary sewer overflows. Over the past two years, BACWA and Regional Water Board staff met to develop

draft SSMP guidelines. In 2004, six workshops were held for collection system agencies to present the draft SSMP guidelines and refine the contents for a comprehensive sanitary sewer overflow (SSO) control program for the region. This program comprises two components: 1) electronic reporting of SSOs; and, 2) development and implementation of SSMPs. The requirement for electronic SSO reporting began on December 1, 2004. The enclosed SSMP Development Guide incorporates input from collection system agencies in the San Francisco Bay Area.

Response Form
The first step of the process for developing your SSMP is to return a completed copy of the attached **SSMP Form A** to the Regional Water Board, to indicate that you have received this letter, understand the requirements, and intend to comply. There is a space on the form for feedback about the regional SSO control program. The Regional Water Board will continue working with BACWA to ensure successful implementation of this program.

Schedule
Individual elements of the SSMP are required to be completed according to the schedule shown below:

Required Schedule for SSMP Elements

SSMP Item	Required Completion Date
• Goals • Organization • Emergency Response Plan • FOG Control Program	August 31, 2006
• Legal Authority • Measures and Activities • Design and Construction Standards	August 31, 2007
• Capacity Management • Monitoring, Measurement, and Program Modifications • SSMP Audits	August 31, 2008

Notification to Regional Water Board of Completed SSMP Elements
You must notify the Regional Water Board when you complete each set of SSMP elements. Use the attached forms as follows:

- Use **SSMP Form B-1** to indicate completion of the first set of SSMP elements
- Use **SSMP Form B-2** to indicate completion of the second set of SSMP elements
- Use **SSMP Form B-3** to indicate completion of the third and last set of SSMP elements

Applicability to NPDES Permitted Facilities
For Publicly-Owned Treatment Works (POTWs) whose discharges are regulated in NPDES permits, and who also operate sanitary sewer systems, any requirement for development of an SSMP in your NPDES permit should be considered fulfilled using the requirements outlined in this letter.

Annual Reports for Reporting of SSOs
As indicated in a previous letter from the Regional Water Board dated November 15, 2004, the first annual report for your agency's SSO control activity is due March 15, 2006, and should cover 13 months from December 1, 2004, through December 31, 2005. Subsequent annual reports are due March 15th, and should contain information for the preceding 12-month calendar year. Additional detail on requirements for annual reports will be forwarded to your agency later this year.

Basis for Requirement and Liabilities
Because SSOs are a threat to water quality, you should be aware that this letter establishes formal requirements for technical information pursuant to California Water Code Section 13267. Failure to respond, late response, or incomplete response may subject you to civil liability imposed by the Water Board to a maximum of $1,000 per day. Any revisions of the request set forth must be confirmed in writing by Regional Water Board staff.

State-wide SSO Control Program
The State Water Resources Control Board (State Water Board) has recently begun the development of a state-wide SSO control program. Regional Water Board and BACWA representatives are working with State representatives to ensure compatibility between the Regional and State programs. In the event the State program has additional requirements beyond the Regional program, these elements will need to be incorporated into the SSMP. Collection System agencies will be notified of any new requirements as they occur. Currently, the State Water Board's proposed SSMP has a more aggressive development and implementation time schedule.

Questions
If your agency has questions about program requirements or SSMPs, please contact Michael Chee at mchee@waterboards.ca.gov or (510) 622-2333.

Sincerely,

Bruce H. Wolfe
Executive Officer

Attachments:

- Sanitary Sewer Authorities Mailing List
- SSMP Form A: Notification Form To Indicate Receipt of Letter Requiring the Development of an SSMP
- SSMP Form B-1: Notification Form To Indicate Completion of First Set of Sewer System Management Plan (SSMP) Elements
- SSMP Form B-2: Notification Form To Indicate Completion of Second Set of Sewer System Management Plan (SSMP) Elements
- SSMP Form B-3: Notification Form To Indicate Completion of Third (and Final) Set of Sewer System Management Plan (SSMP) Elements
- Fact Sheet – Requirements For Submitting Technical Reports Under Section 13267 of the California Water Code

Enclosure:

Sanitary Sewer Management Plan (SSMP) Development Guide

Sewer System Authorities Mailing List

Chris McAuliffe
U.S. Filter
601 Canal Blvd.
Richmond, CA 94804

E.J. Shalaby
West County WW District
1401 Marina Way South
Richmond, CA 94804

Mark Adams
Maintenance Supervisor
City of Pinole, Public Works Department
2131 Pear Street
Pinole, CA 94564

Jeff Brown
City of Hercules
111 Civic Drive
Hercules, CA 94547

Steve Beal
Rodeo SD
800 San Pablo Avenue
Rodeo, CA 94572

Chuck Weir
East Bay Dischargers Authority
2651 Grant Avenue
San Lorenzo, CA 94580

Andy Morrison
Collection Service Manager
Union Sanitary District
5072 Benson Road
Union City, CA 94587

Alex Ameri
Deputy Director/Utilities
Department of Public Works
777 B Street
Hayward, CA 94541

Dean Wilson
Water Pollution Control Plant Manager
City of San Leandro
3000 Davis Street
San Leandro, CA 94577

Michael C. Cameron
General Manager
Oro Loma Sanitary District
2600 Grant Avenue
San Lorenzo, CA 94580

Roland Williams
General Manager
Castro Valley Sanitary District
21040 Marshall Street
Castro Valley, CA 94546

Vivian Housen
General Manager
LAVWMA
7051 Dublin Blvd.
Dublin, CA 94568

Rob Fowler
Dublin San Ramon SD
7051 Dublin Blvd.
Dublin, CA 94568

Richard Lagomarsino
Lead Utility Operator
City of Pleasanton
3333 Busch Road
Pleasanton, CA 94588

Darren Greenwood
Water Resources Manager
City of Livermore
101 West Jack London Blvd.
Livermore, CA 94551

Maura A. Bonnarens
EBMUD
MS#702
P.O. Box 24055
Oakland, CA 94623

Wali Waziri
Director of Public Works
City of Alameda
City Hall West - Alameda Point
1950 West Mall Sq Rm 110
Alameda, CA 94501

Ann Chaney
Director of Community Development
City of Albany-City Hall
1000 San Pablo Avenue
Albany, CA 94706

Henry Yee
City of Berkeley
2180 Milvia Street
Berkeley, CA 94704

Maurice Kaufman
City Engineer
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

Fuad Sweiss
Engineering Division Manager
City of Oakland
250 Frank Ogawa Pl Suite 4314
Oakland, CA 94612

Larry Rosenberg
Director of Public Works
City of Piedmont
120 Vista Avenue
Piedmont, CA 94611

Douglas Humphrey
General Manager
Stege Sanitary District
P.O. Box 537
El Cerrito, CA 94530

Jonathan Goldman
Public Works Director
City of St. Helena
1480 Main Street
St. Helena, CA 94574

Stanley Townsend
Director of Public Works
City of Calistoga, Dept. of Public Works
1232 Washington Street
Calistoga, CA 94515

Don Moore
Joint Treatment Plant Yountville Town
6550 Yount Street
Yountville, CA 94599

Andy Ellicock
Chief of Plant Operations
The California Veterans Home
P.O. Box 1200
Yountville, CA 94599

Sam Mehta
City and County of San Francisco
P.O.Box 8097
San Francisco, CA 94128

Bob Correa
San Mateo WQCP
1949 Pacific Blvd.
San Mateo, CA 94403

Larry Patterson
Public Works Director
City of San Mateo
330 W. 20th Avenue
San Mateo, CA 94403

John Lisenko
Director of Public Works
City of Foster City
610 Foster City Blvd.
Foster City, CA 94404

Scott Munns
Director of Public Works
City of San Bruno
567 El Camino Real
San Bruno, CA 94066

Ming Chen
Collection Systems Manager
City of Pacifica
170 Santa Maria Avenue
Pacifica, CA 94044

David Coe
General Manager
Sewerage Agency of Southern Marin
P.O. Box 1029
Mill Valley, CA 94942

Tom Roberts
Manager
Homestead Valley Sanitary District
P.O. Box 149
Mill Valley, CA 94941

Phil Gorny
Manager
Tamalpais Community Services District
305 Bell Lane
Mill Valley, CA 94941

David Montero
Sanitary District No. 2 of Marin County
P.O. Box 159
Corte Madera, CA 94925

Bonner Buehler
Plant Operator
Seafirth Estate Co., Inc.
33 Seafirth Place
Tiburon, CA 94920

Gordon Sweeney
City of Sausalito
420 Litho Street
Sausalito, CA 94965

Bev James
General Manager
Novato SD
500 Davidson Street
Novato, CA 94945

David Bishop
Public Works Director
Town of Hillsborough
1600 Flibunda Avenue
Hillsborough, CA 94010

Ellen Ellsworth
City Engineer
Town of Colma
1188 El Camino Real
Colma, CA 94014

Phil Scott,
Public Works Superintendent
City of Burlingame
501 Primrose
Burlingame, CA 94010

Bonner Beuhler
Manager
Almonte Sanitary District
P.O. Box 698
Mill Valley, CA 94941

Wayne Bush
Director of Public Works
City of Mill~~brae~~ Valley
26 Corte Madera Avenue
Mill Valley, CA 94941

Rob Cole
Central Marin Sanitation Agency
1301 Andersen Drive
San Rafael, CA 94901

Andrew Preston
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San Francisco Bay Regional Water Quality Control Board
Sanitary Sewer Overflow Control Program

SSMP Form A:
Notification Form To Indicate Receipt of Letter Requiring the Development of an SSMP

Return this form to the Regional Water Quality Control Board at the following address by August 31, 2005. You may email a PDF file of this form, mail the form, or fax the form.

Attention: Michael Chee
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Email: mchee@waterboards.ca.gov
Fax: (510) 622-2460

Name of Agency _____

Agency Contact Person _____

Contact Person Phone Number _____

Contact Person Email _____

Certification:

I certify that my agency has received the July 2005 letter requiring the development of a Sanitary Sewer Management Plan (SSMP), including the enclosure titled, "Sewer System Management Plan (SSMP) Development Guide." I understand the nature of the requirements and intend to comply by the deadlines indicated.

_____ _____
Signature of Responsible Agency Representative Date

_____
Print Name and Title

We also welcome your comments about the San Francisco Bay Area SSO Control Program:

_____

_____

_____

_____

San Francisco Bay Regional Water Quality Control Board
Sanitary Sewer Overflow Control Program

SSMP Form B-1:
Notification Form To Indicate Completion of First Set of Sewer System Management Plan (SSMP) Elements

Return this form to the Regional Water Quality Control Board at the following address by August 31, 2006. You may email a PDF file of this form, mail the form, or fax the form.

Attention: Michael Chee
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Email: mchee@waterboards.ca.gov
Fax: (510) 622-2460

Name of Agency _____

Agency Contact Person _____

Contact Person Phone Number _____

Contact Person Email _____

First Set of SSMP Elements

SSMP Item	Required Completion Date
• Goals • Organization • Emergency Response Plan • FOG Control Program	August 31, 2006

Certification:

I certify that my agency has completed the Sewer System Management Plan (SSMP) elements as specified above. The document(s) comprising these elements are on file at our agency's offices.

_____ _____
Signature of Responsible Agency Representative Date

_____
Print Name and Title

San Francisco Bay Regional Water Quality Control Board
Sanitary Sewer Overflow Control Program

SSMP Form B-2:
Notification Form To Indicate Completion of Second Set of Sewer System Management Plan (SSMP) Elements

Return this form to the Regional Water Quality Control Board at the following address by August 31, 2007. You may email a PDF file of this form, mail the form, or fax the form.

Attention: Michael Chee
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Email: mchee@waterboards.ca.gov
Fax: (510) 622-2460

Name of Agency _____

Agency Contact Person _____

Contact Person Phone Number _____

Contact Person Email _____

Second Set of SSMP Elements

SSMP Item	Required Completion Date
• Legal Authority • Measures and Activities • Design and Construction Standards	August 31, 2007

Certification:

I certify that my agency has completed the Sewer System Management Plan (SSMP) elements as specified above. The document(s) comprising these elements are on file at our agency's offices.

_____ _____
Signature of Responsible Agency Representative Date

_____
Print Name and Title

San Francisco Bay Regional Water Quality Control Board
Sanitary Sewer Overflow Control Program

SSMP Form B-3:
Notification Form To Indicate Completion of Third (and Last) Set of Sewer System Management Plan (SSMP) Elements

Return this form to the Regional Water Quality Control Board at the following address by August 31, 2008. You may email a PDF file of this form, mail the form, or fax the form.

Attention: Michael Chee
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Email: mchee@waterboards.ca.gov
Fax: (510) 622-2460

Name of Agency _____

Agency Contact Person _____

Contact Person Phone Number _____

Contact Person Email _____

Third Set of SSMP Elements

SSMP Item	**Required Completion Date**
• Capacity Management • Monitoring, Measurement, and Program Modifications • SSMP Audits	August 31, 2008

Certification:

I certify that my agency has completed the Sewer System Management Plan (SSMP) elements as specified above. The document(s) comprising these elements are on file at our agency's offices.

_____ _____
Signature of Responsible Agency Representative Date

_____
Print Name and Title

Fact Sheet – Requirements For Submitting Technical Reports Under Section 13267 of the California Water Code

What does it mean when the regional water board requires a technical report?

Section 13267[1] of the California Water Code provides that "…the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged…waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

Are there limits to what the regional water board can ask for?

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons.

Are there penalties if I don't comply?

Depending on the situation, the regional water board can impose a fine of up to $1,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor.

Do I have to use a consultant or attorney to comply?

There is no legal requirement for this, but as a practical matter, in most cases the specialized nature of the information required makes use of a consultant and/or attorney advisable.

What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?

You have two options: ask that the regional water board reconsider the requirement, or submit a petition to the State Water Resources Control Board. See California Water Code sections 13320 and 13321 for details.

If I have more questions, who do I ask?

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

April, 2005

1 All code sections referenced herein can be found by going to www.leginfo.ca.gov

J U L Y 2 0 0 5

SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD

in cooperation with

BAY AREA CLEAN WATER AGENCIES

Sewer System Management Plan (SSMP) Development Guide

San Francisco Bay Regional Water Quality Control Board,
in cooperation with Bay Area Clean Water Agencies

Sewer System Management Plan (SSMP) Development Guide

Table of Contents

San Francisco Bay Regional Water Quality Control Board,
in cooperation with Bay Area Clean Water Agencies

Sewer System Management Plan (SSMP) Development Guide

GENERAL INFORMATION

What is a Sewer System Management Plan?

A Sewer System Management Plan, also called an SSMP, is a document that describes the activities your agency uses to manage your wastewater collection system effectively.

Effective management of a wastewater collection system includes:

1. Maintaining or improving the condition of the collection system infrastructure in order to provide reliable service into the future.

2. Cost-effectively minimizing infiltration/inflow (I/I) and providing adequate sewer capacity to accommodate design storm flows; and

3. Minimizing the number and impact of sanitary sewer overflows (SSOs) that occur;

In order to achieve the above goals it is expected that each wastewater collection system agency develop and implement an SSMP.

Why are SSMPs Being Required Now?

Collection Systems are the last major component of the wastewater management system yet to be regulated. Treatment plants, including pretreatment programs, have been regulated for some time. In addition, other networks have been regulated as well, such as potable water, natural gas, electricity, and liquid fuels, among others. Yet a successful regulatory program for sanitary sewer systems has not yet been developed in the San Francisco Bay Area. While the federal government has developed unpublished draft regulations (sometimes referred to as the "CMOM" program, which stands for Capacity, Management, Operations, and Maintenance), this program has not been officially implemented for a variety of reasons, and Regional Water Boards in California have decided to move forward and implement their own SSO control programs now due to the growing emphasis on reducing overflows.

What Is Required of Your Agency?

This document contains a description of the required elements of an SSMP, as well as helpful information for you to consider in meeting the requirements. Each wastewater collection system is different, and some of the differences that affect the content of an SSMP include geographical terrain (hilly or flat), number and type of connections (residential, commercial, industrial), soil types, weather patterns, age of sewers, condition of sewers, materials of sewers, history of sewer management practices, number of SSOs, affordability of sewer rates, type of agency (municipal government or special district), and other factors.

The required information includes elements that most industry experts agree are necessary to effectively manage a wastewater collection system. For small communities, some of these requirements may not be productive or appropriate, as described in detail in later sections of this document.

In summary, the required elements of an SSMP include:

1. Collection system management goals
2. Organization of personnel, including the chain of command and communications
3. Overflow emergency response plan
4. Fats, oils, and grease (FOG) control program
5. Legal authority for permitting flows into the system, inflow/infiltration control as well as enforcement of proper design, installation, and testing standards, and inspection requirements for new and rehabilitated sewers
6. Measures and activities to maintain the wastewater collection system
7. Design and construction standards
8. Capacity management
9. Monitoring plan for SSMP program effectiveness
10. Periodic SSMP Audits, periodic SSMP updates, and implementation of program improvements

Data Management

Wastewater collection system agencies are not required to use computer-based maintenance management and GIS software to manage their wastewater collection systems, although there is a wide range of software currently available to match most agencies needs and budgets, both large and small. Collection system agencies may find that computer-based solutions are a more effective way to manage large numbers of wastewater collection system assets. Regardless of the method selected for managing information, operations, maintenance and capital improvement procedures should be documented in writing and an SSMP is intended to fulfill that role.

How to Use This Guide

The specific minimum SSMP requirements for wastewater collection system agencies are indicated as bold text in gray boxes in each section of this document. The minimum SSMP requirements are usually followed by the "Key Point" which summarizes the suggested content

for the section, and/or "Helpful Information" which elaborates on the content with introductory information and tips, including more detailed suggestions for content. Both of these sections are presented in plain text.

If your agency already has an existing sewer management program, and this program contains all the required elements of the SSMP, you may use your existing sewer management program to satisfy the requirement for an SSMP. If your existing program contains *some* elements of the SSMP, you may use your existing program and add those SSMP elements that are missing into your existing program.

All public wastewater collection system agencies in the San Francisco Bay Region are expected to document their wastewater collection system activities, as described more specifically in the remainder of this document. If you believe that any element of this program is not appropriate or applicable to your agency, your SSMP does not need to address it, but an explanation in the SSMP should be provided, indicating why that element of the SSMP is not applicable.

Terms That Appear in This Guide

Some terms and acronyms used in this document, along with their definitions, are as follows:

Bay Area Clean Water Agencies (BACWA) – The San Francisco Bay Area Joint Powers Authority comprised of wastewater treatment and collection system agencies. The BACWA vision is to: Develop a region-wide understanding of the watershed protection and enhancement needs through reliance on sound scientific, environmental and economic information and ensure that this understanding leads to long-term stewardship of the San Francisco Bay Estuary. BACWA worked in collaboration with the Regional Water Board to develop this SSMP development document.

Geographical Information System (GIS) – A database linked with mapping, which includes various layers of information used by government officials. Examples of information found on a GIS can include a sewer map; sewer features such as pipe location, diameter, material, condition, last date cleaned or repaired. The GIS also typically contains base information such as streets and parcels.

Infiltration/Inflow (I/I) – Infiltration is generally considered to be extraneous water that enters the sewer system over longer periods of time, such as groundwater seepage through cracks in the sewer. Inflow is generally considered to be extraneous water that enters the system as a direct result of a rain event, such as through improper connections to the sanitary sewer, through flooded manhole covers, or through defects in the sewer. While it is impossible to control all I/I, it is certainly desirable to reduce I/I when cost-effective.

Lateral – The portion of sewer that connects a home or business with the main line in the street. Sometimes sewer system agencies own or maintain a portion of the lateral.

Regional Water Board – Short name for San Francisco Bay Regional Water Quality Control Board (also known as RWQCB). The mission of this state regulatory agency is to: preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The Regional Water Board has worked in collaboration with BACWA to develop this SSMP development guide.

Sanitary Sewer Overflow (SSO) – For the San Francisco Bay SSO program, an SSO is defined as a spill, release, or unauthorized discharge of wastewater from a sanitary sewer system at any point upstream of a wastewater treatment facility that is caused by a problem in or with sewer system authorities' sewer lines including laterals owned by the authorities. For reporting purposes, overflows greater than 100 gallons are to be reported electronically to the Regional Water Board.

Sewer System Agency – The legal entity that owns and is ultimately responsible for the wastewater collection system. Also called wastewater collection system agency.

Stoppage – A build up of debris in the sewer which stops the flow of wastewater and allows the water to back up behind the stoppage, sometimes causing an overflow. Also called a blockage.

Blockage – A build up of debris in the sewer, which stops the flow of wastewater and allows the water to back up behind the stoppage, sometimes causing an overflow. Also called a stoppage.

Wastewater Collection System – All pipelines, pump stations, and other facilities upstream of the headworks of the wastewater treatment plant that transport wastewater from its source to the wastewater treatment plant.

Wastewater Collection System Agency – The legal entity that owns and is ultimately responsible for the wastewater collection system. Also called sewer system agency.

ELEMENTS OF AN SSMP

1. Goals

Requirement: Each wastewater collection system agency shall, at a minimum, develop goals for the Sewer System Management Plan as follows:

- To properly manage, operate, and maintain all parts of the wastewater collection system
- To provide adequate capacity to convey peak flows
- To minimize the frequency of SSOs
- To mitigate the impact of SSOs

This section is applicable to all wastewater collection systems.

Helpful Information

Goals are an important aspect of an SSMP because they provide focus for agency staff to continue good work and/or to implement improvements in management of the wastewater collection system. Goals may also reflect performance, safety, levels of service, resource use, and other considerations. The goals section of the SSMP may also refer to the SSMP as a supplement to an existing wastewater collection system management program, if one already exists.

2. Organization

Requirement: Each wastewater collection agency shall, at a minimum, provide information regarding organization:

- Identify agency staff responsible for implementing, managing, and updating the SSMP
- Identify chain of communication for responding to SSOs
- Identify chain of communication for reporting SSOs

This section is applicable to all wastewater collection systems.

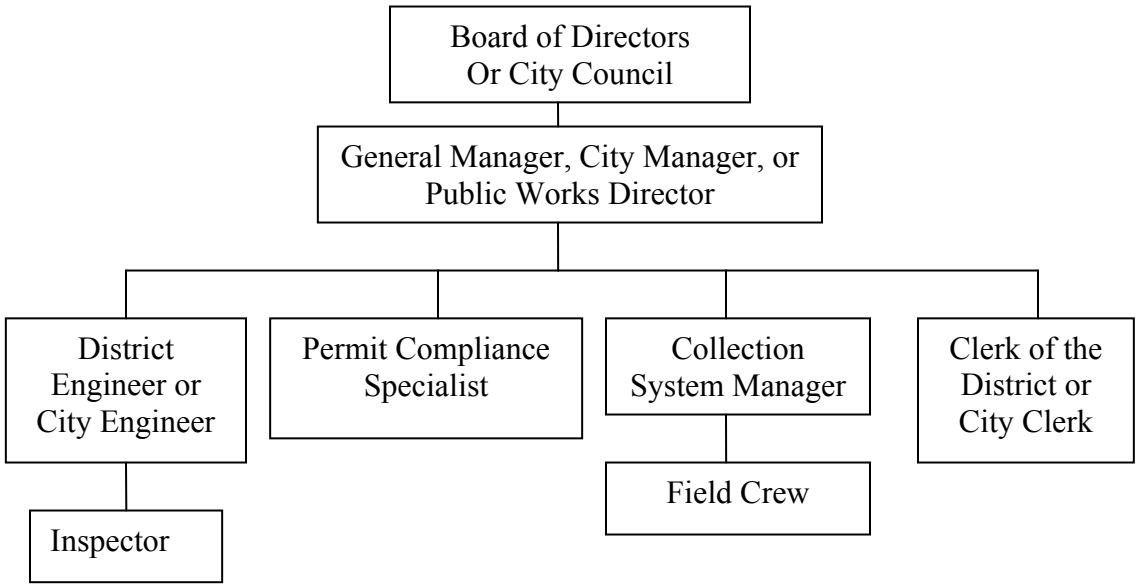
Key Point

The organization of a wastewater collection system agency can be provided in either a tabular form or as an organization chart and should be used to identify administrative and maintenance positions responsible for implementing the SSMP, including the chain of communication for reporting SSOs. An example organization chart, annotated at the bottom to identify responsibilities, is shown in Figure 1.

Helpful Information

The organization identifies those agency staff who are responsible for implementing, managing, and updating the SSMP. The communication plan identifies agency staff who are responsible for managing the SSO response, investigating the cause, and reporting the SSO to the appropriate parties. It also provides a consolidated list of contact information for key agency personnel. This portion of the SSMP should also describe lines of communication by which an SSO is reported to the wastewater collection system agency (for example by members of the public); how management staff is notified; and how maintenance staff, contractors, and equipment are mobilized.

Figure 1. Example Organization Chart for SSMP



Examples of SSMP Roles for wastewater collection system agency staff are:

General Manager, City Manager, or Public Works Director – Establishes policy, plans strategy, leads staff, allocates resources, delegates responsibility, authorizes outside contractors to perform services, and may serve as public information officer.
District Engineer or City Engineer – Prepares wastewater collection system planning documents; manages capital improvement delivery system; documents new and rehabilitated assets; and coordinates development and implementation of SSMP.
Inspector – Ensures that new and rehabilitated assets meet agency standards, works with field crews to handle emergencies when contractors are involved; and provides verbal reports to District Engineer.
Permit Compliance Specialist – Works as needed on applicable permits, laws, and regulations; provides support to all parts of operation.
Collection System Manager –Manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.

Field Crew – Staff preventive maintenance activities, mobilize and respond to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).
Clerk of the District or City Clerk – Provides information updates to Board or City Council. Arranges for emergency meetings if necessary.

It is suggested that job titles be used instead of individual names, in order to accommodate staff changes.

A separate document developed jointly by the Regional Water Board and BACWA describes the procedures for reporting an SSO through the web-based reporting system that is maintained by the Regional Water Board. This document is located at https://www.r2esmr.net/data/sso-erp/SSO_User_Guide_11-23-2004.pdf, or can be accessed from the Regional Water Board's Home Page using the Quick Link.

3. Overflow Emergency Response Plan

Requirement: Each wastewater collection system agency shall develop an overflow emergency response plan with the following elements:

- Notification – Provide SSO notification procedures.
- Response – Develop and implement a plan to respond to SSOs.
- Reporting – Develop procedures to report and notify SSOs per SSO Monitoring and Reporting Program.
- Impact Mitigation – Develop steps to contain wastewater, to prevent overflows from reaching surface waters, and to minimize or correct any adverse impact from SSOs.

This section is applicable to all wastewater collection systems.

Key Point

The response plan should be developed as a stand-alone document and summarized in the SSMP, and updated as necessary to reflect any changes in staffing or notification requirements, including contact numbers.

Helpful Information

An overflow emergency response plan provides a standardized course of action for wastewater collection system personnel to follow in the event of an SSO, and ensures that the sewer system agency is adequately prepared to respond to SSO events. The plan does not need to be organized specifically into sections corresponding to the required elements, but the plan should address each of the required elements.

Further information on each of the required elements of an emergency response plan is shown below:

- Notification – This element includes information on how the agency could be notified of an SSO through a complaint or a report from outside the agency or within the agency, and also the internal agency chain of communication leading up to the response to the overflow. Internal communication responsibilities during and after the overflow should also be included.

- Response – The plan for responding to SSOs should describe the staff and expected response time for SSOs, and any details associated with mobilizing for the response.

- Reporting – This element includes a procedure for evaluating whether an overflow event triggers 24-hour reporting (such as in the case of an SSO that is 1,000 gallons or more; if the SSO may imminently and substantially endanger human health; or if the SSO causes a fish kill). This element would also include the individuals expected to do the reporting and identify the external agencies receiving the reports. The transmission media options should also be identified. The document "San Francisco Bay Area Sanitary Sewer Overflow Monitoring and Reporting Program for Sewer System Authorities" prepared by the Regional Water Board (dated November 15, 2004) should also be consulted for further reporting requirements, such as entering the information into the web-based reporting system.

- Impact Mitigation – The plan should describe potential system failures in order to be prepared for potential overflow situations, and strategies and emergency operations for responding to these potential system failures.

Many sewer system agencies may already have an overflow emergency response plan in place. If the existing overflow emergency response plan contains all the elements required by the SSMP, the wastewater water collection agencies can just refer to the documentation that already exists. If a plan does not currently exist for your sewer system agency, you may wish to consult a publication by the American Public Works Association (APWA), Preparing Sewer Overflow Response Plans: A Guidebook for Local Governments, published in 1998. This 55-page document is a step-by-step guide to developing a plan, including agency coordination strategies, strategies for minimizing private property damage, public notification, and follow-up cleaning and reporting. Training of agency personnel on the emergency response plan is important. Conducting periodic exercises to ensure that both training and emergency equipment are relevant and functional is important.

4. Fats, Oils and Grease (FOG) Control Program

Requirement: Each wastewater collection system agency shall evaluate its service area to determine whether a FOG control program is needed. If so, a FOG control program shall be developed as part of the SSMP. If an agency determines that a FOG program is not needed, the agency must provide justification for why it is not needed.

This section is applicable to all wastewater collection systems.

Key Point

A FOG control program should identify sections of the sewer system subject to grease blockages and establish a cleaning maintenance schedule for each section. Identification of these blockage "hot spots" and their causes is usually based on blockage history, line investigation, and inspection of FOG dischargers (such as restaurants). Hot spots can then be addressed through more frequent cleaning, targeted outreach, and additional regulation on FOG discharges.

Helpful Information

Grease can be a significant source of sewer blockages in some communities, potentially leading to SSOs. If grease is a source of SSOs in your community, recommended elements of a FOG control program include the following:

- Identification & Sewer Cleaning – Identify areas or line segments of the wastewater collection system subject to grease stoppages and establish a prioritized preventive cleaning schedule for each area or line segment.
- Source Control – Develop and implement source control measures for each area of the wastewater collection system identified, for all sources of grease that may be discharged.
- Facility Inspection – Inspect grease-producing facilities, with priority given to previously identified problem areas.
- Legal Authority – Ensure legal authority to prohibit discharges to collection system, as appropriate.

Some communities already have a FOG control program in place, and in that case, the SSMP can refer to the documentation that already exists. If a sewer system agency is developing a FOG control program for the first time, several resources exist, and neighboring agencies with existing programs can provide information for consideration in developing a program that meets the specific needs of your sewer system agency.

Another resource is the California FOG Work Group, a special group organized within Tri-TAC. (Tri-TAC is a technical advisory committee representing municipal wastewater management agencies. Members include the California Association of Sanitation Agencies, the League of California Cites, and the California Water and Environment Association.) CalFOG works to compile information about FOG for sewer system authorities. CalFOG also works on specific FOG issues of interest to the wastewater industry. Information compiled by CalFOG includes best management practices for restaurants and residents, public information and outreach materials, technical guides, laws and regulations, and technology resources. This information can be found at www.calfog.org.

If discharger-specific blockages or permit violations persist, additional source control or installation of grease removal devices may be warranted. Outreach to residences can also be helpful in reducing the total FOG load to the collection system.

5. Legal Authority

Requirement: Each wastewater collection system agency shall, at a minimum, describe its legal authority, through sewer use ordinances, services agreements, or other legally binding procedures to:

- Control infiltration/inflow (I/I) from satellite wastewater collection systems and laterals
- Require proper design and construction of new and rehabilitated sewers and connections
- Require proper installation, testing, and inspection of new and rehabilitated sewers

This section can be waived for collection systems that serve a population of 10,000 or less.

Key Point

The specific legal mechanisms applicable to the sewer system agency should be described in this section of the SSMP, with citations of names and code numbers of ordinances. If legal authority does not currently exist for one of the required elements listed in the box above, the SSMP should indicate a schedule of activities to obtain the proper legal authority.

Helpful Information

Legal authority refers to powers granted to the wastewater collection system agency to provide services to the public, typically through sewer use ordinances, service agreements, and other mechanisms.

Using this legal authority, the wastewater collection system agency can require system users to meet performance standards, maintain user-owned elements of the system, and pay penalties for non-compliance. The specific type of legal authority available to wastewater collection system authorities varies widely based on their existing legal designation (for example, special district, satellite wastewater collection system agency, general purpose government). As with other sections of the SSMP, if documentation of legal authority (such as ordinances or regulations) already exists for an agency, the agency can simply list the legal mechanisms already in place, in order to meet the requirements for the SSMP.

Points to remember when documenting legal authority:

- Legal agreements, discharge permits, and ordinances should include the proper authority to require system users to comply with standards of design, construction, use, and maintenance.

- The wastewater collection system agency should have the ability to ultimately disconnect the user if they fail to comply with the established conditions of use. Other civil or criminal recourse should be available to the wastewater collection system agency in cases where deliberate and significant violations of these conditions occur and there is a substantial impact to a receiving water or endangerment of human health.

- Illegal discharges should be subject to corrective response action using any existing laws prohibiting a type of discharge, regardless of the user class (for example, domestic, commercial, or industrial).

- Many wastewater collection system agencies have enforceable regulations prohibiting downspout, roof drain and area drain connections to their sanitary sewer systems.

- Building codes normally provide legal authority for the proper construction of privately-owned sewer lines.

- Sometimes wastewater collection system agencies require laterals to be inspected when a property is sold. If damage is identified, the property owner could be required to repair or replace their lateral. In any event, construction and installation requirements for laterals can be included in the local building code.

6. Measures and Activities

a. Collection System Map

Requirement: Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities.

This section is applicable to all wastewater collection systems.

Key Point

The SSMP should describe the type of maps currently being used by the sewer system agency, along with procedures for updating the maps with new and rehabilitated facilities.

Helpful Information

Knowledge of the location of all wastewater collection system facilities is essential to effective management. This requires the maintenance of up-to-date collection system maps. The maps can be available in hard copy or electronic format. The benefit of an electronic format is that it provides a more sophisticated tool for prioritizing repair, replacement, or rehabilitation projects, and for producing work orders for sewer cleaning and other maintenance activities. Sewer maps should include at least the basic information shown in the table below. Additional attributes which may be useful to the agency are shown in the column to the right of the basic attributes. Some of this basic information may be included as part of the GIS database linked to the map instead of on the map itself. Pump stations should also be indicated on the map, although their technical information can be too complex to display on a map sheet, and it may be more appropriate to place it in the GIS database. Service lateral data can optionally be included.

Facility Type	Basic Map Information	Additional Map Information
Manholes	- ID number or other unique identifier - Location, with reference to streets and property lines - Depth	- GPS coordinates - Date built - Rim elevation - Invert elevation - Size - Material Type - Worker safety information
Pipes	- ID number or other unique identifier - Location, with reference to streets and property lines - Size - Direction of flow - Length - Material type	- Date built - Slope - Pipe invert elevations - Plan or as-built ID number
Pump Stations	- ID number - Location	- Additional information would normally be available on drawings, or a GIS if available

b. Resources and Budget

Requirement: Each wastewater collection system agency shall allocate adequate resources for the operation, maintenance, and repair of its collection system.

This section is applicable to all wastewater collection systems.

Key Point

The funding and budgetary support for operating the collection system is the foundation of the entire agency. The SSMP should demonstrate that the resources are adequate for an acceptable delivery of the agency's services to the public, including capital replacement.

Helpful Information

The resources required for effective wastewater collection system operations, maintenance, and repair include:

- A reliable, consistent, and sufficient funding source for both the operating budget and capital replacement plan.

  The strongest funding mechanism is a user-supported rate-paying structure, commonly known as an enterprise fund, which is separate from general fund revenue sources.

- A formal operating budget and expenditure plan.

  This is the annual cost of running the collection system, for example operations

and maintenance including staff, equipment, tools, consumables, contract services, spare parts, and support facilities such as corporation yards or utility service centers.

- A capital improvement plan (CIP) sufficient to ensure the continued longevity of the system.

  This is the on-going funding for major rehabilitation or replacement of the collection system as the system wears out, or upgrading of the system because of expansion. Costs include planning, design, construction, and inspection of new or rehabilitated facilities.

In the event that operations and maintenance are provided though contract service, the scope of those services should be described.

c. Prioritized Preventive Maintenance

Requirement: Each wastewater collection system agency shall prioritize its preventive maintenance activities.

This section is applicable to all wastewater collection systems.

Key Point

This section of the SSMP should describe the system currently in use for prioritized preventive maintenance, and any plans for improving the system, as needed, to maintain the integrity of the system and reduce the frequency of SSOs. The program should address criteria and results for short-term and long-term prioritization of corrective actions based on structural or other deficiencies identified during preventive maintenance activities.

Helpful Information

A good preventive maintenance program is one component in keeping a system in good repair and preventing excessive infiltration/inflow (I/I), service interruptions, and system failures, which can result in SSOs. A preventive maintenance program can also help in protecting the capital investment in the collection system.

Preventive maintenance activities can include some or all of the following activities:

- Scheduled cleaning of gravity sewers, with a higher frequency in those areas with a history of stoppages due to debris and fats, oils, and grease in order to minimize SSOs. (See also Section 4 above for FOG control information.)

- Root control in areas that are known to have recurring SSOs or premature structural damage due to root intrusion.

- Investigation and resolution of customer complaints.

- Odor control including the maintenance of chemical injection systems, carbon filters, etc.

- Scheduled cleaning of force mains - although at a longer interval than gravity sewers - to increase pump station efficiency and prevent backups.

- Maintenance activity records to support appropriate analysis and reporting

Prioritization of preventive maintenance activities can occur through the use of verbal communications (especially for smaller agencies), the use of work orders to track progress, and/or routine operations such as sewer cleaning based on experience with known problem areas. Data on stoppages or other operational problems can be collected in field logs or computer-based information systems and reviewed regularly by system managers for prioritization.

Larger sewer system agencies will likely use a formal condition assessment process that relies on television inspection of sewers as part of its prioritization process. For more sophisticated systems, the prioritization of preventive maintenance activities can be coupled with the prioritization of correcting structural deficiencies, as described in Section 6.d. below. If this is the case, Sections 6.c. and 6.d. can be described in the SSMP together.

d. Scheduled Inspections and Condition Assessment

Requirement: Each wastewater collection system agency shall identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them.

Key Point

This section of the SSMP should describe the approach currently used for scheduled inspections and condition assessment of the sewer collection system. The approach should address criteria and results for short-term and long-term prioritization of corrective actions based on identified structural or other deficiencies. This should be consistent with the overall goal of maintaining the integrity of the system and reducing the frequency of SSOs.

Helpful Information

A good inspection program is one component for keeping a system in good repair and preventing excessive inflow/infiltration (I/I), service interruptions, and system failures, which can result in SSOs. When combined with an adequate condition assessment plan, inspections can also help protect the capital investment in the collection system.

There are at least two methods to manage structural deficiencies in a wastewater collection system: *reactive* and *proactive*.

In the reactive method structural deficiencies are identified by waiting for system failures (e.g. stoppage, SSO, equipment failure) to appear. Corrective actions are then taken in response to the failure. This may be adequate for a wastewater collection system that is somewhat new and/or has relatively few SSOs. This is a short-term strategy, however, and may not be cost-effective in the long term. It is likely that as the wastewater collection system ages, however, a "proactive" approach to system management would be more appropriate.

Using a "proactive" method, collection system performance and physical integrity can be substantially improved by actively seeking out and correcting structural deficiencies prior to system failure. Under the "proactive" mode, periodic condition assessments are performed for each sewer facility (manhole, main line, service lateral, etc.) to determine the location and extent of problem areas.

There are many methods for conducting inspections, evaluating results, and establishing condition assessments. For smaller agencies, very simple criteria (high, medium, and low) can be applied to the severity of defects and a prioritized list of repair activities can be established. For larger agencies, sophisticated computer models that combine large quantities of data to form capital management plans can be used.

Inspection activities can include some or all of the following activities:

- Routine inspections of the collection system facilities, including pump stations, with a process to address defects, damage, or other identified problems.
- Flow monitoring for capacity analysis.
- Smoke testing, dye testing, and exfiltration testing to monitor/reduce inflow and infiltration (I/I).
- Uniform condition assessment based on inspection data.
- Implementation of short-term and long-term rehabilitation actions to address each deficiency.
- Maintenance of records to support appropriate analysis and reporting.

Many sewer system agencies will likely use a formal condition assessment process that relies on television inspection of sewers as part of its condition assessment process. For more sophisticated systems, the prioritization of preventive maintenance activities can be

coupled with the prioritization of correcting structural deficiencies, as described above. If this is the case, Sections 6.c. and 6.d. can be described in the SSMP together.

e. Contingency Equipment and Replacement Inventories

Requirement: Each wastewater collection system agency shall provide contingency equipment to handle emergencies, and spare/replacement parts intended to minimize equipment/ facility downtime.

This section can be waived for collection systems serving a population of 10,000 or less.

Key Point

For this section of the SSMP, wastewater collection system agencies should summarize their critical spare parts inventory and list major equipment used for sewer system operation and maintenance. Specific aspects of the replacement parts inventories can also be described (e.g. use of the same model pumps at multiple locations to reduce needed replacements).

Helpful Information

Contingency equipment (e.g. portable pumps, generators) supports an effective response to emergency conditions. Spare/replacement parts can be kept in inventory to minimize equipment/facility downtime in the event of an unplanned failure. Replacement parts for pumps, motors, and vehicles and appropriately maintained emergency response equipment and accessories allow field crews to effectively respond to incidents and efficiently perform routine maintenance. Without an adequate inventory of replacement parts, the collection system may experience high volume and/or extended overflow events in the event of a breakdown or malfunction.

Providing adequate maintenance facilities and equipment typically includes a process for identifying critical parts needed for system operation and maintenance and establishing an adequate inventory of replacement parts. The process for identifying critical parts can be based on a review of equipment and manufacturer's recommendations, supplemented by the experience of the maintenance staff and local availability.

f. Training

Requirement: Each wastewater collection system agency shall provide training on a regular basis for its staff in collection system operations, maintenance, and monitoring.

Key Point

The SSMP should include a description of the agency's training program and whether any changes or improvements are anticipated in the near future.

Helpful Information

An ongoing training program should address the skills necessary to perform proper operations and maintenance, to provide timely and effective emergency response, and to incorporate recognized safety practices.

Training can take on many forms. It can include special classes or seminars, certification programs, such as through the California Water Environment Association (CWEA), on-the-job training, and informal training through mentoring of experienced personnel with those new to collection systems.

CWEA's program provides a mechanism for employee education as well as establishing the technical competence at each level of certification. In addition, there is a program for registering the continuing education activities of employees, which is part of the process for maintaining certification.

g. Outreach to Plumbers and Building Contractors

Requirement: Implement an outreach program to educate commercial entities involved in sewer construction or maintenance about the proper practices for preventing blockages in private laterals. This requirement can be met by participating in a region-wide outreach program.

This section can be waived for collection systems serving a population of 10,000 or less.

Helpful Information

Sometimes commercial entities involved in construction or maintenance of sewers are not aware of the ramifications of their actions which can sometimes result in sanitary sewer overflows. The actions can result in problems such as blockages in the private lateral, or blockages in the main line caused by actions taken in the private lateral (such as pushing debris from the lateral into the main line). An ongoing outreach program to these entities, and others as appropriate, should be implemented to encourage the use of proper practices for preventing blockages. For example, information can be disseminated on construction standards, proper operations and maintenance activities, and effective measures for removing blockages.

7. Design and Construction Standards

a. Standards for Installation, Rehabilitation and Repair

Requirement: Each wastewater collection system agency shall identify minimum design and construction standards and specifications for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems.

This section is applicable to all wastewater collection systems.

Key Point

Wastewater collection system agencies should evaluate if the existing design standards are appropriate and up to date. If the agency believes its current standards are appropriate, the agency can refer to the documentation that already exists, and provide a discussion in the SSMP.

Helpful Information

SSOs and operating problems are, in some cases, attributable to poor design and/or improper construction for both newly constructed and rehabilitated sewers. An effective program that ensures that new sewers are properly designed and installed can minimize system deficiencies that could create or contribute to future overflows or operations and maintenance problems.

Using the legal authorities outlined in Section 5 above, specific design and construction standards should be required for new construction and for rehabilitation. Design criteria include specifications such as pipe materials, minimum sizes, minimum cover, strength, minimum slope, trench and backfill, structure standards, and other factors.

Many communities already have specific standards in place. If design and construction standards need to be developed, neighboring agencies with existing programs can be a valuable resource in developing a program that meets the specific needs of your sewer system agency. Additional resources are listed in the references to this document.

b. Standards for Inspection and Testing of New and Rehabilitated Facilities

Requirement: Each wastewater collection system agency shall identify procedures and standards for inspecting and testing the installation of new sewers, pump stations, and other appurtenances; and for rehabilitation and repair projects.

This section is applicable to all wastewater collection systems.

Key Point

As with design and construction standards, many communities already have specific standards for inspection and testing in place, and in that case, the SSMP should refer to the documentation that already exists.

Helpful Information

Inspection and testing of new facilities is important, to ensure that the standards established as described in Section 7.a. above are actually implemented in the field. It's important that completed construction not be accepted by the wastewater collection system agency until inspection and testing have been completed. This approach helps ensure proper operation and maximum life expectancy.

Using the legal authority set up as outlined in Section 5 above, specific inspection and testing should be required. Installation and testing of facilities is sometimes conducted by the contractor while an inspector representing the wastewater collection system agency makes sure the installation and testing meets the agency standards. Inspections are usually performed during and at the completion of construction. Acceptance testing for gravity sewers can include: low pressure air test or water test to identify leakage, mandrel test to identify deflection in flexible pipe, water or vacuum test of manholes to identify leakage, television inspection to identify grade variations or other construction defects.

If inspection and testing standards need to be developed for the agency, other agencies with existing programs can be a valuable resource in developing a program that meets the specific needs of your sewer system agency.

8. Capacity Management

a. Capacity Assessment

Requirement: Each wastewater collection system agency shall establish a process to assess the current and future capacity requirements for the collection system facilities.

This section can be waived for collection systems serving a population of 10,000 or less.

Key Point

The SSMP should describe whether a current capacity assessment of the wastewater collection system has been prepared, and if not, provide a schedule of activities for completing such an assessment.

Helpful Information

A critical function of a wastewater collection system is to provide adequate capacity to handle peak, typically wet weather, flows. The purpose of a capacity assessment is to ensure that adequate capacity exists in all portions of the collection system and that the downstream portions that will receive wastewater from new connections can handle the additional flow.

A sewer system master plan normally serves the purpose of determining whether there are any capacity-related issues that need to be addressed, but other evaluations may also be used. A master plan would generally include an evaluation of the sewer system capacity through sewer mapping, flow monitoring of major trunk sewers, and modeling to identify hydraulic bottlenecks.

For the purposes of the capacity assessment, it is appropriate to establish the design storm under which various components of the collection system are expected to perform, to make sure that those design storms are consistent with the conceptual approach for wet weather overflows contained in the San Francisco Bay Water Quality Control Plan (2005 Basin Plan), Chapter 4, Table 4-8.

b. System Evaluation and Capacity Assurance Plan

Requirement: Each wastewater collection system agency shall prepare and implement a capital improvement plan to provide hydraulic capacity of key sewer system elements under peak flow conditions.

This section can be waived for collection systems that serve a population of 10,000 or less.

Key Point

Once the capacity assessment (as described in Section 8.a. above) has been completed and capacity needs have been identified, a capital improvement program must be implemented to address capacity needs, if there are any. The SSMP should briefly describe the capital improvements anticipated in the next 1-5 years, 5-10 years, and 10-20 years, and be updated as implementation occurs and priorities change.

Helpful Information

The recommended elements of a capital improvement plan are as follows:

- Evaluation Steps – Evaluate portions of the collection system experiencing SSOs due to hydraulic deficiency.

- Capacity Enhancement Measures – Establish a short- and long-term capital improvement program to address identified hydraulic deficiencies.

- Plan updates – Update the plan on a regular basis as specified in the SSMP.

The capital improvement activities outlined in this section should be coordinated with the identification and prioritization of structural deficiencies identified in Section 6.d. above, because structural and hydraulic problems can be closely related.

Short-term capital improvement programs should replace or repair critical elements of the system that are near failure as soon as possible. An optimized replacement schedule prioritizes specific elements of the collection system to provide the most benefit.

9. Monitoring, Measurement, and Program Modifications

Requirement: Each wastewater collection system agency shall monitor the effectiveness of each SSMP element and update and modify SSMP elements to keep them current, accurate, and available for audit as appropriate.

This section is applicable to all wastewater collection systems.

Key Point

This section of the SSMP should discuss how your agency monitors implementation of the SSMP elements, and measures the effectiveness of SSMP elements in reducing SSOs. Effectiveness should be measured by developing and tracking performance indicators on a regular basis. Performance indicators should be selected to meet the goals of the wastewater collection system agency.

Helpful Information

Some examples of performance indicators include:

- Number of SSOs over the past 12 months, distinguishing between dry weather overflows and wet weather overflows
- Volume distribution of SSOs (e.g. number of SSOs < 100 gallons, 100 to 999 gallons, 1,000 to 9,999 gallons, > 10,000 gallons)
- Volume of SSOs that was contained in relation to total volume of SSOs
- SSOs by cause (e.g. roots, grease, debris, pipe failure, pump station failure, capacity, other).
- Number of stoppages over the past 12 months
- Stoppages by cause
- Average time to respond to an SSO
- Relationship of capacity-related SSOs to storm event return frequency
- Ratio of planned sewer cleaning to unplanned sewer cleaning
- Backlog of repair, rehabilitation, and replacement projects

- Plans developed for, or implementation of, activities to target specific problems identified, such as roots, structural deficiencies, or fats, oil, and grease (FOG)

This section of the SSMP should also contain a description of what the wastewater collection system agency plans to do to make sure the SSMP remains current and useful over time. Examples of changes that could occur include new or modified infrastructure, increased system demand, new or modified operations and maintenance protocols, or changed organizational structure.

There are several ways the SSMP can be kept up to date. Examples of actions, which could be used to meet this requirement, include:

- Obtain specific funding to carry out periodic reviews and to participate in any related coordinating meetings.
- Assign a staff person to review the SSMP periodically to check effectiveness and timeliness.
- Check in with collection systems staff at periodic intervals to review the effectiveness and identify potential areas for improvement, either individually or through meetings.
- Prepare progress reports documenting effectiveness, potential changes, and/or a summary of program activities on a periodic basis.
- Obtain internal approval to update the SSMP with specific revisions.
- Solicit peer review by another collection system agency

If major changes are proposed for the sewer system management program, they may need to be approved by a Board of Directors in the case of a sewer district, or similar higher levels of governmental officials for a city or county. In addition, if changes are identified for implementation in the SSMP, other related documentation may also be affected and need to be revised as well.

10. SSMP Audits

Requirement: Each wastewater collection system agency shall conduct an annual audit of their SSMP which includes any deficiencies and steps to correct them (if applicable), appropriate to the size of the system and the number of overflows, and submit a report of such audit.

This section can be waived for collection systems serving a population of 10,000 or less.

Key Point

The audit should cover the most recent calendar year, and be submitted to the Regional Water Board by March 15 of the year following the calendar year for which the analysis applies.

Helpful Information

The audit can contain information about successes in implementing the most recent version of the SSMP, and identify revisions that may be needed for a more effective program. Information collected as part of Section 9 above can be used in preparing the audit. Tables and figures or

charts can be used to summarize information about these indicators. An explanation of the SSMP development, and accomplishments in improving the sewer system, should be included in the audit, including:

- Progress made on development of SSMP elements, and if the sewer system agency is on schedule in development of the SSMP. Provide justification on the delay if the sewer system agency is behind schedule on development of the SSMP;

- How the sewer system agency implemented SSMP elements in the past year;

- The effectiveness of implementing SSMP elements;

- A description of the additions and improvements made to the sanitary sewer collection system in the past reporting year; and

- A description of the additions and improvements planned for the upcoming reporting year with an estimated schedule for implementation.

Additional Tips

Helpful Information

- You may want to include a section up front entitled "System Overview," which describes the size and physical features of the system, to put the rest of the document into context.

- When you prepare the SSMP for the first time, you may want to include a "Sewer Overflow History" to give you a place to start from in evaluating any trends for SSOs in the future.

Resources

Publications

American Public Works Association, 1998, *Preparing Sewer Overflow Response Plans: A Guidebook for Local Governments.*

American Society of Civil Engineers, 1982, *Gravity Sanitary Sewer Design and Construction*, ASCE Manual and Report on Engineering Practice No. 60 and WPCF Manual of Practice No. FD-5.

American Society of Civil Engineers, 1994, *Existing Sewer Evaluation & Rehabilitation,* WEF Manual of Practice FD-6, ASCE Manual and Report on Engineering Practice No. 62.

American Society of Civil Engineers, 1997, *Manhole Inspection and Rehabilitation*, ASCE Manuals and Report on Engineering Practice No. 92.

American Society of Civil Engineers, 1999, *Optimization of Collection System Maintenance Frequencies and System Performance*.

American Society of Civil Engineers, 2000, *Protocols for Identifying Sanitary Sewer Overflows* (draft as of April 2000).

California State University, Sacramento, 1998, *Collection System: Methods for Evaluating and Improving Performance.*

Collection System Collaborative Benchmarking Group, 2001, *Hydroflush Cleaning of Small-Diameter Sewers*, available from the California Water Environment Association (CWEA) website, at http://www.cwea.org/book_ocb.shtml.

Collection System Collaborative Benchmarking Group, 2004, *Best Practices for Sanitary Sewer Overflow Prevention and Response Plan*, available from the California Water Environment Association (CWEA) website, at http://www.cwea.org/book_ocb.shtml.

Collection System Collaborative Benchmarking Group, expected publication in 2005, *Best Practices for Integrated Root Control*, will be available from the California Water Environment Association (CWEA) website, at http://www.cwea.org/book_ocb.shtml.

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NASSCO, 1993, *Inspector Handbook for Sewer collection System Maintenance and Rehabilitation.*

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San Francisco Bay Regional Water Quality Control Board, 1995*, San Francisco Bay Basin (Region 2) Water Quality Control Plan* (also known as "The Basin Plan").

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U.S. Environmental Protection Agency, 1975, *Handbook for Sewer System Evaluation and Rehabilitation,* Document No. EPA/430/9-75/021.

U.S. Environmental Protection Agency, 1985, *Demonstration of Service Lateral Testing and Rehabilitation Techniques*.

U.S. Environmental Protection Agency, 1985, *Design Manual for Odor and Corrosion Control in Sanitary Sewerage Systems and Treatment Plants*, Document No. EPA/625/1-85/018.

U.S. Environmental Protection Agency, 1991, *Sewer System Infrastructure Analysis and Rehabilitation Handbook*.

U.S. Environmental Protection Agency, 1992, *Detection, Control and Correction of Hydrogen Sulfide Corrosion in Existing Wastewater Systems*, Document No. EPA-832-R-92-001, September 1992.

Uniform Plumbing Code or California State Plumbing Code.

Water Environment Federation, 1993, *Design of Wastewater and Stormwater Pumping Stations*, MOP FD-4.

Water Environment Federation, 1999, *Control of Infiltration and Inflow in Private Building Sewer Connections.*

Water Environment Federation, 1999*, Prevention and Control of Sewer System Overflows,* Second Edition, Manual of Practice FD-17.

Water Environment Federation, 1999, *Wastewater Collection Systems Management*, 5th Edition, Manual of Practice No. 7.

Water Environment Research Foundation, 1997, *Benchmarking Wastewater Operations – Collection, Treatment and Biosolids Management,* Project 96-CTS-5.

Water Pollution Control Federation, 1969, *Design and Construction of Sanitary & Storm Sewers*, MOP 9.

Water Research Centre, 1993, *Manual of Sewer Condition Classification.*

Water Research Centre, 1994, *Sewerage Rehabilitation Manual*, Third Edition.

Website Resources

California Water Environment Association: certification program for collection system maintenance. Visit http://www.cwea.org/cert.shtml, or call (510) 382-7800.

California FOG Work Group. Visit http://www.calfog.org.

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006-0003-DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

The State Water Resources Control Board, hereinafter referred to as "State Water Board", finds that:

1. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to comply with the terms of this Order. Such entities are hereinafter referred to as "Enrollees".

2. Sanitary sewer overflows (SSOs) are overflows from sanitary sewer systems of domestic wastewater, as well as industrial and commercial wastewater, depending on the pattern of land uses in the area served by the sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. SSOs may cause a public nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

3. Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.

4. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

SEWER SYSTEM MANAGEMENT PLANS

5. To facilitate proper funding and management of sanitary sewer systems, each Enrollee must develop and implement a system-specific Sewer System Management Plan (SSMP). To be effective, SSMPs must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.

6. Many local public agencies in California have already developed SSMPs and implemented measures to reduce SSOs. These entities can build upon their existing efforts to establish a comprehensive SSMP consistent with this Order. Others, however, still require technical assistance and, in some cases, funding to improve sanitary sewer system operation and maintenance in order to reduce SSOs.

7. SSMP certification by technically qualified and experienced persons can provide a useful and cost-effective means for ensuring that SSMPs are developed and implemented appropriately.

8. It is the State Water Board's intent to gather additional information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and consequent public health and/or environmental impacts occurring in the State.

9. Both uniform SSO reporting and a centralized statewide electronic database are needed to collect information to allow the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) to effectively analyze the extent of SSOs statewide and their potential impacts on beneficial uses and public health. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. 2006-0003-DWQ, are necessary to assure compliance with these waste discharge requirements (WDRs).

10. Information regarding SSOs must be provided to Regional Water Boards and other regulatory agencies in a timely manner and be made available to the public in a complete, concise, and timely fashion.

11. Some Regional Water Boards have issued WDRs or WDRs that serve as National Pollution Discharge Elimination System (NPDES) permits to sanitary sewer system owners/operators within their jurisdictions. This Order establishes minimum requirements to prevent SSOs. Although it is the State Water Board's intent that this Order be the primary regulatory mechanism for sanitary sewer systems statewide, Regional Water Boards may issue more stringent or more

APPENDIX D

State SSO Reduction Program and Summary Report – 2013

Nute Engineering

Sanitary Sewer Overflow Reduction Program

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease. SSOs pollute surface and ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. Typical consequences of SSOs include the closure of beaches and other recreational areas, inundated properties, and polluted rivers and streams.

Quick Links

- SSO Reduction Program Review and Update
- General Order Information
- SSO Compliance & Enforcement Information
  Annual Compliance Report
- Interactive SSO Report
- Sewage Spill Incident Maps
- Online SSO Database Access and Use
- SSO Data
- Sewer System Management Plan
  Development/Implementation
- Sanitary Sewer Systems WDR Training
- Historical Information
- SSO Program Contacts

Announcements

New! FY 12/13 SSO Reduction Program Report

New! Dischargers User Guide

General Order Information

To provide a consistent, statewide regulatory approach to address SSOs, the State Water Resources Control Board (State Water Board) adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Systems WDR) on May 2, 2006. The Sanitary Sewer Systems WDR requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. The Sanitary Sewer Systems WDR and its supporting documents can be viewed through the links below:

- Glossary of Terms (posted 9/30/08)
- Statewide General WDRs for Sanitary Sewer Systems, WQO No. 2006-0003
- Revised Monitoring and Reporting Program (WQ 2013-0058-EXEC)
  - Revised MRP WQ 2013-0058-Exec
  - Revision Transmitted Letter
  - Factsheet
- SSO Fact Sheets
  - Trifold Brochure - 2009
  - WQO 2006-0003

All public agencies that own or operate a sanitary sewer system that is comprised of more than one mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Systems WDR. The application or Notice of Intent (NOI) for coverage under the Sanitary Sewer Systems WDR should have been submitted to the State Water Board by November 2, 2006 and is available at the link below:

- NOI Form - Notice of Intent to Comply with the Terms of the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- Instructions for Completing the NOI Form
- LRO Form
- Data Submitter Form

SSO Compliance & Enforcement Information Annual Compliance Report

- FY 2012-2013
- FY 2011-2012
- 2011
- 2010
- 2009
- 2008
- SSO Reduction Program Compliance and Enforcement Plan - January 2010

Sewage Spill Incident Maps

These interactive geographic information system (GIS) maps, updated nightly, plot all certified sanitary sewer overflows (SSOs) and Private Lateral Sewage Discharges from sanitary sewer collection systems (not including any spills from wastewater (sewage) treatment plants), reported by agencies into the state's online California Integrated Water Quality System. This includes the spill location, amount, source, and name of the responsible or reporting agency.

- View the SSO Incident Map

A second map allows users to see Private Lateral Sewage Discharges, voluntarily reported from enrollees in the program from pipes which empty into public sewer collection systems. Private lateral spills are caused from failures in pipes that tie private businesses and homes into the public sewer collection system, and are maintained by individual property owners. They often suffer from overflows which can affect public sewer collection systems.

- View the Private Lateral Sewage Discharge Incident Map

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Online SSO Database Access and Use

The SSO database is used to collect and store an enrollee's (defined as an agency which is covered under the Sanitary Sewer Systems WDR) facility and organizational information (collection system questionnaire) and details of all SSOs which occur from an enrollee's sanitary sewer system (SSO reports). All of the information collected in the SSO database is entered by enrollees. State and Regional Water board staff cannot enter or modify any information in the SSO database. The SSO database is accessed through the California Integrated Water Quality System (CIWQS), which is the State Water Board's regulatory and water quality information management system. Enrollees will automatically be assigned a CIWQS account to access the SSO database. The implementation of the SSO database is being phased in throughout the state on a regional basis as discussed below.

Access to the SSO database allows enrollees to complete the collection system questionnaire and submit SSO reports as required by the Sanitary Sewer Systems WDR. The Sanitary Sewer Systems WDR requires enrollees to complete the collection system questionnaire within 30 calendar days of receiving their CIWQS user ID and password. The Legally Responsible Official for each enrollee will receive their CIWQS user ID and password, via email message, to access the SSO database according to the schedule below:

Regional Water Quality Control Board	CIWQS User ID / Password Receipt Date

Regions 4,8,9	December 1, 2006
Regions 1,2,3	March 30, 2007
Regions 5,6,7	August 1, 2007

Once the Legally Responsible Official has received their CIWQS user ID and password, the enrollee can register additional staff for individual access to CIWQS for submitting agency information to the SSO database. Instructions regarding this registration process are available on the CIWQS Help Center webpage.

The Sanitary Sewer Systems WDR requires enrollees to begin reporting all SSOs to the SSO database according to the following schedule:

Regional Water Quality Control Board	Date Begin Reporting All SSOs
Regions 4,8,9	January 2, 2007
Regions 1,2,3	May 2, 2007
Regions 5,6,7	September 2, 2007

The collection system questionnaire gathers information related to an enrollee's agency and facilities. This information will allow the performance of an enrollee's sanitary sewer system to be put into the context of site specific characteristics. The information collected includes population served, miles of pipe, and age of the sanitary sewer system. To view a copy of the collection system questionnaire, select the link below:

- Collection System Questionnaire

The SSO report collects detailed information on a specific overflow event. Enrollees are required to report all SSOs that result from a failure in any portion of a sanitary sewer system under their management. For the purposes of reporting, SSOs fall into one of two categories: Category 1 (greater threat to public health of water quality) and Category 2 (lesser threat to public health of water quality). A Category 1 SSO is defined as a failure in an enrollee's sanitary sewer system that results in a (1) discharge of sewage which equals or exceeds 1,000 gal, or (2) discharge of sewage to a surface water and/or drainage channel, or (3) discharge of sewage to a storm drainpipe which was not fully captured and returned to the sanitary sewer system. A Category 2 SSO is defined as any discharge of sewage resulting from a failure in an enrollee's sanitary sewer system which does not meet the criteria for a Category 1 SSO.

SSO information reported by enrollees includes location of overflow, volume of sewage spilled, and cause of the overflow. A copy of the Category 1 and Category 2 SSO report form can be viewed at the links below:

- Category 1 SSO Report
- Category 2 SSO Report

If an enrollee does not have any SSOs in a calendar month, they are required to complete a no spill certification. The no spill certification form can be viewed at the link below:

- No Spill Certification

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Sewer System Management Plan Development/Implementation

Every enrollee is required to develop and implement a sewer system management plan (SSMP). The SSMP documents an enrollee's program to properly operate and maintain its sanitary sewer system.; Each SSMP should address the following elements:

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 Program Audits
11. Communication Program

For a detailed explanation of the SSMP elements, please refer to the Sanitary Sewer Systems WDR above.

The Sanitary Sewer Systems WDR gives enrollees a reasonable amount of time to develop and implement their SSMP with smaller communities having more time than larger ones. The time schedule for each enrollee to develop and implement their SSMP is presented below:

Sewer System Management Plan (SSMP) Time Schedule

Task and Associated WDR Section	Completion Date			
	Population > 100,000	**Poplation Between 100,000 and 10,000**	**Poplation Between 10,000 and 2,500**	**Poplation < 2,500**
SSMP Development Plan and Schedule No Specific Section	August 2, 2007	November 2, 2007	February 2, 2008	May 2, 2008
Goal Section D 13 (i)	November 2, 2007	November 2, 2007	May 2, 2008	May 2, 2008
Organization Section D 13 (ii)				
Legal Authority Section D 13 (iii)	November 2, 2008	May 2, 2009	November 2, 2009	February 2, 2010
Operation and Maintenance Program Section D 13 (iv)				
Overflow Emergency Response Program Section D 13 (vi)				
FOG Control Program Section D 13 (vii)				
Design and Performance Provisions Section D 13 (v)	May 2, 2009	August 2, 2009	May 2, 2010	August 2, 2010
System Evaluation and Capacity Assurance Plan Section D 13 (viii)				
Monitoring and Program Modifications Section D 13 (ix)				
Program Audits Section D 13 (x)				
Communication Program Section D 13 (xi)				
Final SSMP				

Enrollees are required to certify that the final SSMP and its constituent subparts are in compliance with the Sanitary Sewer Systems WDR within the time frames above. This certification is done electronically in the SSO database and will be available for use beginning July 9, 2007. Enrollees are also required to obtain their governing board's approval of the SSMP Development Plan and Schedule and final SSMP at a public hearing prior to certification as complete and in compliance. **Enrollees do not send their SSMP to the State or Regional Water Boards for review or approval; but,**

need to make them available upon request.

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Sanitary Sewer Systems WDR Enrollee Training

The State Water Board signed a memorandum of agreement (MOA) with California Water Environment Association (CWEA) to develop a training course for the Sanitary Sewer Systems WDR. CWEA will offer the courses statewide to educate enrollees about the terms of the Sanitary Sewer Systems WDR, use of the online SSO database, and development of a sewer system management plan (SSMP). For details about the course content and schedule, please visit the CWEA Website.

Related Links:

- U.S. Environmental Protection Agency - information on SSOs
- California Water Environment Association – register for training on SSO reporting and SSMP development
- Southern California Alliance of Publicly Owned Treatment Works – site contains resources for SSMP development and implementation
- CIWQS Help Center – technical support on access (e.g., user ID and password information and login questions) to and use of the SSO database

Historical Information

- Written comments received on revised proposed Order; Prior to adoption and part of the public hearing process; Deadline for comments was April 24, 2006; Hearing was held on May 2, 2006.
- Written comments received on proposed Order; Prior to adoption and part of the public hearing process; Deadline for comments was January 25, 2006; Hearing was held on February 8, 2006.
- Revised Monitoring and Reporting Program (WQ 2008-0002-EXEC)
  - Revised MRP WQ 2008-0002-Exec
  - Revision Transmitted Letter
  - MRP NO. 2006-0003-DWQ

SSO Program Contacts

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(Updated 2/10/14)

California
Water Boards
Protecting California's Water

Statewide
Sanitary Sewer Overflow Reduction Program
Annual Compliance Report

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

FISCAL YEAR 2012 – 2013

EXECUTIVE SUMMARY

The State Water Resources Control Board (State Water Board) adopted the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDRs) as Water Quality Order 2006-0003-DWQ in May 2006. The purpose of the SSS WDRs is to provide consistent statewide requirements for notification and reporting of sewage spills and sewer system management with the goal of reducing both the number of Sanitary Sewer Overflows (SSOs) and the volume of wastewater spilled in the state. This Fiscal Year 2012-2013 report provides an annual update on the statewide Sanitary Sewer Overflow Reduction Program (SSO Reduction Program). The report contains detailed information on implementation efforts, compliance, and enforcement actions completed.

Currently, 1,093 sanitary sewer systems are enrolled under the SSS WDRs. All enrollees are required to report all SSOs regardless of volume. For any month in which an enrollee does not have an SSO, the enrollee is still required to do a no-spill certification 30 days after the end of the month or within that quarter. The average monthly reporting compliance for Fiscal Year 2012-2013 (i.e., the percent of enrollees either reporting a spill or submitting a no-spill certification during a calendar month) was 92 percent, which is one percent less than during Fiscal Year 2011-2012. Overall, 493 enrollees (approximately 45 percent) reported one or more SSOs and 600 enrollees (approximately 55 percent) reported no SSOs for Fiscal Year 2012-2013. Since inception of the program, 802 enrollees (approximately 73 percent) have reported one or more SSOs and 291 enrollees (approximately 27 percent) reported no SSOs.

State Water Board staff's analyses of SSO reports show that SSOs have a seasonal pattern with more SSOs occurring and higher volumes of sewage spilled during the wet seasons. Although most SSOs are small, less than 1,000 gallons, the relatively few large SSOs that occur account for the majority of the sewage volume spilled. A significant cause of the large SSOs appears to be excessive infiltration and inflow. Staff's analyses of Regional Water Quality Control Boards' (Regional Water Boards) spill data for Fiscal Year 2012-2013 indicate that (1) the San Francisco Bay, Central Valley, and Los Angeles Water Boards account for 82 percent of reported spills in the state and (2) the San Francisco Bay and Central Valley Water Boards account for 74 percent of reported spill volume in the state. Staff ranked the sanitary sewer systems with the largest volumes of sewage spilled for Fiscal Year 2012-2013 and identified the 20 highest volume spillers in the state in this report.

Staff focused compliance and enforcement activities in Fiscal Year 2012-2013 on providing compliance assistance to enrollees and following up on past enforcement actions. Staff sent 148 notices of violation (NOVs) in Fiscal Year 2011-2012 to enrolled agencies that failed to complete and certify some or all the elements of their Sewer System Management Plan (SSMP), as required by the SSS WDRs. Of the 148 enrollees that received NOVs, 128 have returned to compliance and 8 have contacted staff requesting additional time to comply and/or submit completion schedules. The remaining 12 non-responsive enrollees have been referred to the State Water Board Office of Enforcement for further enforcement action. Staff also continues to address reporting deficiencies by implementing the automated email reminder tool developed and implemented in Fiscal Year 2011-2012. This tool identifies system specific reporting deficiencies and sends monthly email reminders to enrollees. Enrollees that do not respond to the NOVs or fail to correct deficiencies identified by the automated email reminders are referred to the Office of Enforcement for further enforcement action.

The Regional Water Boards and the Office of Enforcement are actively conducting sanitary sewer system inspections. Twenty three inspections were conducted in Fiscal Year 2012-2013. Additionally, the Regional Water Boards have taken 137 enforcement actions for violations, in whole or in part, related to the Statewide SSS WDRs during Fiscal Year 2012-2013.

SSO Reduction Program activities planned for the upcoming year include:

- Conducting additional enforcement to address SSS WDRs compliance;
- Making further refinements to the SSO database and public reports;
- Providing additional outreach and written guidance to assist staff and enrollees in program implementation; and
- Implementing Monitoring and Reporting Program (MRP) amendments per Order 2013-0058-EXEC.

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1.0 INTRODUCTION

A. General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (SSS WDRs)

This report provides an annual update on the statewide Sanitary Sewer Overflow Reduction Program (SSO Reduction Program) which implements the SSS WDRs. This report contains detailed information on the SSO Reduction Program covering implementation, compliance, and enforcement for Fiscal Year 2012-2013. Staff issued prior editions of this annual report in May 2008, May 2009, May 2010, August 2011, and January 2013. Staff aligned issuance of this annual report with the state fiscal year beginning in 2011-2012 to match other statewide performance reporting activities.

The SSS WDRs apply to all public agencies that own or operate a sanitary sewer system greater than one mile in pipe length. A publicly-owned sanitary sewer system is any system of pipes, pump stations, sewer lines, or other conveyances used to collect and convey wastewater to a publicly owned treatment facility. Agencies operating sanitary sewer systems in affected Regional Water Boards jurisdictions were required to enroll in the SSS WDRs at times. For instance, sanitary sewer systems in the San Diego, Los Angeles, and Santa Ana Regional Water Boards were required to enroll by January 2, 2007. Sanitary sewer systems in the Central Coast, North Coast and San Francisco Bay Water Boards were required to enroll in the program by May 2, 2007. Finally, sanitary sewer systems in the Central Valley[1], Lahontan[2], and Colorado River Basins were required to enroll on September 2, 2007. Throughout this report, the reader will note that the data analyses are presented for each Regional Water Board or its sub-areas (i.e., offices), as in the case of the Central Valley and Lahontan Regional Water Boards. The data are presented by sub-area due to the unique characteristics of each sub-area (i.e., geography, socio-economic setting, etc.).

An SSO is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a publicly owned sanitary sewer system upstream of a treatment plant head-works. SSOs do not include overflows from privately-owned service laterals when these overflows are caused by blockages or other problems within the privately-owned lateral, but do include overflows from privately-owned laterals when the cause of the overflow is a problem within the publicly-owned portion of the sanitary sewer system. Overflows caused by problems in privately-owned service laterals and other private sewer assets like private lift stations are generally referred to as private lateral sewage discharges (PLSDs) even though the discharges do not always occur from laterals.

SSOs contain high levels of suspended solids, pathogens, toxic pollutants, nutrients, oil and grease, and other pollutants. SSOs can pollute surface water and groundwater, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface water. SSOs can also result in closure of beaches and other recreational areas and cause damage to properties.

The objective of the SSS WDRs is to reduce the number of SSOs and the volume of sewage spilled across the state by: (1) increasing transparency in terms of making spill data available to the public; and (2) encouraging the proper operation and maintenance of sanitary sewer systems by requiring the development and implementation of Sewer System Management Plans (SSMPs). The SSS WDRs require that any public agency with more than one mile of publicly-owned sewer lines that collects and/or conveys untreated or partially treated wastewater to a publicly owned treatment facility in the state must enroll for coverage, develop and implement an SSMP, and report all SSOs. If no SSOs occur during a month, the enrollee must submit a “no-spill” certification after the end of that month.

In addition to the statewide requirements of the SSS WDRs, sanitary sewer systems owned by public agencies in specific Regional Water Board jurisdictions are subject to additional requirements.

[1] The Central Valley Water Board has three offices in Fresno, Redding, and Sacramento.
[2] The Lahontan Water Board has two offices in South Lake Tahoe, and Victorville.

Although it is the State Water Board's intent that the SSS WDRs be the primary mechanism for regulation of sanitary sewer systems statewide, the SSS WDRs provide that a Regional Water Board may issue more stringent or prescriptive requirements for sanitary sewer systems in its region.

B. Additional SSS Requirements

San Diego Water Board

The San Diego Water Board's Order R9-2007-0005 contains the following requirements for sanitary sewer systems that are in addition to the requirements of the statewide SSS WDRs:

1) Prohibits all discharges of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant.
2) Requires that sanitary sewer system agencies notify the San Diego Water Board of all PLSDs in their service area when they become aware of them and report PLSDs to the State Water Board's SSO database.

Los Angeles Water Board

The Los Angeles Water Board places the following SSO notification and reporting requirements in National Pollutant Discharge Elimination System (NPDES) permits it issues to publicly owned treatment works (POTWs):

1) Requires POTWs to provide a 2-hour notification to health departments and the Los Angeles Water Board.
2) Requires water quality monitoring for spills 1,000 gallons or larger (includes spills to shallow groundwater and specifies additional water quality parameters above and beyond the statewide Monitoring and Reporting Program (MRP) requirements).
3) Requires POTWs to provide a 24-hour report to the Los Angeles Water Board and U.S. Environmental Protection Agency (U.S. EPA).
4) Requires POTWs to provide a 5-day preliminary report to Regional Water Board and U.S. EPA.
5) Requires POTWs to provide an Annual Report to the Los Angeles Water Board summarizing all spills that occurred during the year.
6) Requires POTWs to provide and retain additional records above and beyond the statewide MRP requirements.

The Los Angeles Water Board accepts some of the documentation prepared by the enrollee under the SSS WDRs for compliance purposes as satisfying the requirements of its spill contingency plan, construction, operation and maintenance, and spill reporting requirements provided that any additional or more stringent provisions enumerated in the permit are addressed (e.g., annual report, record keeping).

San Francisco Bay Water Board

On October 3, 2012, the San Francisco Bay Water Board rescinded additional requirements it had placed on sanitary sewer systems enrolled in the SSS WDRs. These requirements included annual SSO reports, 24-hour SSO online reporting, and annual SSMP audit reporting. The SSS WDRs already require enrollees to complete internal SSMP audits at least every two years and submit all SSOs to the database. However, the SSS WDRs do not require an annual report. Instead of requiring an annual report, Regional Water Board staff has worked with stakeholders to develop a performance report, which summarizes the performance of individual sanitary sewer systems and provides comparison to similar systems.

The San Francisco Bay Water Board has also issued individual NPDES permits to satellite sanitary sewer systems connected to the East Bay Municipal Utility District Regional Interceptor System in accordance with State Water Board Water Quality Order 2007-0004. These permits are unique and support other enforcement and regulatory activities to address excessive inflow and infiltration into these sanitary sewer systems and resulting wet weather discharges to San Francisco Bay.

Central Coast Water Board

The Central Coast Water Board has rescinded individual WDRs it had issued to several sanitary sewer systems in its region, and has directed applicable agencies to enroll in the statewide SSS WDRs. The Central Coast Water Board is scheduled to rescind another two individual orders on sanitary sewer systems at its January 30, 2014 meeting.

2.0 STATEWIDE SSS WDRS IMPLEMENTATION

Since the implementation of the SSS WDRs, staff resources have been focused on outreach, reporting, database development, training, development of a spill mapping tool, enforcement, and review and update of the SSS WDRs to achieve successful statewide implementation and compliance. Staff outreach to stakeholders since inception of the SSO Reduction Program has played a key role in the successful implementation of the program. Over the years, staff has partnered with stakeholder representative organizations to provide outreach and training opportunities, and to develop easy access to data submitted to the SSO database. In addition, increased compliance and enforcement activities have contributed to the overall successful implementation of the program.

A. SSO Reduction Program Outreach

Outreach continues to play a key role in both increasing enrollee participation in the SSO Reduction Program and reaching other interested stakeholders such as environmental groups and the general public. State and Regional Water Board staff has conducted specific outreach to provide information about the SSS WDRs to as many different audiences as possible. Specific tasks include the following:

1) Giving presentations and online training for trade and non-profit associations such as the California Water Environment Association (CWEA), Southern California Alliance of POTWs, Bay Area Clean Water Association, Central Valley Clean Water Association (CVCWA), California Fat, Oils, and Grease work group, American Public Works Association, Rural Community Assistance Corporation (RCAC), and the California Rural Water Association (CRWA).
2) Providing reporting assistance and resolving issues related to the SSO database.
3) Enhancing the SSO Public Reports.
4) Enhancing and maintaining the SSO website.
5) Broadcasting list-serve email announcements regarding program activities.

B. SSO Database and External Users Group

The SSO database is part of the California Integrated Water Quality System (CIWQS). The SSO database allows online submittal of information by enrollees and makes these data available to the public through the use of the public reports. The SSO database was created in collaboration with an advisory group of enrollees with the goal of achieving accurate and consistent spill data reporting. Staff continues to maintain and enhance the SSO database with available resources. Staff coordinates enhancements with an external users' group comprised of enrollees and other participating stakeholders. Once the SSO database enhancements resulting from the implementation of the 2013 amended MRP are completed, staff plans to re-initiate the bi-monthly data review meetings with stakeholders that were conducted in the past to evaluate the data collected and address database issues and enhancements.

C. Enrollee Training

Staff continues to implement the Memorandum of Agreement (MOA) with CWEA, which has been in place since inception of the program, to offer training on the SSS WDRs to enrollees. The current MOA is in effect until December 2015. With staff assistance, CWEA has created training courses on reporting a spill to the SSO database, developing an SSMP, communicating with the media during and after spill events, and estimating spill volumes. CWEA has offered these training courses statewide and will continue to do so under the terms of the MOA. In addition, CWEA has 17 independent local chapters throughout the state that provide training on topics related to the SSS WDRs.

Staff continues to provide assistance to CWEA for the production of new SSO Reduction Program education materials and for the periodic review and update of existing educational materials in accordance with the established MOA. This task includes participation in regular CWEA Training Task Force meetings, communication with education and marketing staff at CWEA, and development and presentation of training.

As part of the outreach and training cooperation with CWEA, staff plans to offer coordinated training throughout the state to educate enrollees of the SSS WDRs on the 2013 amendments to the MRP. Staff plans to use these training opportunities to inform enrollees of the changes to the MRP and the SSO database. In addition, staff will continue to work with small and disadvantaged communities and the organizations representing them (e.g., RCAC CRWA, and CVCWA) to provide accessible training. Staff has made it a priority to assist small and disadvantaged communities through one-on-one assistance and training.

D. Regional Water Board SSO Reduction Program Training

With technical assistance from outside consultants, staff provided customized training in northern and southern California for Regional Water Board staff in September 2008 that covered the requirements of the SSS WDRs and proper sanitary sewer system operation and maintenance. Class curriculum included training on the requirements of the SSS WDRs, conducting audits of sanitary sewer systems, evaluating SSMPs, and responding to and investigating SSOs. Additional advanced training classes are planned for development and will be presented, as staff time permits, to representative State and Regional Water Board staff in the future.

E. SSO Incident Maps

As part of the public spill reports, staff developed GIS spill incident maps and made them available to the public in May 2009. The spill incident maps are updated daily and depict SSO and PLSD incidents that have been reported to CIWQS by enrollees. The spill maps include spills from sanitary sewer systems only and do not include spills from wastewater treatment plants. The GIS maps serve to implement California Water Code section 13193 which requires the State Water Board to make reports available to the public using GIS maps where possible.

In addition, the GIS maps support the State Water Board's Strategic Plan goal of communicating public information regarding California water quality in an easily understood form. The mapping tool incorporates numerous recommendations from external users including the capability to search for spills by spill date, spill size, enrolled agency, county, Regional Water Board, and spill street address. Future enhancements are planned and will be made as staff time permits. Figure 1 is a screen shot of the incident map for SSOs illustrating certified spill incidents in CIWQS entered by enrollees in Fiscal Year 2012-2013.

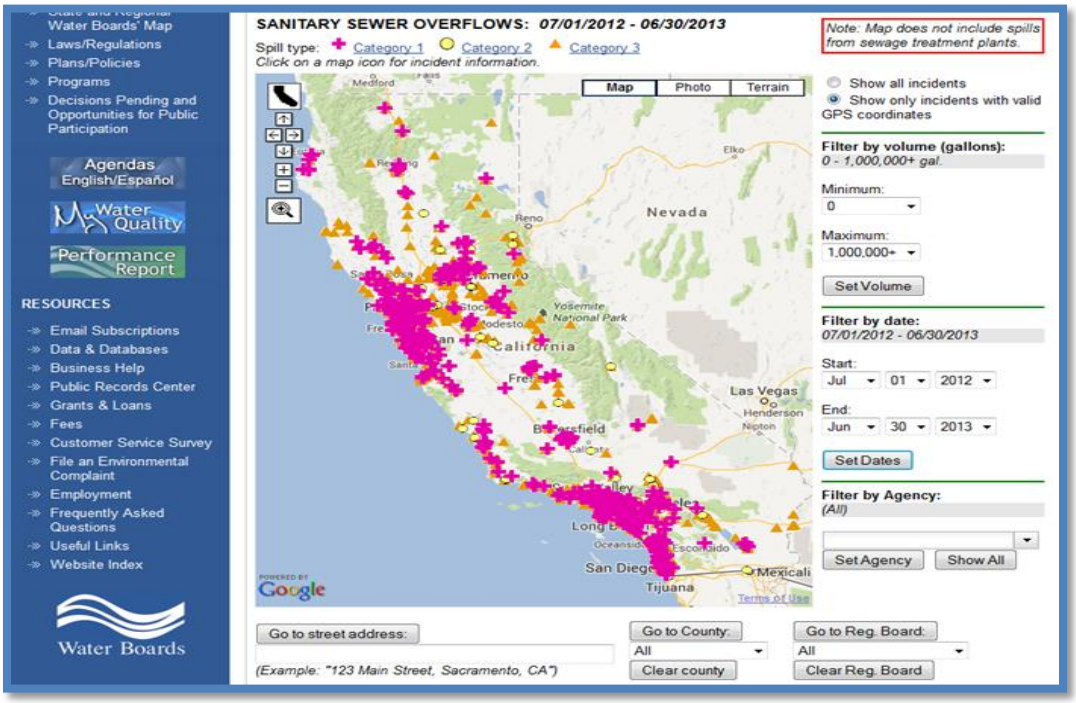


Figure 1 – SSO GIS Incident Map

F. Enforcement of the SSS WDRs

Between September 2007 and July 2013, State and Regional Water Board staff increased enforcement of the SSS WDRs as illustrated on Figure 2.

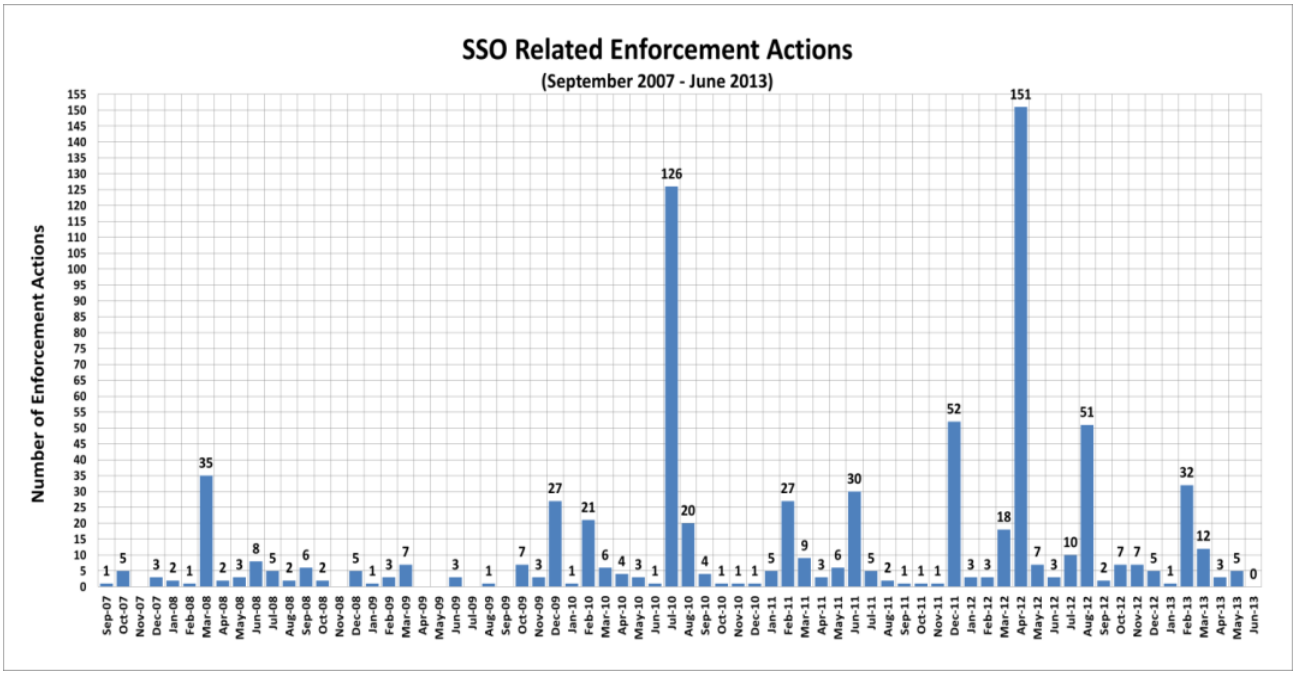


Figure 2 – SSO Enforcement Actions

To ensure a fair and consistent approach to achieve statewide compliance, State Water Board staff implements the Sanitary Sewer Overflow Reduction Program Compliance and Enforcement Plan. This plan identifies the specific enforcement actions to be undertaken to comprehensively address noncompliance with the SSS WDRs.

Current compliance and enforcement tasks are focused on addressing violations of the SSS WDRs in the following areas:

1) Evaluating compliance and implementing enforcement actions for failing to provide required reporting elements (i.e., failure to participate), and
2) Evaluating the accuracy and completeness of required reporting elements via facility inspections.

Evaluating compliance and implementing enforcement actions are handled solely by State Water Board staff. Evaluating reporting requirements is addressed jointly by State and Regional Water Board staff through sanitary sewer system inspections. Due to limited staff resources, enforcement tasks for the Sanitary Sewer Overflow Reduction Program are implemented in the following three phases:

- **Phase I –** During Phase I, staff identified agencies not meeting the basic program participation requirements (e.g., enrollment, reporting, and SSMP development) and conducted enforcement actions to bring the identified noncompliant agencies into compliance. Staff will continue to address non-compliant enrollees by providing compliance assistance, issuing NOVs, and, where necessary, applying additional enforcement actions. Additional information on enforcement actions is discussed in section G below.

- **Phase II –** In Phase II, staff is addressing enrollees with deficiencies to the reporting and implementation requirements of the SSS WDRs. Staff continues to implement the automated email system developed in Fiscal Year 2011-2012 that identifies collection system specific deficiencies and sends an email reminder to deficient enrollees monthly. This tool is discussed in further detail in section G below.

- **Phase III –** Phase III includes evaluation of the completeness and accuracy of enrollee SSMPs and spill reporting. Staff plans to use targeted and random sanitary sewer system inspections in this phase.

G. Enforcement Activities

On July 20, 2010, staff sent 119 Notices of Violation (NOVs). These NOVs were aimed at enrolled agencies that failed to meet the MRP requirements and failed to complete their SSMPs on time. Of the 119 enrollees that received the NOVs, 18 submitted Notices of Non-Applicability (NONs), 83 resolved the deficiencies and returned to compliance, and 18 enrollees were non-responsive and subsequently referred to the Office of Enforcement for further enforcement action. The Office of Enforcement has been working with the referred enrollees to bring them into compliance by providing compliance assistance and applying additional enforcement actions to non-responsive enrollees.

In addition, on April 10, 2012, staff sent 148 NOVs to agencies that failed to timely certify in CIWQS that they had developed the required SSMP elements. The NOVs directed the agencies to complete their SSMPs and certify in CIWQS that all the elements have been developed and approved by their governing board. Per the State Water Board's Enforcement Policy, the NOVs gave small and disadvantaged communities additional time to come into compliance.

To date, 128 enrollees have completed and certified all elements of their SSMPs, 13 have completed and certified some elements of their SSMPs, and seven have not completed and certified any of the elements of their SSMPs. Out of the 20 enrollees that have completed some elements or have not completed any elements of the SSMP, eight have submitted completion schedules or requested

additional time to comply. Staff referred the remaining 12 non-responsive enrollees to the Office of Enforcement for further enforcement action, which is pending.

In addition, the automated email reminder system developed in Fiscal Year 2011-2012 continues to be implemented, Email reminders are sent to enrollees with minor reporting deficiencies identified in CIWQS. The automated email system identifies CIWQS reporting deficiencies for each enrolled sanitary sewer system (e.g., uncertified spill reports, uncertified SSSMP element, etc.) and sends an automatic monthly email reminder detailing the reporting deficiencies. The automated email system also sends courtesy reminders to enrollees as their sanitary sewer system questionnaire yearly update approaches the due date.

Staff is evaluating non-responsive agencies with minor reporting deficiencies and will pursue additional enforcement action against enrollees who fail to: 1) complete and annually update the sanitary sewer system questionnaire; 2) certify development of SSMP elements; and 3) submit monthly no-spill certifications or enter SSO spill reports each month. Since program inception, Office of Enforcement and Regional Water Board staff has conducted 103 inspections and 50 record audits throughout the state. The inspections included a mix of small, medium, and large sanitary sewer systems. The basis for selection of sanitary sewer systems inspected included referral by Regional Water Board staff, enrollees having numerous and/or large SSOs (e.g., 50,000+ gallon SSOs), enrollees failing to complete routine required reporting, suspect reporting, and complaints from the public.

State Water Board, Office of Enforcement, and Regional Water Board staff conducted 23 inspections in Fiscal Year 2012 – 2013. The inspections were conducted throughout California and targeted small to large sanitary sewer systems. Enforcement actions against some enrollees are pending. In Fiscal Year 2012 – 2013, Regional Water Board staff took 137 enforcement actions for violations, in whole or in part, related to the Statewide SSS WDRs. A summary of the enforcement actions taken by the Regional Water Boards using data since the last annual report was issued is presented in Table 1 below.

Table 1 – Enforcement Actions by Regional Water Board for Fiscal Year 2012 -2013 (*Revised*)

Row Labels	13267 Letter	Notice of Violation (NOV)	Adimistrative Civil Liability (ACL)	Cease and Desist Order (CDO)	Staff Enforcement Letter (SEL)	Verbal Communication (VER)	Grand Total
North Coast	2		1				3
San Francisco Bay		4	1	2			7
Central Coast		2	1				3
Los Angeles	3	10	1				14
Central Valley - Fresno	1	24					25
Central Valley - Redding		3					3
Central Valley - Sacramento		56					56
Lahotan - Tahoe			1		2	1	4
Lahotan - Victorville		2		1			3
Colorado River Basin			1				1
Santa Ana			1		1		2
San Diego	1		3		12		16
Total	7	101	10	3	15	1	137

H. Sanitary Sewer Systems WDRs Review and Update

The review and update of the SSS WDRs was initiated in September 2009 and culminated with a decision by the State Water Board, at a workshop on January 24, 2012, to update the MRP for the SSS WDRs for Executive Director approval. Staff worked with key stakeholders to revise the MRP and shared the draft MRP with all stakeholders registered on the Lyris email list for the SSO Reduction Program. Staff solicited public comments in January and March 2013 and considered all comments received in developing the revised MRP. The following is a summary of major updates made to the MRP (Order 2008-0002-EXEC) and incorporated in the final revised MRP (Order 2013-0058-EXEC), signed by the Executive Director on July 30, 2013 with an effective date of September 9, 2013:

1) Spill notification requirements were revised to require enrollees to notify only the California Office of Emergency Services (Cal OES) for spills of 1,000 gallons or more to surface water. Cal OES notifies the Regional Water Boards and local Health Departments when a spill notification is received. Enrollees are also required to update Cal OES when there are substantial changes to previously reported spill volume estimates or impacts. Previously, enrollees were required to notify Cal OES for spills to surface water of any volume. In addition, enrollees were required to notify their Regional Water Board and local Health Department resulting in multiple notifications being received for individual spills.
2) New spill categories were established and spill report forms were refined. Spill Categories 1 and 2 were replaced with Categories 1, 2, and 3. Spills are now classified as follows:
    - Category 1 – Spills of any volume that reach surface water.
    - Category 2 (formerly Category 1) – Spills greater than or equal to 1,000 gallons that do not reach surface water.
    - Category 3 (formerly Category 2) – Spills less than 1,000 gallons that do not reach surface water.

    All spills to surface water are now in a distinct category with this change. Spill reporting fields were refined and streamlined with stakeholder input.
3) Enrollees are now required to submit a technical report within 45 days of the end date of spills to surface water where over 50,000 gallons are spilled.
4) Enrollees are now required to develop a Water Quality Monitoring plan to be implemented within 48 hours of becoming aware of SSOs where 50,000 gallons or more are spilled to surface water.
5) Enrollees are now required to submit an electronic copy of their SSMP to the State Water Board or provide the web address where their SSMP is posted.

Staff conducted outreach activities through the representative organizations (e.g., CWEA, CVCWA, etc.) regarding the changes to the MRP and the SSO database. Staff has coordinated with CWEA to provide three workshops in Northern, Central, and Southern California. The workshops consisted of two sessions that focused on the changes to the MRP and the SSO Database. In total, 171 participants attended the three workshops. State Water Board staff plans to provide additional training to Regional Water Board staff and enrollees as needed. In addition to this outreach, staff has developed and released, with stakeholder input, a document to provide step-by-step guidance on how to use the SSO Database. The Enrollee's Guide to the SSO Database can be found at: http://www.waterboards.ca.gov/water_issues/programs/sso/docs/discharger_workbook.pdf

3.0 SSS WDRS COMPLIANCE SUMMARY

The following section provides an update on enrollee participation compliance. Measures of enrollee participation include enrolling for coverage under the SSS WDRs, completing required monthly reporting elements, completing required SSMP development and certification, and completing and annually updating their sanitary sewer system questionnaire.

A. Enrollment for Coverage

All public agencies that own or operate sanitary sewer systems consisting of more than one mile of pipe that collect and/or convey, directly or indirectly via other connected sanitary sewer systems, untreated or partially treated wastewater to a publicly owned wastewater treatment facility are required to apply for coverage under the SSS WDRs. Since implementation of the SSS WDRs, the number of enrolled sanitary sewer systems has varied between 1,080 and 1,100. Currently, 1,093 sanitary sewer systems are enrolled for coverage. As illustrated in Figure 3, the Central Valley Water Board (Sacramento office) has the highest number of enrolled sanitary sewer systems with 183, followed by the Central Valley Water Board (Fresno office) with 156 systems enrolled and the Los Angeles Water Board with 144 systems enrolled.

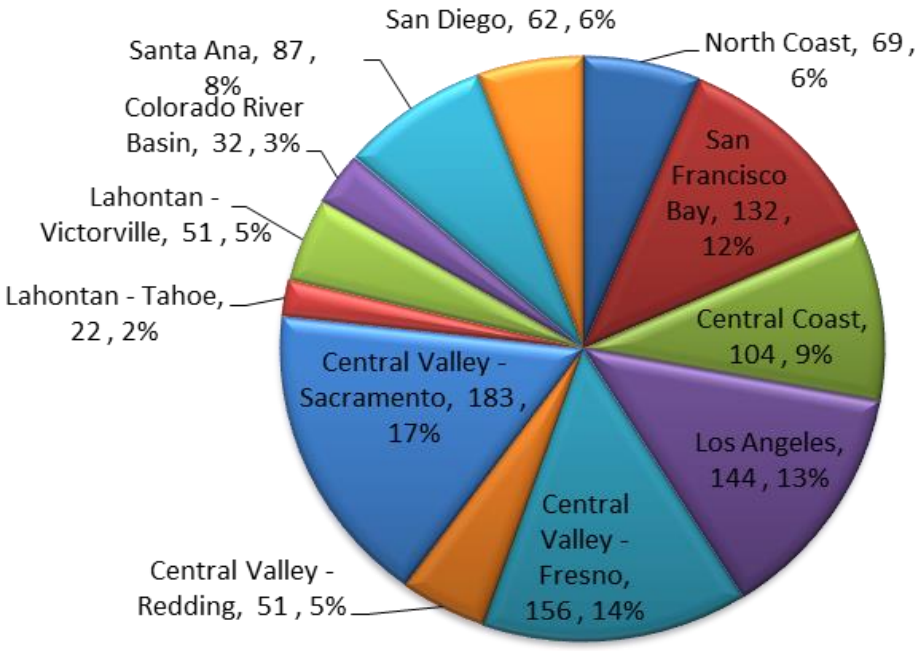


Figure 3 – Number and Percentage of Enrolled Sanitary Sewer Systems by Regional Water Board

The number of enrollees in the state varies due to new applications being received for coverage and cancellations of enrollment. Reasons for cancellations of enrollment include: 1) an agency enrolled erroneously and later determined it did not meet the application criteria (i.e., it does not own greater than one mile of publicly owned sewer pipe) and 2) redundant enrollments due to submittal of multiple applications.

Since June 30, 2012, twelve new enrollees applied for coverage under the SSS WDRs. Staff occasionally receives notifications from Regional Water Boards and other sources regarding sanitary sewer systems required to be covered under the SSS WDRs that are not enrolled. Staff follows up on these notifications with enforcement activities as previously described in section 2.F.

B. SSO Reporting

Enrollees are required to report all SSOs that occur in their sanitary sewer system assets. If there are no SSOs during a calendar month, the enrollee is required to submit a No-Spill Certification in the CIWQS SSO database. Monthly SSO reporting compliance rates are calculated by tallying how many individual enrollees submitted either an SSO report or no-spill certification for a given calendar month. Monthly reporting compliance by Fiscal Year is shown in Figure 4.

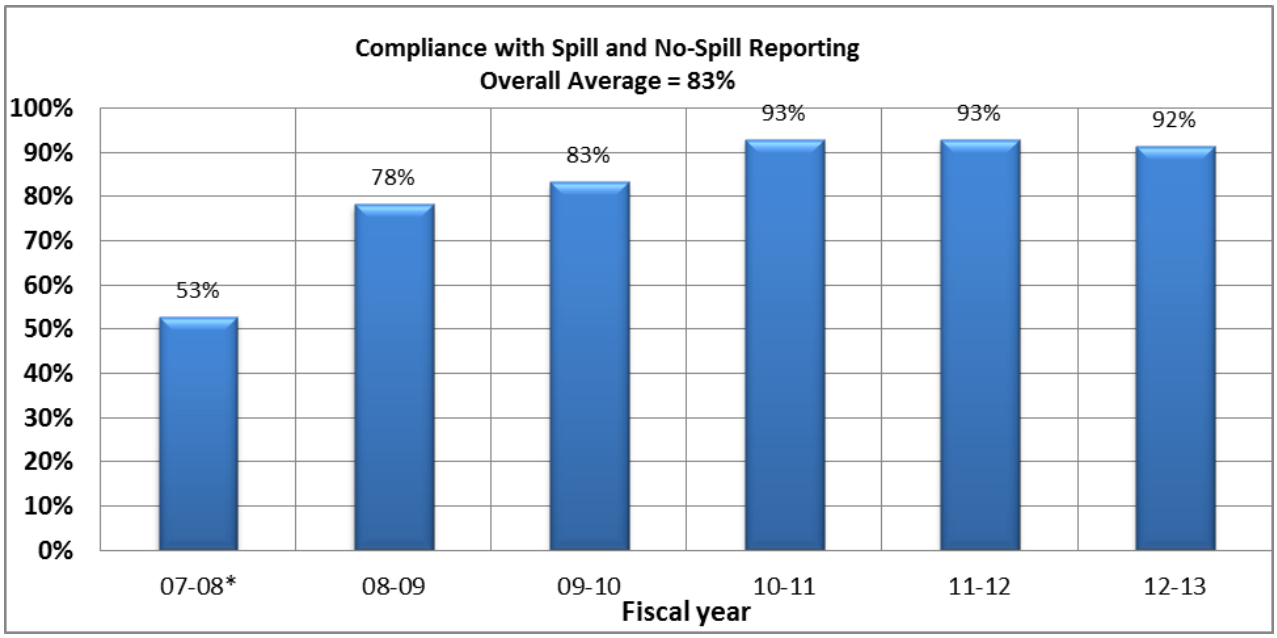


Figure 4 – Monthly Compliance with Spill and No-spill Reporting by Fiscal Year

The average reporting compliance rate is 83 percent for the period of September 2007 to June 2013. The average monthly reporting compliance rate during Fiscal Year 2012-2013 is 92 percent. The monthly reporting compliance rate significantly increased over the past year. Staff concludes that increased compliance rates are a result of increased thoroughness of enrollees reporting, increased enforcement by the State and Regional Water Boards, and the automated monthly email compliance reminders.

The current average monthly reporting compliance rate of 92 percent is less than the target level of 100 percent and one percent lower than the rate during Fiscal Year 2011-2012. Enforcement activities described previously in section 2.F will continue to be conducted to improve this compliance rate. Non-compliant enrollees that are nonresponsive to compliance reminders and NOVs are referred to the Office of Enforcement for further enforcement action. In addition, the 12 new sanitary sewer systems that enrolled under the SSS WDRs in Fiscal Year 2012-2013 increased the number of enrollees from 1081 to 1093. Some of the new enrollees have not “back reported” spills or no-spill certifications, which may also have contributed to the decrease in monthly compliance. Monthly compliance reporting has been maintained at higher than 90 percent for the past three fiscal years however, during Fiscal Year 2012-2013, only 45 percent of enrolled sanitary sewer systems in the state reported an SSO. As illustrated in Figure 5, 600 enrollees (approximately 55 percent) did not have any spills in Fiscal Year 2012-2013.

For the period of January 2007 to June 2013, 802 (i.e., approximately 73 percent) enrollees reported one or more SSOs while 291 enrollees (i.e., approximately 27 percent) did not report an SSO. The monthly reporting performance for those enrollees that did not report an SSO during Fiscal Year 2012-2013 is illustrated in Figure 6. One hundred and thirty seven of these enrollees (approximately 23 percent) missed all monthly reporting, missed some monthly reporting, or have

some reporting errors (e.g., submitted “no-spill” certification when they had SSOs); whereas 463 of the enrollees (approximately 77 percent) with no reported SSOs complied fully with the required monthly reporting.

For the period of January 2007 to June 2013, 127 (i.e., approximately 44 percent) enrollees missed all monthly reporting, missed some monthly reporting, or have some reporting errors (e.g., submitted “no-spill” certification when they had SSOs); whereas 164 of the enrollees (i.e., approximately 56 percent) with no reported SSOs complied fully with the required monthly reporting.

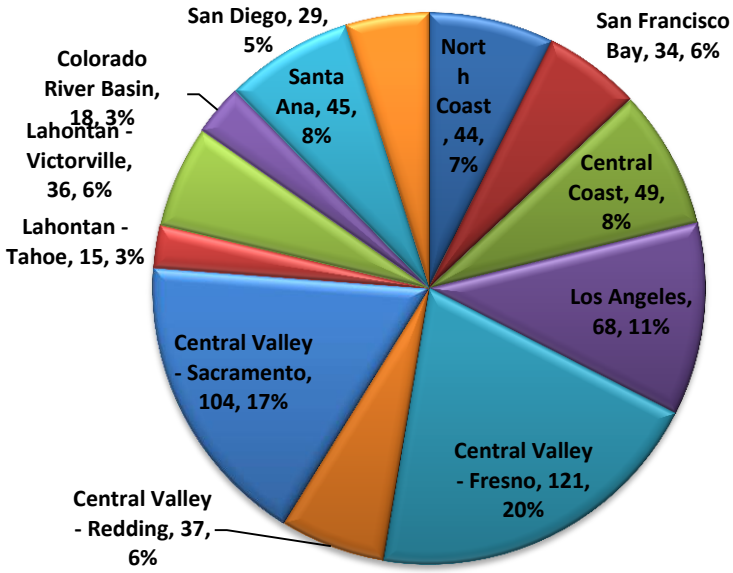
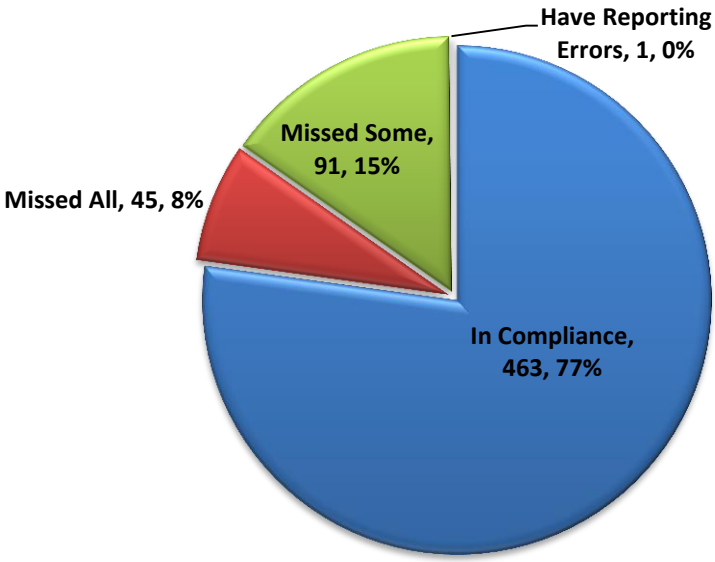


Figure 5 – Percentage and Number of Enrollees with No SSOs Reported by the Regional Water Boards in Fiscal Year 2012-2013



Note: Reporting errors include, filling a "No-spill" certification when the enrollee had a public SSO spill, submitting duplicate "No-spill" certifications, not submitting a "No-spill" certification, or not submitting an SSO.

Figure 6 – Monthly Reporting Performance of Enrollees with No SSOs Reported in Fiscal Year 2012-2013

C. SSMP Development and Certification

Enrollees are required to certify that their final SSMPs have been developed within the time frames specified in the SSS WDRs. This certification is submitted electronically in the SSO database. Enrollees are required to obtain their governing boards' (or equivalent) approval at a public hearing for the final SSMP certification and for SSMP re-certification. Enrollees do not send their SSMP to the State or Regional Water Boards for review or approval, but must make it publicly available, and upload an electronic copy to the SSO database or provide a link to the enrollees' website where the SSMP is posted.

The CIWQS online certification system for the SSMP provides State and Regional Water Board staff the ability to evaluate compliance of enrollees with SSMP development deadlines. SSMP development compliance by year is illustrated in Figure 7. The status of enrollee SSMP certification as of June 2013 is as follows:

1) All enrollees (i.e., 1093) were required to have their SSMPs fully developed as of August 2, 2010.
2) Ninety-three percent of enrollees (i.e., 1016) completed all SSMP elements (includes those completed late in addition to on-time SSMPs).
3) Four percent of enrollees (i.e., 49) certified some but not all of their SSMP elements.
4) Of the ninety-seven percent (1065) enrollees that completed all or some of the SSMP elements, twenty percent (i.e., 218) met all SSMP certification deadlines.
5) Three percent of enrollees (i.e., 28) did not certify any of their SSMP elements, which are now past due.

Staff and the Office of Enforcement are conducting activities described in sections 2.F and 2.G to improve the SSMP compliance rates.

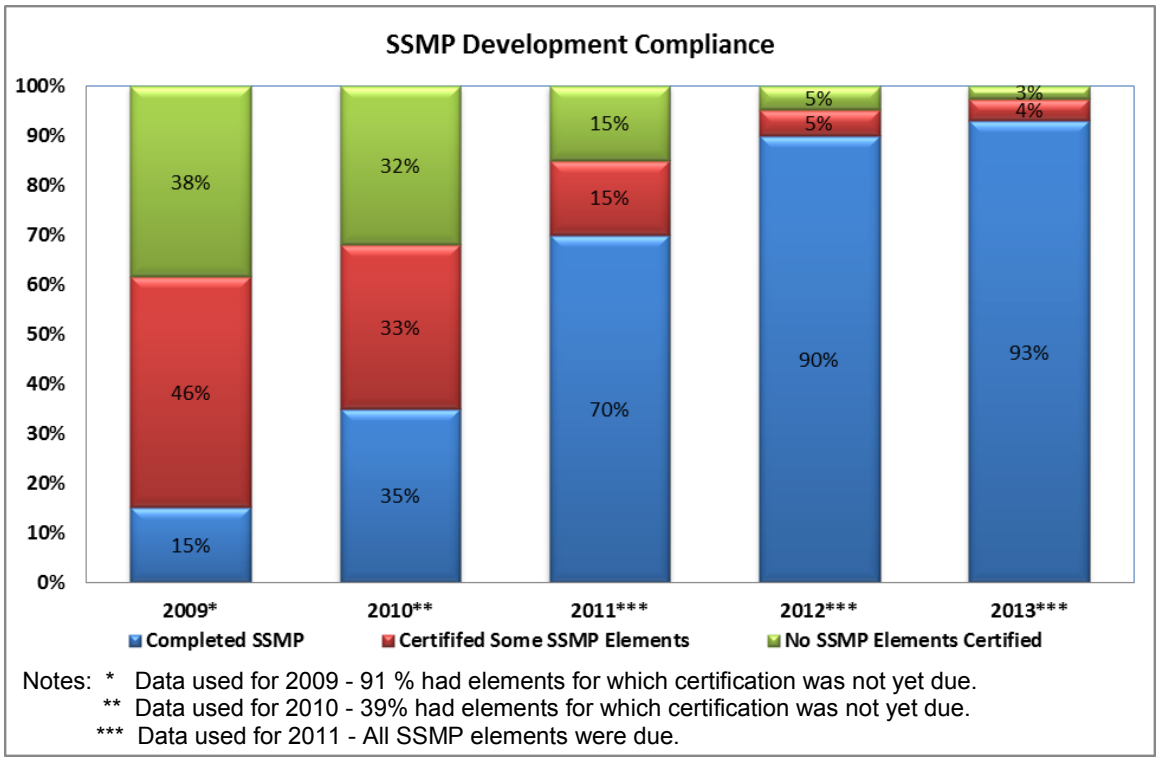


Figure 7 – SSMP Development Compliance by Year

D. Sanitary Sewer System Questionnaire

The SSS WDRs require enrollees to complete a sanitary sewer system questionnaire and update it every 12 months. The sanitary sewer system questionnaire is a summary of each enrollee's organization, sanitary sewer system management resources, and sanitary sewer system assets. Enrollees are required to submit information including operating and capital expenditure budgets, miles of pipe, number of employees, and population served. The purpose of this questionnaire is to put the enrollee's SSMP and reported SSOs into context with organizational and facility characteristics. This is important because these characteristics have a significant impact on how an enrollee operates and maintains its sanitary sewer system. For example, population served represents the size of the rate paying base an enrollee has available from which to collect fees to operate and maintain the sanitary sewer system.

Currently, 96 percent of enrollees (i.e., 1045) have completed the sanitary sewer system questionnaire and updated it annually, two percent (i.e., 30) have completed the questionnaire but have failed to annually update it, and two percent (i.e., 18) of enrollees have never completed the questionnaire. Compliance with the sanitary sewer system questionnaire has increased in Fiscal Year 2012-2013 as illustrated in Figure 8. Compliance and enforcement assistance activities described in section 2.F are conducted to improve the questionnaire compliance rates. For compliance assistance, email reminders are now sent to each enrollee one month before their yearly questionnaire update is due.

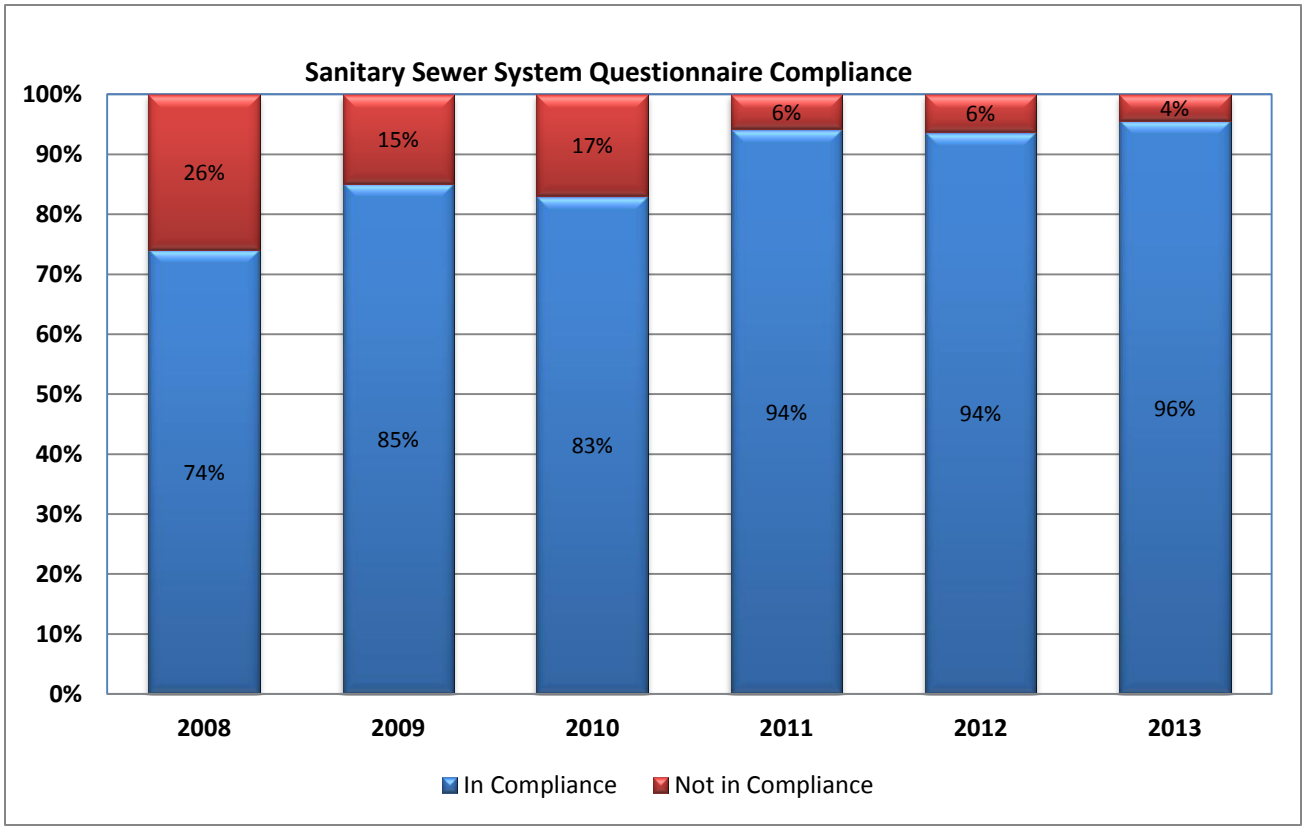


Figure 8 – Sanitary Sewer System Questionnaire Compliance by Year

4.0 SPILL DATA SUMMARY

A. Statewide Reported Spill Data

The SSS WDRs prohibit all SSOs that reach surface water or cause a nuisance as defined in California Water Code section 13050(m)(2). A summary of statewide SSO data reported by enrollees since reporting requirements became effective on January 2, 2007 and for Fiscal Year 2012-2013 are presented in Table 2 below

State Water Board staff conducts checks to ensure the accuracy of the approximately 33,800 enrollee-entered spill records. When erroneous data are identified, the enrollee responsible for the data entry error is contacted and requested to correct it. The data summaries presented in Table 2 below are from analyses of spill data submitted by enrollees. Staff is examining additional metrics as ongoing data cleanup by enrollees is completed, efforts to improve the reporting database are implemented, and additional data are collected.

Table 2 – Overall and Fiscal Year 2012 – 2013 Statewide SSO Data

	Jan 2007 - Jun 2013	FY 2012 - 2013
Number of SSOs	33,824	4,840
Total Volume of SSOs (gallons)	137,553,903	9,062,065
Total volume Recovered (gallons)	27,018,078	2,202,282
Total Volume Reached Surface Water (gallons)	109,029,155	6,011,527
Percent Recovered	20%	24%
Percent Reached Surface Water	79%	66%
Total Miles of Pressure Sewer	3,311	3,311
Total Miles of Gravity Sewer	94,231	94,231
Total Miles of laterals Responsible	13,051	13,051
SSOs per 100 miles per year	4.71	4.38
Volume of SSOs per 100 miles per year	19,135	8,194

Overall SSO Reduction Program performance from January 2, 2007, when the first SSS WDR enrollees were required to start reporting, to June 30, 2013, is illustrated in Figures 9 and 10. Figure 9 illustrates a seasonal pattern with more SSOs occurring during the wet seasons. From January 2008 to the present, a general downward trend in the number of spills occurring during all seasons is evident.

Figure 10 illustrates the seasonal pattern with respect to spill volumes and statewide average precipitation. The total number of spills and spill volume were significantly lower during the 2008/2009 wet season. The reason for the low wet season spill volume in 2008/2009 could not be determined. Spill volumes rose during the 2009/2010 wet season, significantly increased during the 2010/2011 wet season, and decreased during the 2011/2012 wet season. The spill volume decreased during the 2012/2013 wet season. This may be due to only 73 percent of normal precipitation during the wet weather season of October 1, 2012 through September 30, 2013.

The increase in spill volume during wet seasons is likely caused by excessive inflow and infiltration and/or inadequate sizing of sanitary sewer systems. The annual variation in wet season spill volume appears to be correlated with the annual variation in wet season precipitation with more spills and higher volumes generally correlating to higher average statewide annual precipitation.

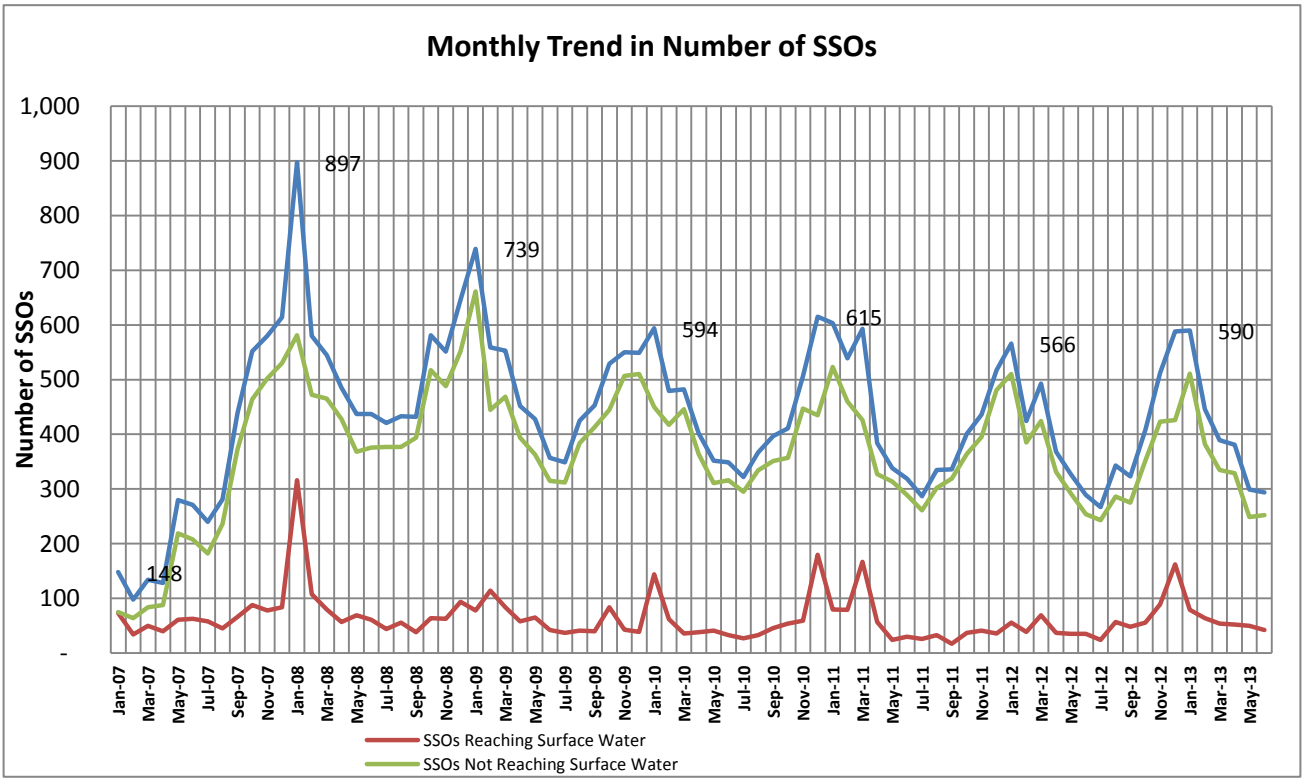


Figure 9 – Monthly Trend in Number of SSOs

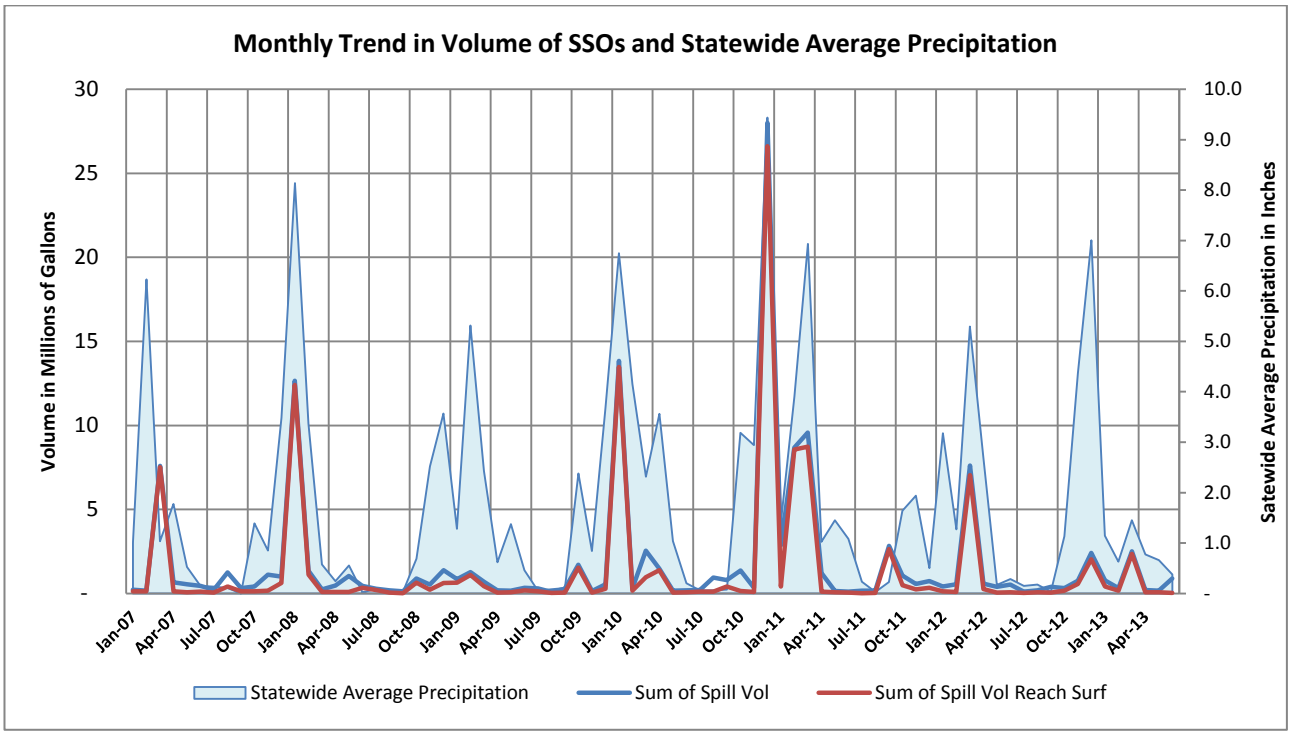


Figure 10 – Monthly Trend in SSO Volume and Statewide Average Precipitation

B. SSO Spill Trends for Fiscal Year 2012-2013

As illustrated in Figure 11, approximately 91 percent of all SSOs in the state are less than 1,000 gallons. Of the reported SSO volume spilled in the state, approximately 82 percent of the total volume is from only about 1.7 percent of the SSO events as illustrated in Figures 11 and 12. Therefore, only about one fifth or 18 percent of the reported volume of SSOs in the state result from the majority of SSO events (i.e., approximately 98.3 percent of SSOs).

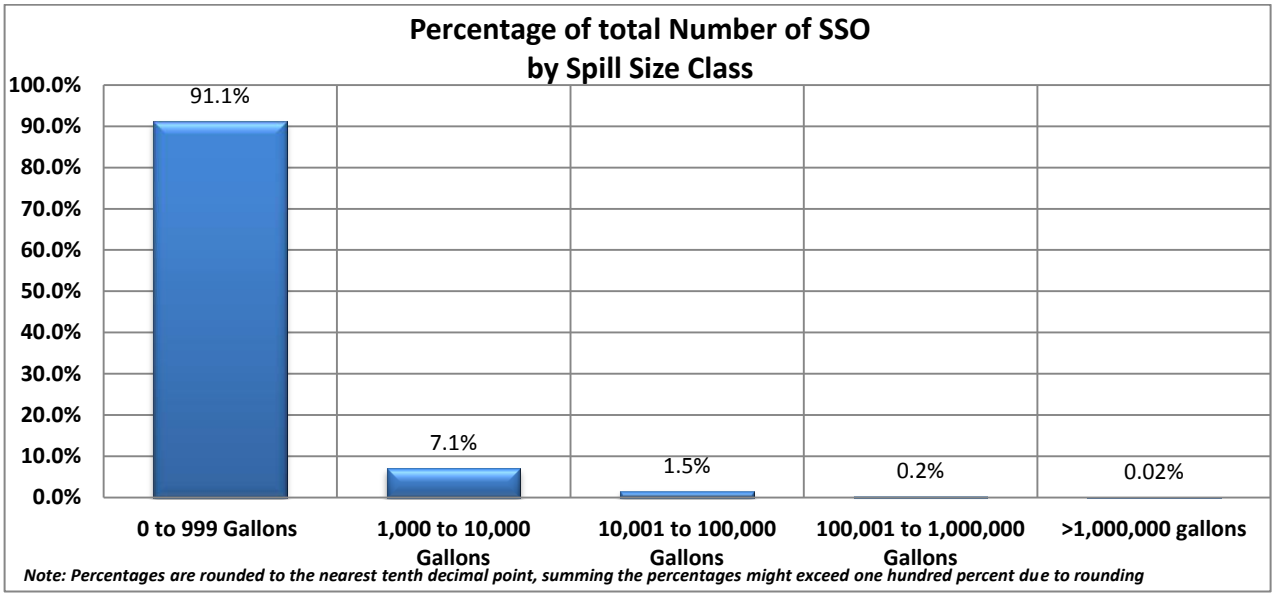


Figure 11 – Percentage of Total Number of SSOs by Spill Size Class for Fiscal Year 2012-2013

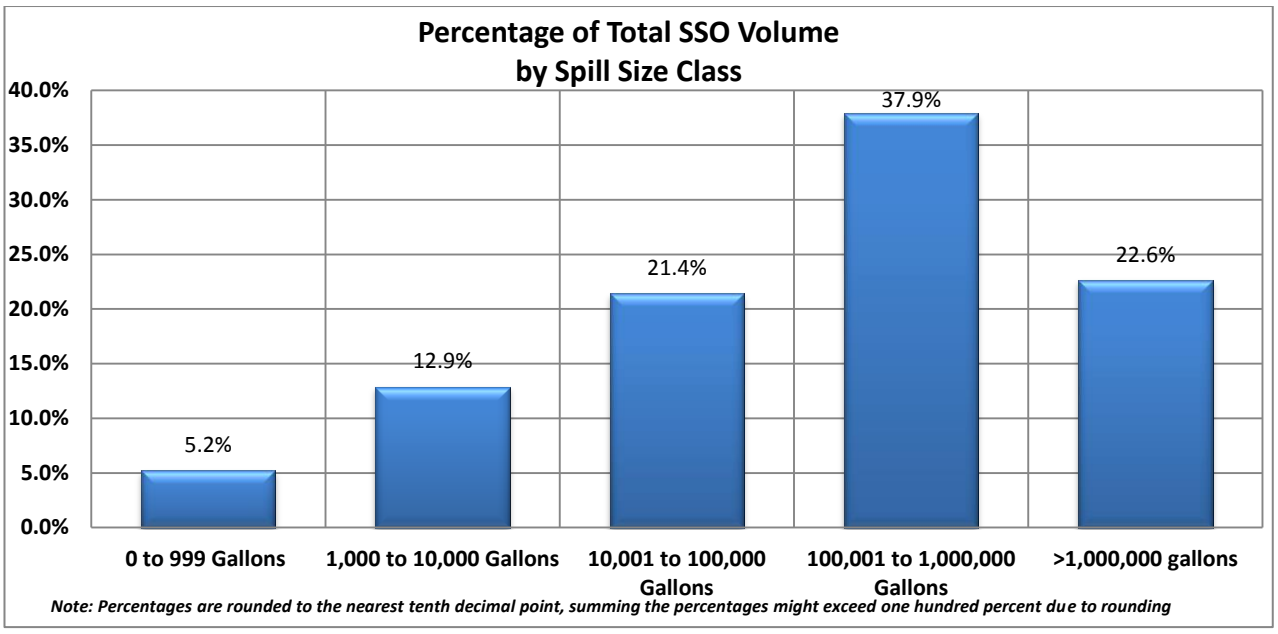


Figure 12 – Percentage Total of SSO Volume by Spill Size Class for Fiscal Year 2012-2013

The percentage of reported SSOs that reached surface water by spill size class is presented in Figure 13. Of 4,840 SSOs reported during Fiscal Year 2012-2013, 777 (approximately 16 percent) were reported to have reached surface water. Of these, 285 (approximately 63 percent) were less than 1,000 gallons. The majority of spills (approximately 84 percent) were reported as not reaching surface water.

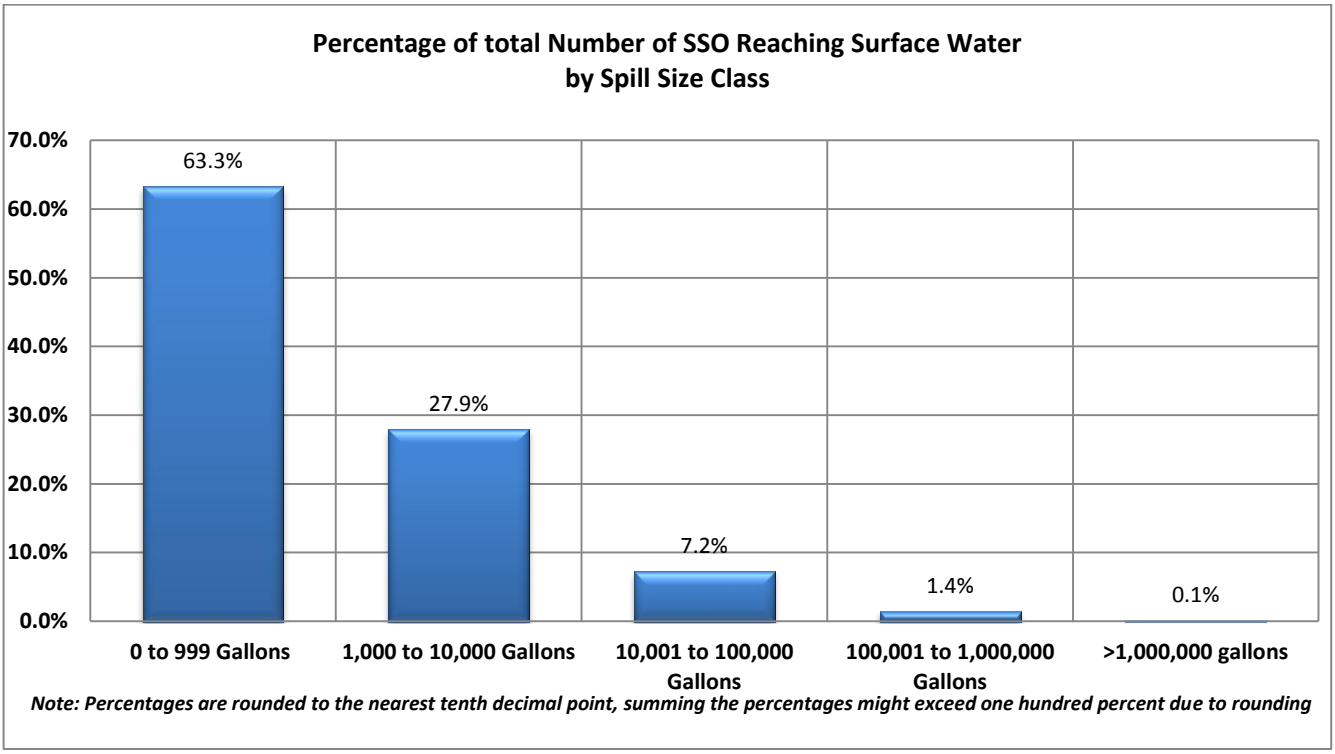


Figure 13 – Percentage of SSOs Reaching Surface Water by Size Class for Fiscal Year 2012-2013

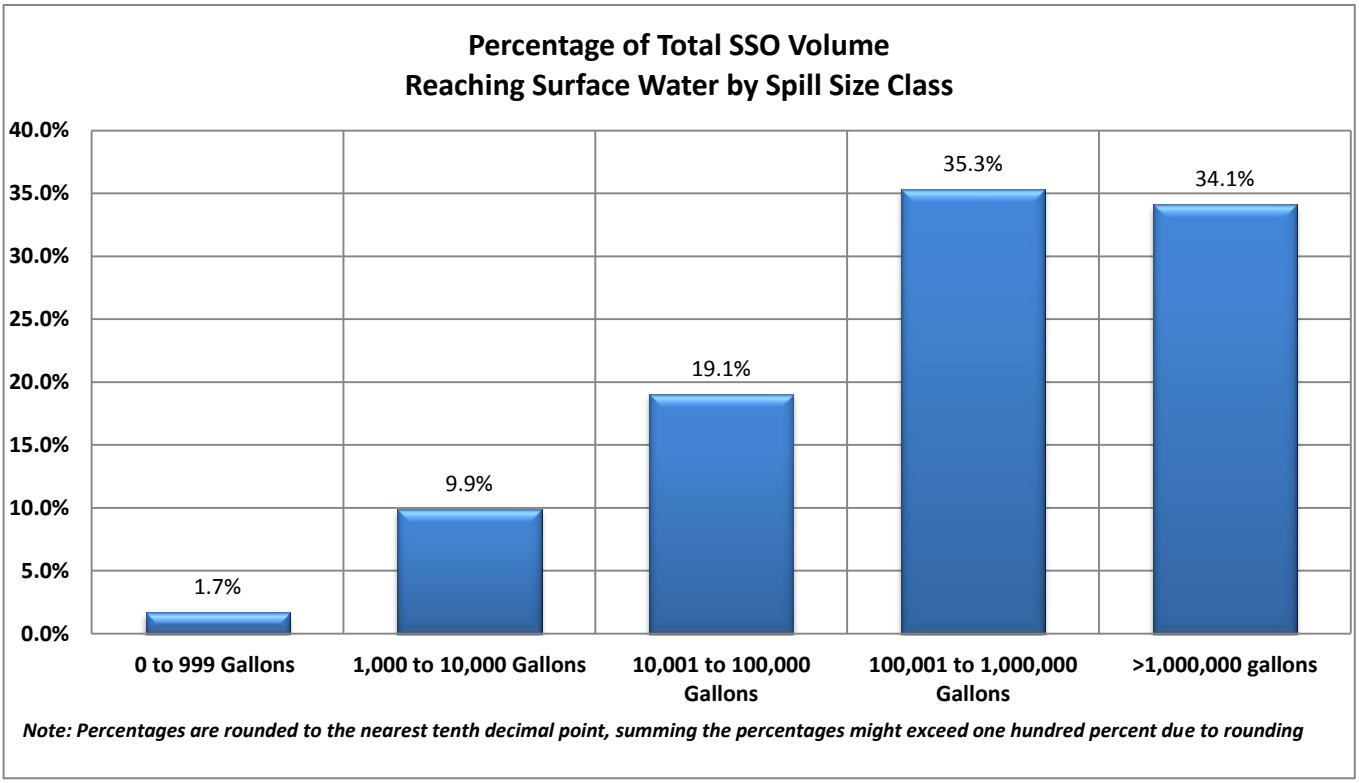


Figure 14 – Percentage of Total SSO Volume Reaching Surface Water by Spill Size Class for Fiscal Year 2012-2013

The percentage of SSO volume that reached surface water, categorized by spill size class, is illustrated in Figure 14. Comparing Figures 13 and 14, approximately 1.5 percent of spills reported to have reached surface water account for approximately 69 percent of the total volume spilled to

surface water since spill reporting was required. In addition, approximately 63 percent of the spills reported to have reached surface water account for only 1.7 percent of the spill volume that reached surface water during Fiscal Year 2012-2013.

The number of enrollees reporting SSOs to surface waters and the number of SSOs reaching surface waters since program 2007 are presented in Table 3. There is no discernible trend in the number of enrollees reporting SSOs to surface waters. However, there is a general decreasing trend in the number of SSOs reaching surface waters each Fiscal Year. These data trends remain unchanged over prior years and represent the overall "life of program" trend.

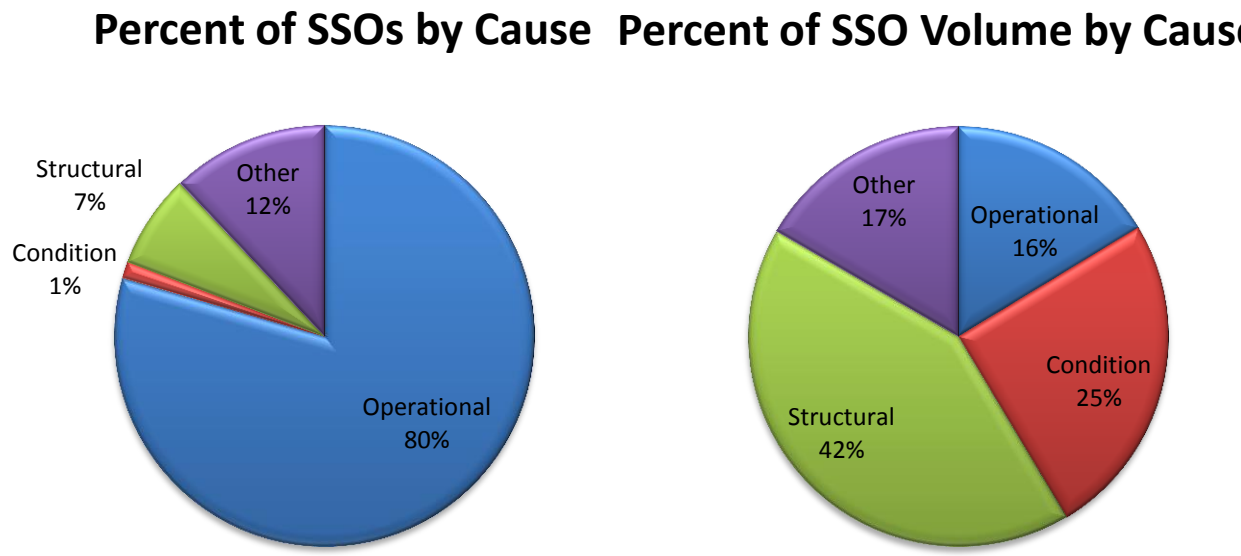
Table 3 - Number of Enrollees with SSOs to Surface Waters and Number of SSOs to Surface Water

Regional Water Board	FY 07-08		FY 08-09		FY 09-10		FY 10-11		FY 11-12		FY 12-13	
	Enrollees w/ SSOs Reaching Surface Water	SSOs Reaching Surface Water	Enrollees w/ SSOs Reaching Surface Water	SSOs Reaching Surface Water	Enrollees w/ SSOs Reaching Surface Water	SSOs Reaching Surface Water	Enrollees w/ SSOs Reaching Surface Water	SSOs Reaching Surface Water	Enrollees w/ SSOs Reaching Surface Water	SSOs Reaching Surface Water	Enrollees w/ SSOs Reaching Surface Water	SSOs Reaching Surface Water
North Coast	20	39	14	36	14	19	16	35	11	22	12	19
San Francisco Bay	74	458	65	274	60	252	63	316	48	172	72	285
Central Coast	26	55	17	34	25	41	26	70	19	26	31	57
Los Angeles	60	238	52	130	47	97	42	111	35	74	47	147
Central Valley - Fresno	11	30	12	25	9	30	16	40	9	13	11	51
Central Valley - Redding	8	16	9	16	7	13	8	11	5	7	5	10
Central Valley - Sacramento	38	80	35	101	34	73	33	87	27	57	29	68
Lahontan - Tahoe	1	1	1	2	3	4	2	2	2	5	2	2
Lahontan - Victorville	7	14	7	12	6	10	10	21	4	10	5	9
Colorado River Basin	2	3	4	4	2	2	2	7	1	1	6	7
Santa Ana	30	88	29	73	27	56	29	55	22	37	26	56
San Diego	26	82	24	92	21	43	24	79	14	29	23	66
Total	**303**	**1,104**	**269**	**799**	**255**	**640**	**271**	**834**	**197**	**453**	**269**	**777**
% of Total Enrollees Reporting/Spills Reported	**60%**	**18%**	**52%**	**13%**	**50%**	**12%**	**55%**	**16%**	**41%**	**10%**	**55%**	**16%**

C. Spill Causes for Fiscal Year 2012-2013

The percentages of total SSOs by spill causes for Fiscal Year 2012-2013 are presented in Figure 15. The data indicate that operational causes (root intrusion, grease deposition, and debris) remain as the primary causes of SSOs and are responsible for approximately 80 percent of all SSOs. In terms of volumes spilled, these causes resulted in only approximately 15 percent of the reported SSO volume for this time period. This trend remains unchanged from previous fiscal years and over the life of the program.

In addition, the data indicate that SSOs caused by factors related to system capacity (e.g., flow exceeded capacity) and structural issues (e.g., pipe structural failures, pump station failures) account for only approximately eight percent of the number of SSOs reported, but account for approximately 67 percent of the reported SSO volume.



NOTE: **Operational** – Includes, SSOs caused by Debris, FOG, Roots; **Condition** – Includes SSOs caused by flow exceeded capacity and Rain flow exceeded capacity; **Structural** – Includes, SSOs caused by pipe structural failures and pump station failure; **Other** – Includes, unknown cause, multiple causes, vandalism, operator error, maintenance, improper installation, valve failure, failure from diversion during construction, siphon failure, inappropriate discharge, and non-sanitary sewer system related.

Figure 15 – Percent of SSOs and Total SSO Volume by Cause for Fiscal Year 2012-2013

D. Sewage Spills by Pipe Characteristics for Fiscal Year 2012-2013

Pipe Diameter – Reported SSO data indicate: (1) that many enrollees are not reporting the sewer pipe diameter in their reports (i.e., approximately 69 percent); and (2) that at least 89 percent of SSOs where pipe data are reported occurred in pipe sizes of eight inches or less. It is expected that smaller diameter pipes would be affected to a higher degree by the most common causes of SSOs (i.e., root intrusion, grease deposition, and debris). Increased thoroughness in reporting would help to clarify if there is any relationship between pipe diameter and SSOs. Pipe diameter is not a required field in the SSO reports

Pipe Material – Reported SSO data indicate: (1) that many enrollees are not reporting the pipe material in their reports (i.e., approximately 74 percent) and (2) that at least 60 percent of the SSOs where pipe material is reported occur in vitrified clay pipes (VCP). This result is likely due to the prevalence of VCP in sanitary sewer systems piping in the state. Increased thoroughness in reporting would help to clarify if there is any relationship between pipe material and SSOs. Pipe material is not a required field in the SSO reports.

Sewer Age – As illustrated in Figure 16, approximately 32 percent (i.e., approximately 34,000 miles) of the publicly owned sanitary sewer system piping in the state is older than 53 years. Since the age information was collected up to a year ago, the time periods have been offset one year.

In general, older sanitary sewer system pipes require more maintenance than newer segments of pipe and may be more prone to SSOs.

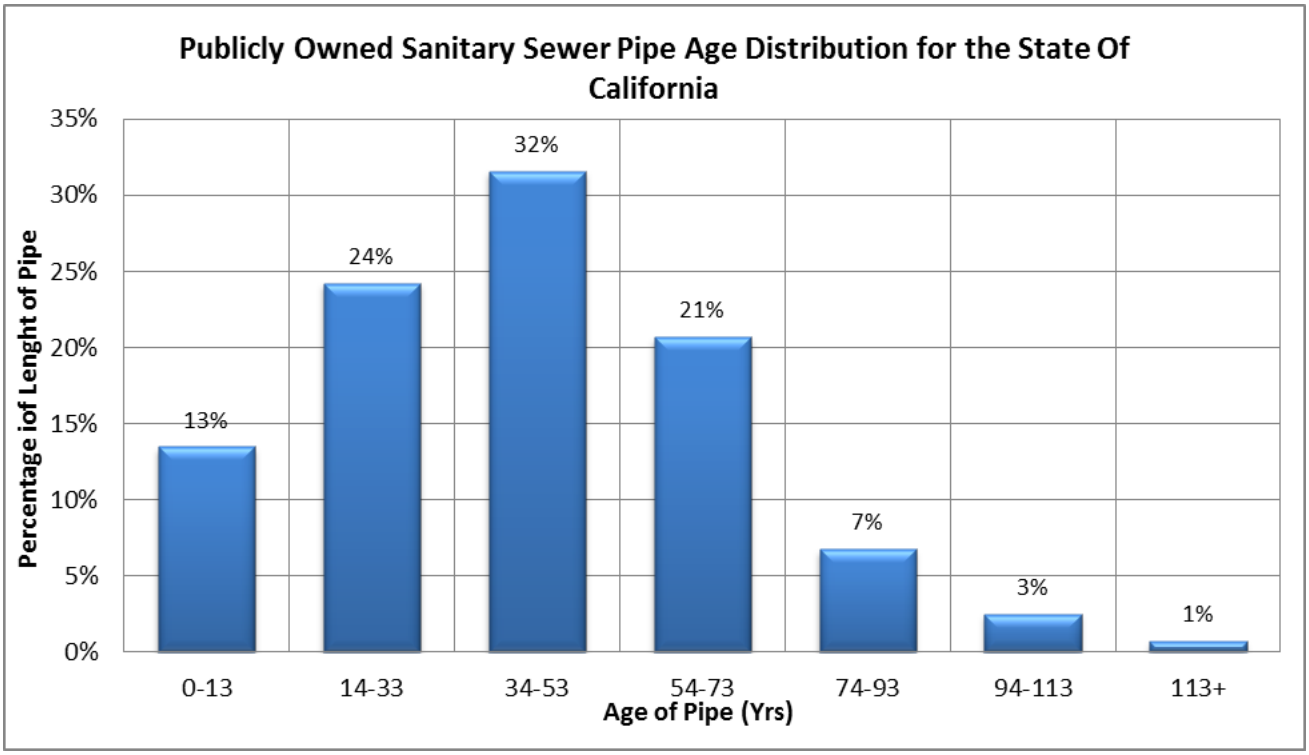


Figure 16 – Publicly Owned Sanitary Sewer Pipe Age Distribution for the State of California as of June 2013

E. Spill Rate Indices for Fiscal Year 2012-2013

Spill rate indices are normalized metrics of spill frequencies that allow for comparison of sanitary sewer systems of different sizes. The number of SSOs per 100 miles of pipe per year metric is used to compare the relative performance of enrollees and their sanitary sewer systems. This metric expresses the number of SSOs for every 100 miles of pipe or sewer lines owned by the enrollee per year (SSOs/100 mi/year). This spill rate metric is calculated as follows:

$$= \left(\frac{\#of\ \ SSOs\ \ per\ Year}{Total\ \ miles\ \ pipe\ responsible} \right) \times 100\ miles$$

This metric is one indicator of an enrollee's overall sanitary sewer system performance and can provide insight into its management, operations, and maintenance practices. A well-managed and maintained system with adequate capacity can be expected to have a lower spill rate than a poorly managed system or a system with inadequate capacity.

It is important to consider the type of sanitary sewer system (e.g., municipal, prison, school, etc.) and the size of the sanitary sewer system when examining spill rate indices for comparing sanitary sewer system performance. As illustrated in Figure 17, of the 1,093 enrolled sanitary sewer systems, approximately 84 percent (i.e., 923) serve municipalities and approximately16 percent (i.e., 170) serve other public entities including airports, hospitals, military facilities, parks, ports, prisons, and schools. The distribution of municipal sanitary sewer systems by system size in miles of publicly owned pipe is illustrated in Figure 18.

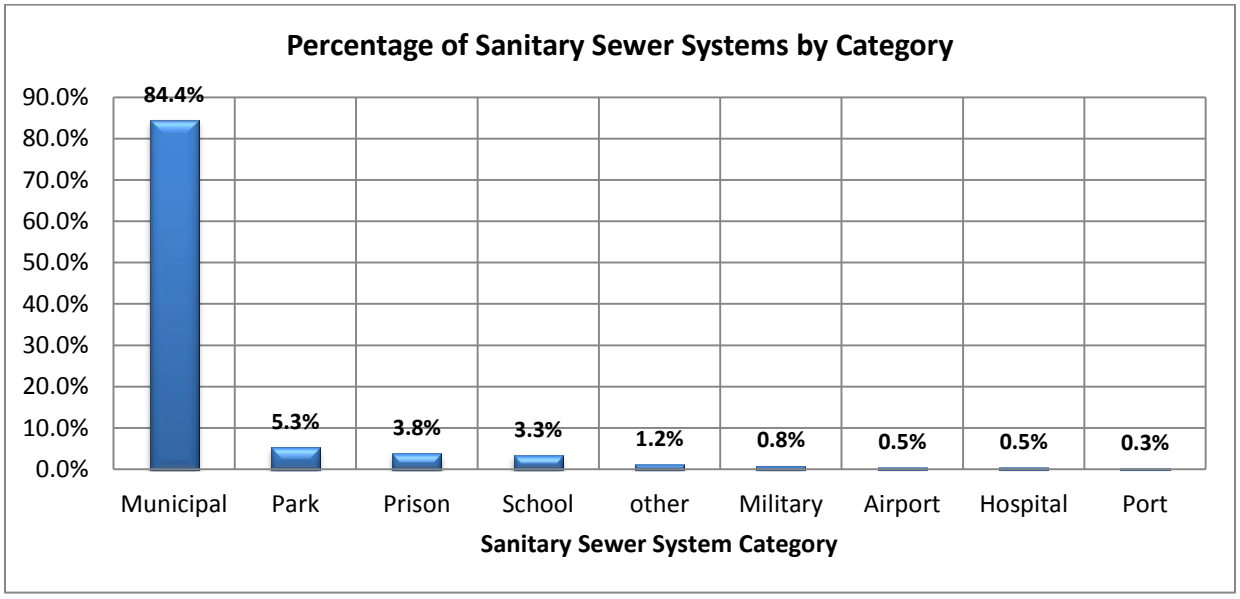


Figure 17 – Percentage of Enrolled Sanitary Sewer Systems by Category

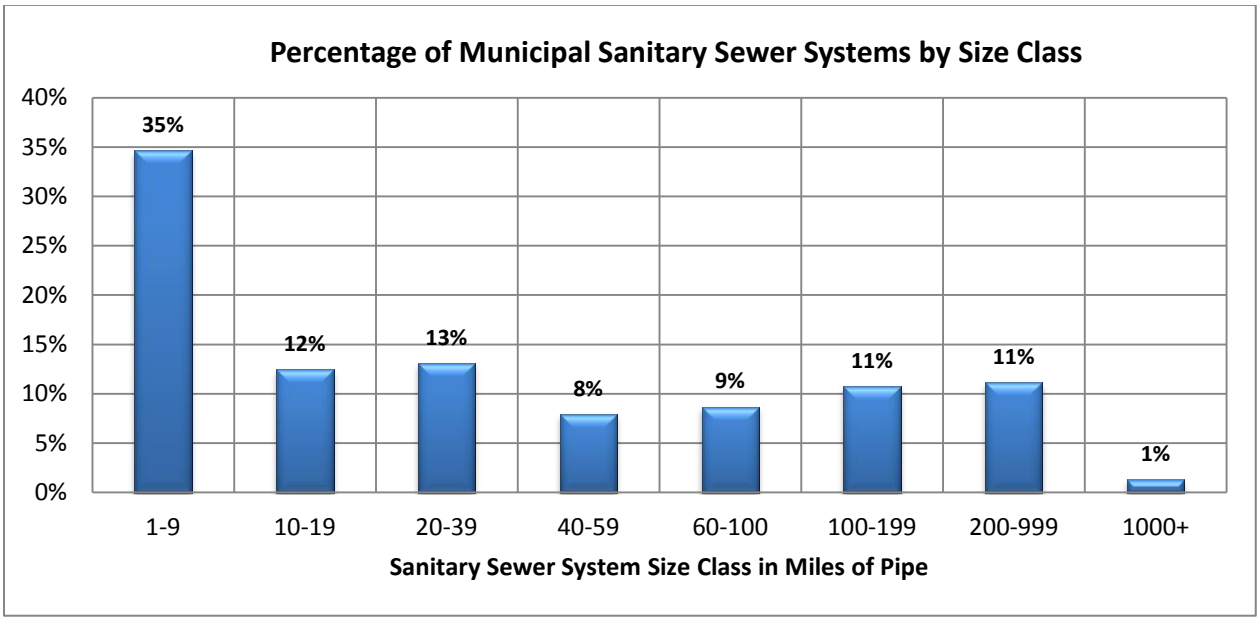


Figure 18 – Percentage of Enrolled Municipal Sanitary Sewer Systems by System Size

The spill rates for enrolled municipal sanitary sewer systems grouped by system size class in miles of publicly owned pipe is illustrated in Figure 19. Municipal sanitary sewer systems were grouped based on the miles of sewer pipe owned into size classes. For example all municipal sanitary sewer systems that owned 1-9 miles of sewer pipe were grouped in the "1-9" size class. The statewide average spill rate for municipal sanitary sewer systems in Fiscal Year 2012-2013 is 9 (nine). Sixteen SSOs/100mi/year and the statewide median spill rate is 3.79 SSOs/100mi/year.

As illustrated in Figure 19, small municipal sanitary sewer systems with fewer than 20 miles of pipe generally have spill rates above the state average for municipalities. This trend is a reflection of economies of scale in managing a sanitary sewer system. Smaller sanitary sewer systems generally have smaller budgets and fewer resources dedicated to operate and maintain their sanitary sewer systems.

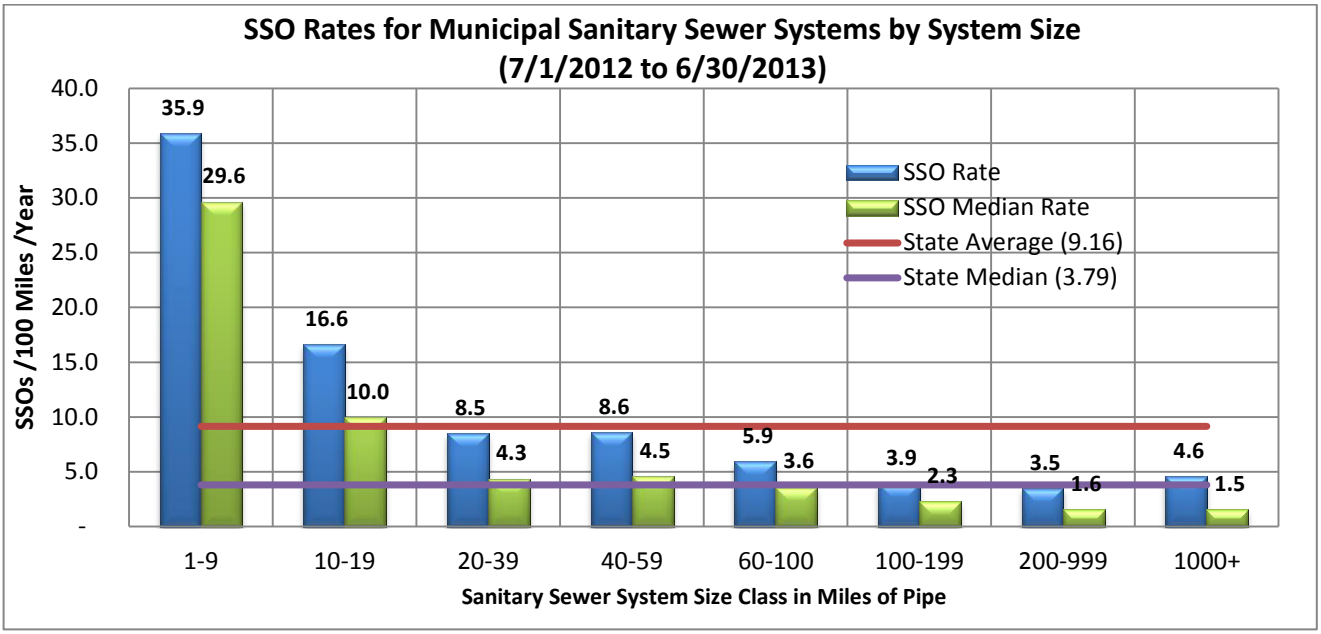


Figure 19 – SSO Rates for Municipal Sanitary Sewer Systems by System Size for Fiscal Year 2012 – 2013

Municipal sanitary sewer systems greater than 20 miles in length generally have spill rates below the state average for municipalities. The lower spill rates for larger sanitary sewer systems are likely attributable, in part, to having more resources to manage their sanitary sewer systems. In addition, the lower spill rates for the larger systems may be, in part, a reflection of earlier development and implementation of SSMPs. For instance, agencies that own larger sanitary sewer systems were required to develop and implement their SSMPs before the agencies that own smaller sanitary sewer systems. The smallest agencies had a deadline of August 2, 2010 to complete development and start implementation of their SSMPs whereas, the largest agencies had a deadline of May 2, 2009 to complete development and start implementing their SSMPs.

Pipe age may also be a factor contributing to high SSO rates that include excessive inflow and infiltration and/or pipe defects resulting in excessive blockages. For instance, enrollees with 50 percent or more of sewer pipe older than 52 years have higher SSO rates as shown in Figure 20. Specifically, these enrollees have an SSO rate of 10.3 SSOs/100mi/year which is approximately double of the enrollees with less than 50 percent of sewer pipe older than 52 years. This SSO rate for older systems is also higher than the overall state average SSO rate (over a five-year period from January 2007 through June 2013) of approximately 7.01 SSOs/100mi/year.

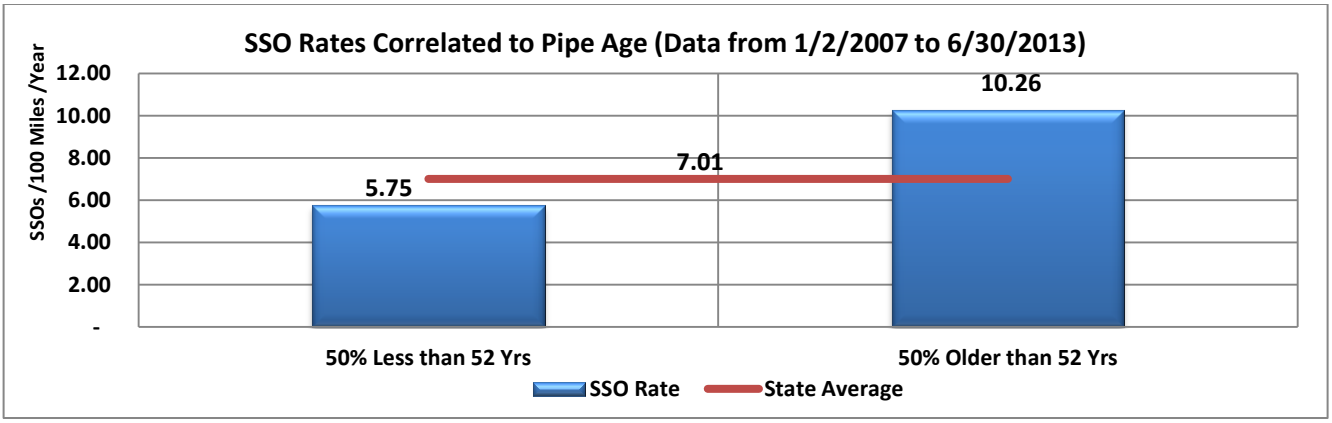


Figure 20 – SSO Rates Correlated to Pipe Age (Data from 1/2/2007 to 6/30/2013)

Although Figure 19 illustrates that sanitary sewer systems with less than 20 miles of pipe have the highest spill rates per mile of pipe, overall these systems have relatively fewer spills than larger systems as illustrated in Figure 21. In addition, as shown in Figure 22, only approximately 11 percent of enrollees (i.e., 42 enrollees) with nine or less miles of pipe reported having SSOs during Fiscal Year 2012-2013.

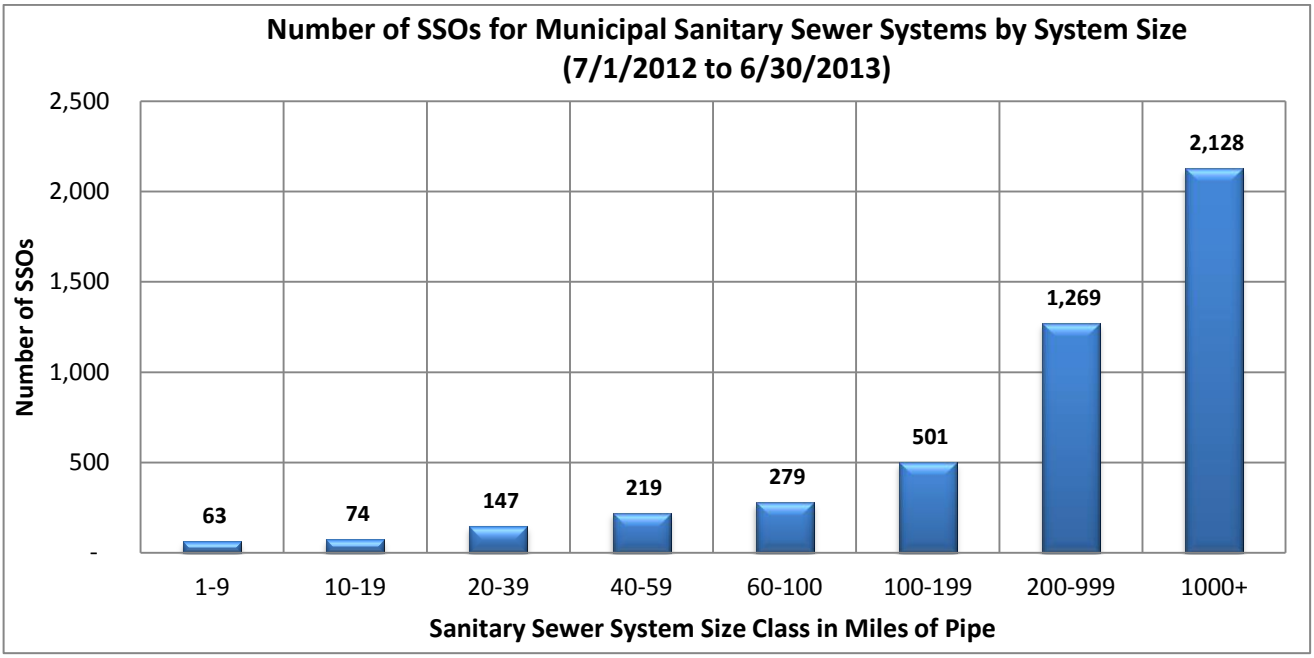


Figure 21 – Number of SSOs for Municipal Sanitary Sewer Systems by System Size for Fiscal Year 2012 – 2013

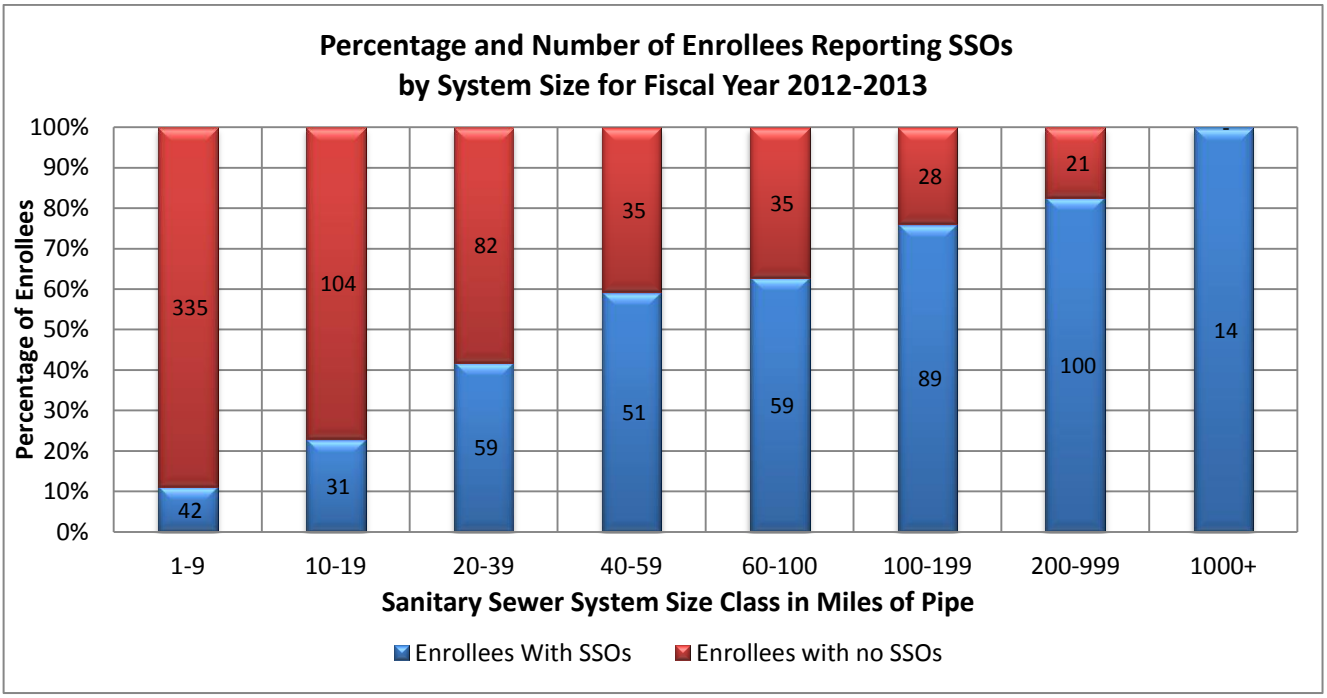


Figure 22 - Percentage and Number of Enrollees Reporting SSOs by System Size for Fiscal Year 2012 – 2013

The SSO volume per 1,000 people served per year (gallons/1,000 capita/year) is another metric that can be used to compare the relative performance of sanitary sewer systems. This metric is calculated as follows:

$$= \left(\frac{Total\ Volume\ Spilled\ \ per\ Year}{Population\ \ Served} \right) \times 1000$$

The SSO spill volume rate for enrolled municipal sanitary sewer systems by system size class for Fiscal Year 2012-2013 is illustrated in Figure 23. Sanitary sewer systems between 20 and 40 miles of pipe, and between 60 and 100 miles of pipe have the highest SSO volume rates at 5,277 gallons/1,000 capita/year and 4,142 gallons/1,000 capita/year, respectively. Sanitary sewer systems with more than 1,000 miles of pipe have the lowest average SSO spill volume rate at 47 gallons/1,000 capita/year.

The total SSO volume in the state by sanitary sewer system size class for Fiscal Year 2012-2013 is illustrated in Figure 24. Sanitary sewer systems with more than 40 miles of pipe contributed approximately 73 percent of the SSO volume in the state during Fiscal Year 2012-2013. Also, it is worth noting that the high SSO volume for sanitary sewer systems between 20 to 39 miles of pipe is due to a one-time SSO event where two million gallons were spilled in one event during Fiscal Year 2012-2013.

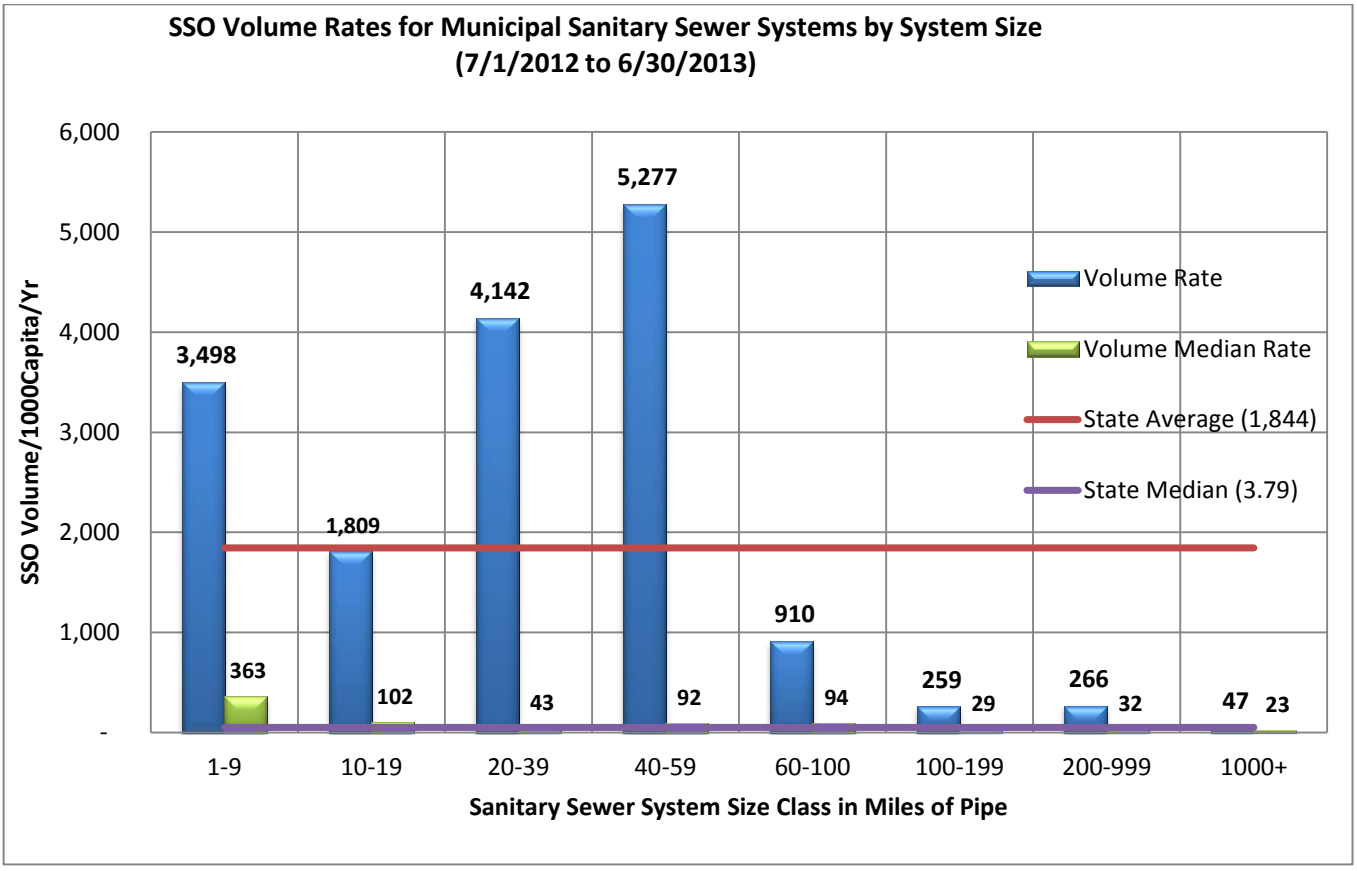


Figure 23 –SSO Volume Rates for Municipal Systems by System Size for Fiscal Year 2012 – 2013

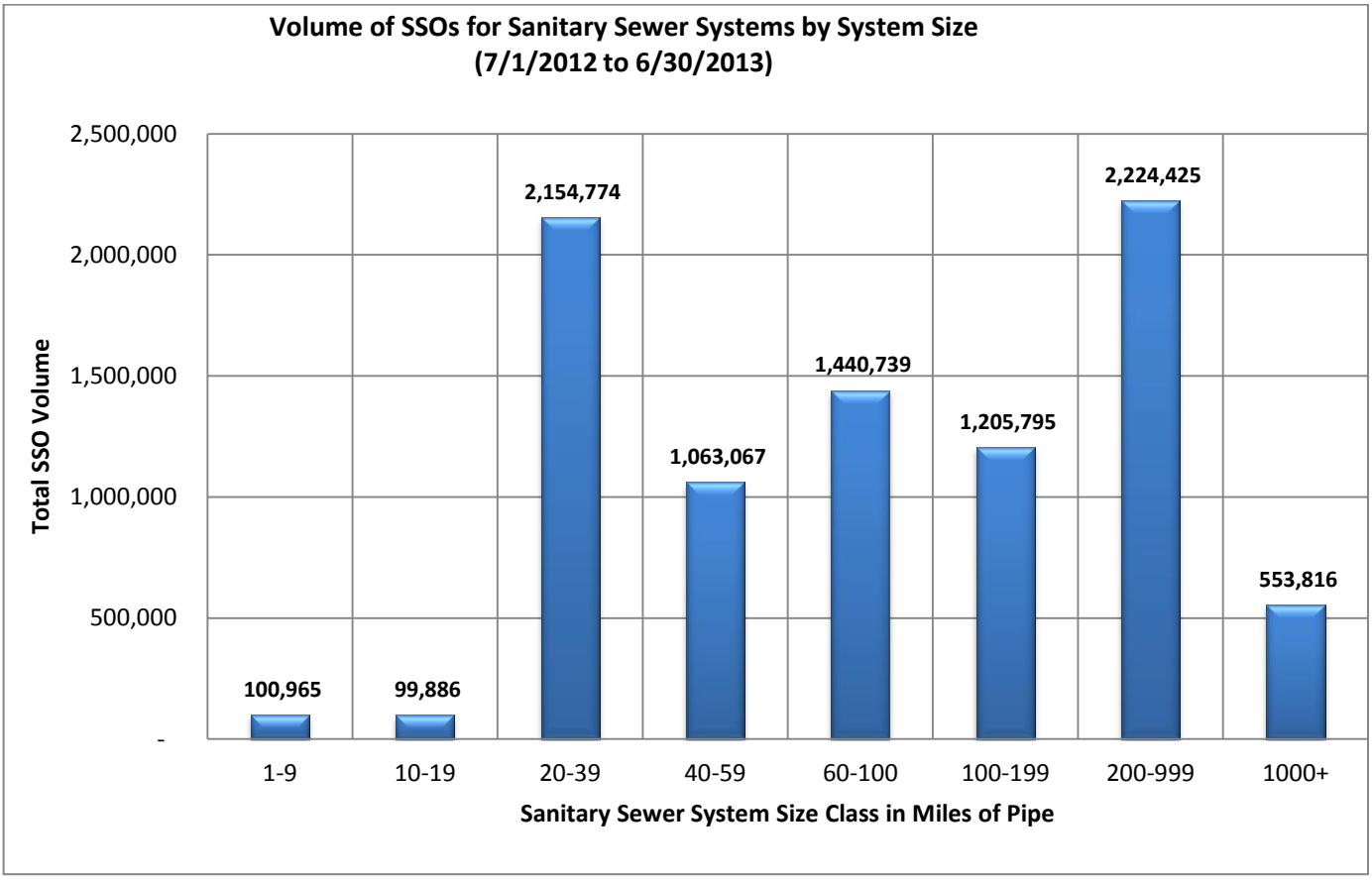


Figure 24 –Total SSO Volume for Municipal Sanitary Sewer Systems by System Size for Fiscal Year 2012 – 2013

As illustrated on Figures 19 and 23, there is a significant difference in mean and median rates for the spill rate indices. The median rate is the rate at which half the sanitary sewer systems in the category have rates higher and half have rates lower. The mean is the sum of the rates of all sanitary sewer systems in the category divided by the number of systems in the category. The large difference between the mean and median rates indicates that a number of sanitary sewer systems have significantly higher spill rates than others, and these poor performers are driving the average rates well above the median rates.

F. Regional Water Board Spill Data and Trends for Fiscal Year 2012-2013

A summary of the statewide SSO data by Regional Water Board for Fiscal Year 2012 – 2013 is shown in Table 4. As illustrated in Table 4, the Central Valley Water Board (Sacramento) and San Francisco Bay Water Board have the highest SSO rates with 12.7 SSOs/100mi/year and 7.6 SSOs/100mi/year, respectively. With respect to SSO volume rate, the San Francisco Water Board and the Central Valley Water Board (Fresno) have the highest SSO volume rates with 24,028 gallons/100mi/year and 4,914 gallons/100mi/year, respectively. The data also indicate that the San Francisco Bay, Los Angeles, Central Valley (Sacramento), Santa Ana, and San Diego Water Boards have the majority of sanitary sewer system piping owned by public agencies in the state.

Table 4– Regional Water Board SSO Data for Fiscal Year 2012 – 2013

Regional Water Board	Total Miles of Sewer Owned by Enrollees	Facilities Regulated Under SSO Program	Enrollees Reporting SSOs	Enrollees with No SSOs	Number of SSOs	Volume of Sewage Spilled	Volume Reaching Surface Water	Percent Reaching Surface Water	SSOs Per 100 miles of Sewer	SSOs Volume Per 100 miles of Sewer
North Coast	2,377	69	25	44	55	94,730	64,484	68%	2.31	3,986
San Francisco Bay	17,850	132	98	34	1,364	4,288,909	2,653,662	62%	7.64	24,028
Central Coast	4,473	104	55	49	195	146,363	45,480	31%	4.36	3,272
Los Angeles	21,525	144	76	68	440	384,630	130,371	34%	2.04	1,787
Central Valley - Fresno	13,198	156	35	121	128	2,452,199	2,418,702	99%	0.26	18,580
Central Valley - Redding	1,612	51	14	37	37	54,581	40,011	73%	2.30	3,385
Central Valley - Sacramento	17,181	183	78	105	2,186	750,991	427,067	57%	12.72	4,371
Lahontan - Tahoe	1,178	22	7	15	28	18,515	200	1%	2.38	1,572
Lahontan - Victorville	2,974	51	15	36	45	86,974	2,612	3%	1.51	2,925
Colorado River Basin	3,033	32	14	18	34	51,996	15,811	30%	0.08	1,714
Santa Ana	16,505	87	42	45	143	219,807	82,470	38%	0.87	1,332
San Diego	13,198	62	34	28	185	512,370	130,657	26%	1.40	3,882
TOTAL	**115,104**	**1,093**	**493**	**600**	**4,840**	**9,062,065**	**6,011,527**	**66%**	**3.16**	**5,903**

The percentages of total reported number of SSOs and number of SSOs reaching surface waters in the state by Regional Water Board are presented in Figure 25. The data indicate that:

(1) San Francisco Bay, Central Valley (Sacramento office), and Los Angeles Water Boards account for 82 percent of reported spills in the state (San Francisco Bay Water Board = 45 percent, Central Valley(Sacramento office) Water Board = 28 percent, Los Angeles Water Board = 9 percent); and

(2) San Francisco Bay and Central Valley Water Boards account for approximately 64 percent of reported spills reaching surface waters in the state (San Francisco Bay Water Board = 36.7 percent, Central Valley (Fresno office) Water Board = 18.9 percent, Central Valley (Sacramento office) Water Board = 8.8 percent).

The statewide distribution of the total SSO volume reported for Fiscal Year 2012-2013 is illustrated in Figure 26 as the percentage of total statewide SSO volume reported in each Regional Water Board. These data indicate that:

(1) San Francisco Bay and Central Valley (Fresno office) Water Boards account for approximately 74 percent of reported spill volume in the state (San Francisco Bay = 47 percent, and Central Valley-Fresno = 27.1 percent); and

(2) Approximately 84 percent of the reported spill volume reaching surface water results from spills in the San Francisco Bay and Central Valley (Fresno office) Water Boards (San Francisco Bay = 47 percent, and Central Valley-Fresno = 27 percent).

(3) Increased compliance efforts in the Central Valley (Sacramento office), San Francisco Bay and Central Valley (Fresno office) Water Boards may yield the best results for reduction of the number of SSOs and volume of sewage spilled.

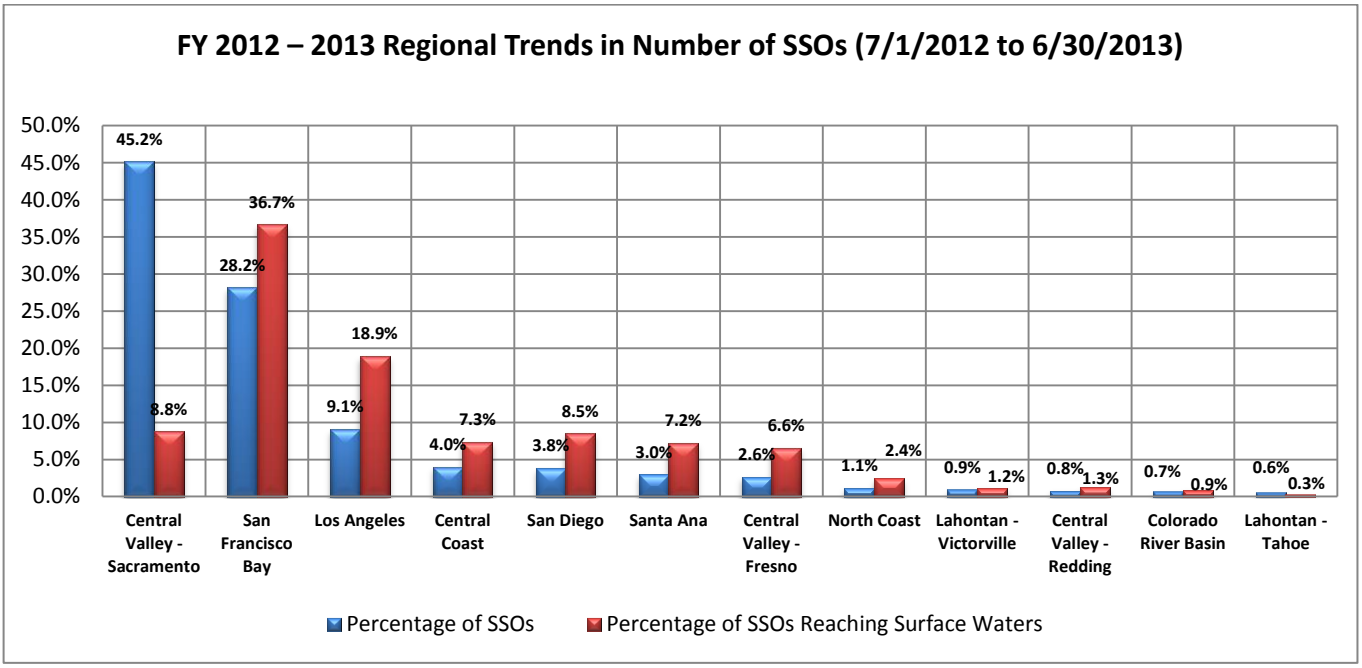


Figure 25 – FY 2012 – 2013 Regional Trends in Number of SSOs for Fiscal Year 2012 – 2013

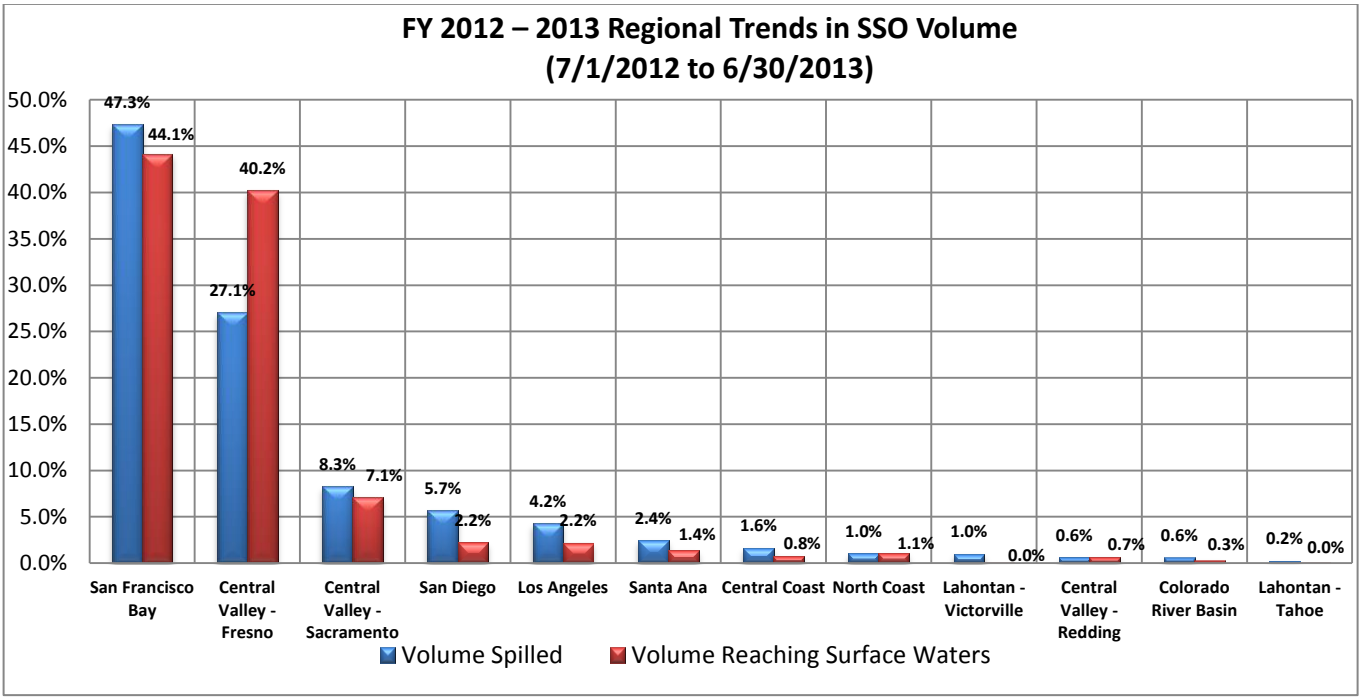


Figure 26 – FY 2012 – 2013 Regional Trends in SSO Volume for Fiscal Year 2012 – 2013

G. Summary of FY 2012 – 2013 Reported Spill Data

In Fiscal Year 2012-2013, 58 enrollees were responsible for approximately 90 percent of the reported SSO volume. The 20 sanitary sewer systems with the largest cumulative reported SSO volumes ranked from highest to lowest for Fiscal Year 2012 – 2013 is presented in Table 5. The population and mileage of the ranked sanitary sewer systems for Fiscal Year 2012 – 2013 vary from small to large systems. The total SSO volume reported in millions of gallons and the number of spill events that exceeded 50,000 gallons are also illustrated in Table 5.

Table 5– Top 20 Sanitary Sewer Systems Ranked by Cumulative SSO Volume Reported for Fiscal Year 2012 – 2013

Regional Water Board	Sanitary Sewer System	Population Served	Miles of Sewer Pipe Owned	Total SSO Volume Spilled (MG)	# of Events >=50k Gallons	SSO Rate (# of SSOs per 100 Miles)	Volume Rate (Volume Spilled per 1000 Capita)	FY 12-13 Rank
Central Valley - Fresno	Taft City CS (Taft City)	9,000	29	2.05	1	6.90	227,800	1
San Francisco Bay	San Mateo CS (San Mateo City)	97,000	236	0.80	5	13.15	8,224	2
San Francisco Bay	Fssd Subregional CS (Fairfield Suisun Sewer District)	134,357	84	0.77	1	2.38	5,737	3
San Francisco Bay	Richmond City CS	68,240	191	0.63	2	23.54	9,219	4
Central Valley - Sacramento	Grass Valley City CS	12,500	64	0.48	1	23.36	38,588	5
Central Valley - Fresno	Groveland CS	1,500	42	0.33	1	4.76	220,017	6
San Francisco Bay	Town Of Hillsborough CS	10,300	99	0.32	3	20.22	30,970	7
San Diego	Temecula Valley RCS (Eastern Municipal Water District)	212,425	499	0.27	1	1.20	1,280	8
San Francisco Bay	Fairfield, Unincorporated Area CS (Fairfield City)	105,026	426	0.24	1	7.51	2,288	9
San Francisco Bay	San Dist #1 of Marin CS	50,000	203	0.20	1	14.31	3,967	10
San Francisco Bay	San Jose City CS	971,372	2,281	0.18	-	6.80	180	11
San Francisco Bay	Delta Diablo SD CS	189,000	50	0.14	1	6.06	724	12
San Francisco Bay	Airport Industrial Wastewater CS (City & County of San Francisco, Airport Commision)	10,000	31	0.12	1	3.22	11,730	13
San Francisco Bay	Oakland City CS	400,000	930	0.12	-	10.64	292	14
San Francisco Bay	Sonoma Valley County S.D. CS (Sonoma Cnty Water Agency)	44,968	135	0.11	-	9.63	2,395	15
Los Angeles	Hyperion CS (Los Angeles City Bureau of Sanitation)	4,000,000	6,096	0.08	-	1.98	21	16
Santa Ana	Eastern Municipal Water District CS	564,629	1,151	0.08	1	0.43	134	17
San Francisco Bay	Las Gallinas CS (Las Gallinas Valley Sanitary District)	29,057	112	0.06	1	6.27	1,931	18
Central Valley - Sacramento	Sacramento Area Sewer District CS	1,160,000	4,431	0.05	-	34.69	46	19
San Diego	San Diego City CS	2,186,810	5,147	0.05	-	0.78	24	20

H. Summary of Reported Spill Data Since Inception of the SSO Reduction Program

Since inception of the SSO Reduction Program, 30 enrollees have reported approximately 90 percent of the cumulative SSO volume reported to have reached surface waters in the state. The 30 sanitary sewer systems reporting the largest SSO volumes to surface water, cumulatively over the life of the program, are listed in Table 6 where they are ranked from highest reported cumulative SSO volume to lowest reported cumulative SSO volume. Out of the 30 enrollees, 28 have reported three or more SSOs reaching surface waters. The total reported SSO volume reaching surface water from these 30 enrollees is approximately 98 million of gallons.

Table 6 – Sanitary Sewer Systems Ranked by Cumulative Total SSO Volume Reported as Reaching Surface Water from January 2007 – June 2013

Regional Water Board	Sanitary Sewer System	Population Served	Miles of Sewer Pipe Owned	Number of SSOs	Total SSO Volume Spilled Reaching Surface Waters (MG)	Spills => 50k	SSO Rate (SSOs per 100 Miles per Yr)	Volume Rate (Volume Spilled per 1000 Capita per Yr)
San Francisco Bay	Richmond City CS	68,240	191	265	45.80	38	3.89	638.18
Santa Ana	Carlsbad MWD CS	69,420	287	38	7.37	2	16.03	8,839.74
Santa Ana	Running Springs CS	5,632	68	5	5.89	1	33.38	158.14
San Diego	La Salina WWTP, Oceanside Otfl CS	169,350	475	55	5.54	2	2.35	27,139.00
San Francisco Bay	San Mateo CS	97,000	236	288	5.09	27	12.55	5,929.03
San Francisco Bay	Town Of Hillsborough CS	10,300	99	190	3.71	20	15.99	18,477.03
San Diego	San Diego City CS	2,186,810	5,147	375	3.26	4	3.66	611.04
San Francisco Bay	San Dist #1 of Marin CS	50,000	203	239	2.75	5	7.09	39,213.22
Central Valley - Fresno	Taft City CS	9,000	29	12	2.06	1	3.67	48,655.81
San Francisco Bay	San Bruno City CS	40,165	130	202	1.63	5	2.04	16,323.11
Colorado River Basin	Calexico CS	38,000	78	2	1.35	1	1.78	5,033.80
San Diego	City Of La Mesa CS	55,724	155	66	1.32	2	1.12	229.44
Colorado River Basin	Coachella Valley Water District CS	260,700	1,168	49	1.26	3	6.55	3,649.90
San Francisco Bay	Sonoma Valley County S.D. CS	44,968	135	82	1.11	5	1.39	2,348.98
Central Valley - Sacramento	Sacramento Area Sewer District CS	1,160,000	4,431	8,630	1.07	3	0.26	879.61
San Diego	Padre Dam CS	67,398	166	15	1.03	1	9.28	6,091.78
San Diego	Santa Margarita Water District CS	155,000	782	13	0.89	1	1.13	160,896.33
San Francisco Bay	Oakland City CS	400,000	930	872	0.83	5	0.44	6,087.84
San Diego	City Of Laguna Beach CS	18,000	100	60	0.71	2	0.72	828.99
San Francisco Bay	Mt. View SD CS	18,253	75	66	0.66	1	2.35	2.11
Los Angeles	Hyperion CS (Los Angeles City Bureau of Sanitation)	4,000,000	6,096	931	0.66	6	39.60	1,696.38
Lahontan - Tahoe	Susanville Csd CS	9,960	62	58	0.51	1	22.45	108,737.34
San Francisco Bay	Novato And Ignacio CS	56,000	225	130	0.50	3	19.79	8,497.70
Central Valley - Sacramento	Dry Creek, Zone 173 CS (Placer Cnty)	2,873	22	3	0.46	2	31.12	58,390.53
Central Valley - Sacramento	Grass Valley City CS	12,500	64	47	0.43	2	19.10	8,907.06
Central Valley - Fresno	Groveland CS	1,500	42	9	0.43	2	25.17	6,590.53
Central Coast	South San Luis Obispo Sd CS	40,000	9	22	0.42	2	9.84	3,988.53
Lahontan - Victorville	Victor Valley Wastewater CS	110,000	44	10	0.41	3	15.19	336.10
Central Valley - Sacramento	Jamestown SD CS	3,540	15	14	0.38	1	14.26	5,881.94
Central Valley - Redding	Redding City CS	91,000	431	92	0.32	3	9.36	1,434.15

APPENDIX E

State WDR Requirements - 2013

Nute Engineering

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/

ATTACHMENT A

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

APPENDIX F

State ASBS Drainage and Discharge Requirements
GIS Map of Fitzgerald Marine Reserve Drainage Basin

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2012-0031

AMENDING THE GENERAL EXCEPTION TO THE CALIFORNIA OCEAN PLAN FOR SELECTED DISCHARGES INTO AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE, INCLUDING SPECIAL PROTECTIONS FOR BENEFICIAL USES

WHEREAS:

1. The State Water Resources Control Board (State Water Board) adopted the California Ocean Plan (Ocean Plan) on July 6, 1972 and revised the Ocean Plan in 1978, 1983, 1988, 1990, 1997, 2000, 2005, and 2009.

2. The Ocean Plan prohibits the discharge of waste to designated Areas of Special Biological Significance (ASBS).

3. ASBS are designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.

4. Under the Marine Managed Areas Improvement Act, all ASBS are designated as a subset of state water quality protection areas and require special protection as determined by the State Water Board pursuant to the Ocean Plan and the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan).

5. In state water quality protection areas, waste discharges must be prohibited or limited by special conditions, in accordance with the Porter-Cologne Water Quality Control Act, (Wat. Code, §13000 et seq.) and implementing regulations, including the Ocean Plan and Thermal Plan.

6. The Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

7. On October 18, 2004, the State Water Board notified a number of parties that they must cease the discharge of storm water and nonpoint source waste into ASBS or request an exception to the Ocean Plan.

8. The State Water Board received 27 applications for an exception to the Ocean Plan prohibition against waste discharges into an ASBS. The applicants discharge storm water and nonpoint source waste into ASBS.

9. On March 20, 2012, in Resolution 2012-0012, the State Water Board adopted a General Exception to the Ocean Plan ASBS waste discharge prohibition, for storm water and nonpoint source discharges from these 27 applicants, including Special Protections for Beneficial Uses.

10. The State Water Board's stated intention when adopting the General Exception with Special Protections for Beneficial Uses was for compliance with natural ocean water quality within six years of the effective date.

11. Two sections in the Special Protections to ASBS Compliance Plans, section A. 2.d(2), and ASBS Pollution Prevention Plans, section B.2.b(2), were not corrected and retained a four year, instead of six year, compliance deadline.

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Amends sections A.2.d(2) and B.2.b(2) of the Special Protections in Attachment B to the General Exception, originally adopted in Resolution 2012-0012, to require pollutant reductions to be achieved within six years, to be consistent with the compliance schedules in sections I.A.3 and I.B.3.

2. Authorizes the Executive Director or designee to transmit the amended General Exception to the United States Environmental Agency (U.S. EPA) for concurrence.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 19, 2012.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

Attachment A – Applicants

Applicant	ASBS
Carmel by the Sea, City of	Carmel Bay
Connolly-Pacific Company	Southeast Santa Catalina Island
Department of Parks and Recreation	Redwoods National Park, Trinidad Head, King Range, Jughandle Cove, Gerstle Cove, James V. Fitzgerald, Año Nuevo, Carmel Bay, Point Lobos, Julia Pfeiffer Burns, Laguna Point to Latigo Point, Irvine Coast
Department of Transportation (CalTrans)	Redwoods National Park, Saunders Reef,James V. Fitzgerald, Año Nuevo, Carmel Bay, Point Lobos, Julia Pfeiffer Burns, Salmon Creek Coast, Laguna Point to Latigo Point, Irvine Coast
Humboldt County	King Range
Humboldt Bay Harbor District	King Range
Irvine Company	Irvine Coast
Laguna Beach, City of	Heisler Park
Los Angeles County	Laguna Point to Latigo Point
Los Angeles County Flood Control District	Laguna Point to Latigo Point
Malibu, City of	Laguna Point to Latigo Point
Marin County	Duxbury Reef
Monterey, City of	Pacific Grove
Monterey, County of	Carmel Bay
Newport Beach, City of, and on behalf of the Pelican Point Homeowners	Robert E. Badham And Irvine Coast
Pacific Grove, City of	Pacific Grove
Pebble Beach Company, and on behalf of the Pebble Beach Stillwater Yacht Club	Carmel Bay
San Diego, City of	La Jolla
San Mateo County	James V. Fitzgerald
Santa Catalina Island Company, and on behalf of the Santa Catalina Island Conservancy	Northwest Santa Catalina Island And Western Santa Catalina Island
Sea Ranch Association	Del Mar Landing
Trinidad, City of	Trinidad Head
Trinidad Rancheria	Trinidad Head
U.S. Dept. of Interior, Point Reyes National Seashore	Point Reyes Headlands, Duxbury Reef
U.S. Dept. of Interior, Redwoods National and State Park	Redwoods National Park
U.S. Dept. of Defense, Air Force	James V. Fitzgerald
U.S. Dept. of Defense, Navy	San Nicolas Island & Begg Rock
U.S. Dept. of Defense, Navy	San Clemente Island

Attachment B - Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges

I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER AND NONPOINT SOURCE WASTE DISCHARGES

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water and nonpoint source discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

The special conditions are organized by category of discharge. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) will determine categories and the means of regulation for those categories [e.g., Point Source Storm Water National Pollutant Discharge Elimination System (NPDES) or Nonpoint Source].

A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water

   a. Existing storm water discharges into an ASBS are allowed only under the following conditions:

      (1) The discharges are authorized by an NPDES permit issued by the State Water Board or Regional Water Board;

      (2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and

      (3) The discharges:

         (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;

         (ii) Are designed to prevent soil erosion;

         (iii) Occur only during wet weather;

         (iv) Are composed of only storm water runoff.

   b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

c. The discharge of trash is prohibited.

d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. Non-storm water discharges are prohibited except as provided below:

(1) The term "non-storm water discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.

(2) (i) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

(a) Discharges associated with emergency fire fighting operations.

(b) Foundation and footing drains.

(c) Water from crawl space or basement pumps.

(d) Hillside dewatering.

(e) Naturally occurring groundwater seepage via a storm drain.

(f) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

(ii) An NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS only to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS.

(3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP).

The discharger shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be included in its SWMP or a SWPPP, as appropriate to permit type. If a statewide permit includes a SWMP, then the discharger shall prepare a stand-alone

compliance plan for ASBS discharges. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.

b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

c. For Municipal Separate Storm Sewer System (MS4s), the ASBS Compliance Plan shall require minimum inspection frequencies as follows:

   (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;

   (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;

   (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season; and

   (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.

d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

   (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

(2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspirate storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.

g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

h. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.

(1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.

(2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

(3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within eighteen (18) months from the effective date of the Exception, the discharger shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type. The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.

c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.

d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.

e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

f. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe

the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for municipalities, a demonstration of significant hardship to discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the discharger's jurisdictional area, and the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or

2. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

B. NONPOINT SOURCE DISCHARGES

1. General Provisions for Nonpoint Sources

   a. Existing nonpoint source waste discharges are allowed into an ASBS only under the following conditions:

      (1) The discharges are authorized under waste discharge requirements, a conditional waiver of waste discharge requirements, or a conditional prohibition issued by the State Water Board or a Regional Water Board.

      (2) The discharges are in compliance with the applicable terms, prohibitions, and special conditions contained in these Special Protections.

      (3) The discharges:

         (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;

         (ii) Are designed to prevent soil erosion;

         (iii) Occur only during wet weather;

         (iv) Are composed of only storm water runoff.

   b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

c. The discharge of trash is prohibited.

d. Only existing nonpoint source waste discharges are allowed. "Existing nonpoint source waste discharges" are discharges that were ongoing prior to January 1, 2005. "New nonpoint source discharges" are defined as those that commenced on or after January 1, 2005. A change to an existing nonpoint source discharge, in terms of relocation or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. Non-storm water discharges from nonpoint sources (those not subject to an NPDES Permit) are prohibited except as provided below:

(1) The term "non-storm water discharges" means any waste discharges that are not composed entirely of storm water.

(2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:

(i) Discharges associated with emergency fire fighting operations.

(ii) Foundation and footing drains.

(iii) Water from crawl space or basement pumps.

(iv) Hillside dewatering.

(v) Naturally occurring groundwater seepage via a storm drain.

(vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

(3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

f. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

g. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

h. All other nonpoint source discharges not specifically authorized above are prohibited.

2. Planning and Reporting

a. The nonpoint source discharger shall develop an ASBS Pollution Prevention ~~P~~lan, including an implementation schedule, to address storm water runoff and any other nonpoint source discharges from its facilities. The ASBS Pollution Prevention Plan must be equivalent in contents to an ASBS Compliance Plan as described in I (A)(2) in this document. The ASBS Pollution Prevention Plan is subject to approval by the Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements).

b. The ASBS Pollution Prevention Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff that are necessary to comply with these special conditions, will be achieved through Management Measures and associated Management Practices (Management Measures/Practices). Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director or Regional Water Board Executive Officer that such installation would pose a threat to health or safety. Management Measures to control storm water runoff during a design storm shall achieve on average the following target levels:

(1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

(2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

c. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff or other nonpoint source pollution is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and the Regional Water Board within 30 days of receiving the results.

(1) The report shall identify the constituents that alter natural water quality and the sources of these constituents.

(2) The report shall describe Management Measures/Practices that are currently being implemented, Management Measures/Practices that are identified in the ASBS Pollution Prevention Plan for future implementation, and any additional Management Measures/Practices that may be added to the Pollution Prevention Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the Management Measures/Practices.

(3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements), the discharger shall revise its ASBS Pollution Prevention Plan to incorporate any new or modified Management Measures/Practices that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised ASBS Pollution Prevention Plan, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within eighteen (18) months from the effective date of the Exception, the dischargers shall submit a draft written ASBS Pollution Prevention Plan to the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) that describes its strategy to comply with these special conditions, including the requirement to maintain natural ocean water quality in the affected ASBS. The Pollution Prevention Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls to comply with these special conditions for inclusion in the discharger's Pollution Prevention Plan. The final ASBS Pollution Prevention Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.

c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these Special Protections shall be implemented.

d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Pollution Prevention Plan that are necessary to comply with these special conditions shall be operational.

e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85^{th} percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85^{th} percentile threshold of reference water quality data and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

f. The Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or

2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with parks and recreation facilities shall comply with the following:

A. The discharger shall include a section in an ASBS Compliance Plan (for NPDES dischargers) or an ASBS Pollution Prevention Plan (for nonpoint source dischargers) to address storm water runoff from parks and recreation facilities.

1. The plan shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.

2. The plan shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or

Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.

3. The plan shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.

4. The plan shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of these Special Protections and identify the ASBS boundaries.

5. The plan shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being wind blown and periodically emptying the receptacles to prevent overflows.

6. The plan shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.

B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with waterfront and marine operations shall comply with the following:

A. For discharges related to waterfront and marine operations, the discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.

1. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.

2. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.

3. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.

4. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.

5. The discharger shall submit its Waterfront Plan to the by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The plan must be fully implemented within 18 months of the effective date of the Exception.

B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.

C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.

D. If the discharger anticipates that the discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the discharger shall submit a technical report as soon as practicable to the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.

E. The State Water Board or the Regional Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.

2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:

   Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-

storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements

   a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.

   b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events

   a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:

      (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and

      (2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

      (3) If an applicant has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

   b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:

      (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and

      (2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and

      (3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

c. For an applicant not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

B. Ocean Receiving Water and Reference Area Monitoring Program

In addition to performing the Core Discharge Monitoring Program in Section II.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

   a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

      The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

   b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs,

pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

2. Regional Integrated Monitoring Program: Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

   a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d)

listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:

   a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

(1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.

(2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur monthly from May through October on a high use weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.

b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

Glossary

At the point of discharge(s) – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Areas of Special Biological Significance (ASBS) – Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Design storm – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger's applicable storm water permit, then the design storm shall be the definition included in the discharger's applicable storm water permit.

Development – Relevant to reference monitoring sites, means urban, industrial, agricultural, grazing, mining, and timber harvesting land uses.

Higher threat discharges - Permitted storm drains discharging equal to or greater than 18 inches, industrial storm drains, agricultural runoff discharged through an MS4, discharges associated with waterfront and marina operations (e.g., piers, launch ramps, mooring fields, and associated vessel support activities, except for passive discharges defined below), and direct discharges associated with commercial or industrial activities to ASBS.

Low Impact Development (LID) – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which entails collecting and conveying storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID focuses on using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.

Marine Operations – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

Management Measure (MM) - Economically achievable measures for the control of the addition of pollutants from various classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives. For example, in the "marinas and recreational boating" land-use category specified in the Plan for California's Nonpoint Source Pollution Control Program (NPS Program Plan) (SWRCB, 1999), "boat cleaning and maintenance" is considered a MM or the source of a specific class or type of NPS pollution.

Management Practice (MP) - The practices (e.g., structural, non-structural, operational, or other alternatives) that can be used either individually or in combination to address a specific MM class or classes of NPS pollution. For example, for the "boat cleaning and maintenance" MM, specific MPs can include, but are not limited to, methods for the selection of environmentally sensitive hull paints or methods for cleaning/removal of hull copper anti-fouling paints.

Municipal Separate Storm Sewer System (MS4) – A municipally-owned storm sewer system regulated under the Phase I or Phase II storm water program implemented in compliance with Clean Water Act section 402(p). Note that an MS4 program's boundaries are not necessarily congruent with the permittee's political boundaries.

Natural Ocean Water Quality - The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of: (a) man-made constituents (*e.g.,* DDT); (b) other chemical (*e.g.,* trace metals), physical (temperature/thermal pollution, sediment burial), and biological (*e.g.*, bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (*e.g.,* invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges "*shall not alter natural ocean water quality*" as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that *natural ocean water quality* is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

Nonpoint source – Nonpoint pollution sources generally are sources that do not meet the definition of a point source. Nonpoint source pollution typically results from land runoff, precipitation, atmospheric deposition, agricultural drainage, marine/boating operations or hydrologic modification. Nonpoint sources, for purposes of these Special Protections, include discharges that are not required to be regulated under an NPDES permit.

Non-storm water discharge – Any runoff that is not the result of a precipitation event. This is often referred to as "dry weather flow."

Non-structural control – A Best Management Practice that involves operational, maintenance, regulatory (e.g., ordinances) or educational activities designed to reduce or eliminate pollutants in runoff, and that are not structural controls (i.e. there are no physical structures involved).

Physical impossibility - Means any act of God, war, fire, earthquake, windstorm, flood or natural catastrophe; unexpected and unintended accidents not caused by discharger or its employees' negligence; civil disturbance, vandalism, sabotage or terrorism; restrain by court order or public authority or agency; or action or non-action by, or inability to obtain the necessary authorizations or approvals from any governmental agency other than the permittee.

Representative sites and monitoring procedures – Are to be proposed by the discharger, with appropriate rationale, and subject to approval by Water Board staff.

Sheet-flow – Runoff that flows across land surfaces at a shallow depth relative to the cross-sectional width of the flow. These types of flow may or may not enter a storm drain system before discharge to receiving waters.

Storm Season – Also referred to as rainy season, means the months of the year from the onset of rainfall during autumn until the cessation of rainfall in the spring.

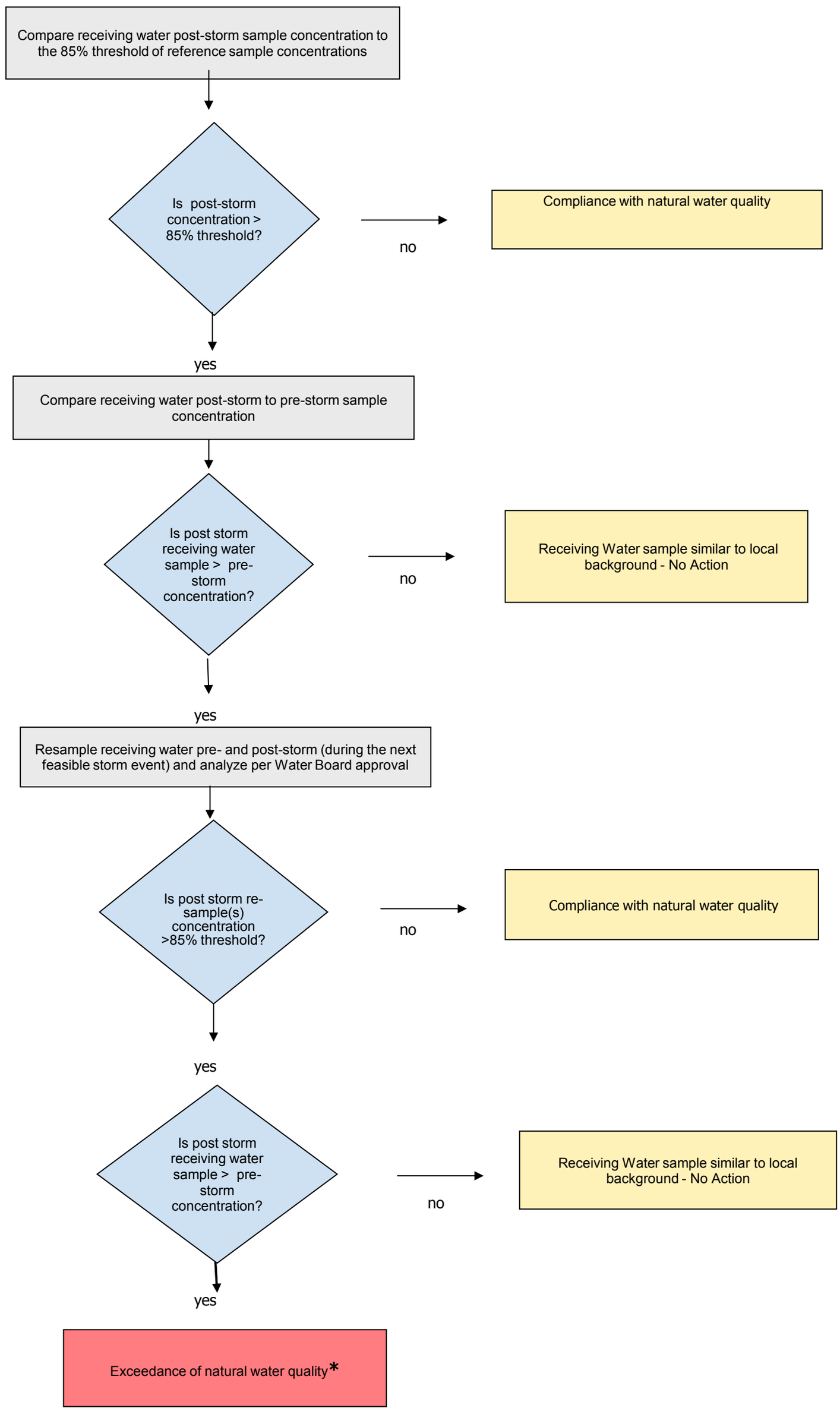
Structural control – A Best Management Practice that involves the installation of engineering solutions to the physical treatment or infiltration of runoff.

Surf Zone - The surf zone is defined as the submerged area between the breaking waves and the shoreline at any one time.

Surface Water Ambient Monitoring Program (SWAMP) comparable – Means that the monitoring program must 1) meet or exceed 2008 SWAMP Quality Assurance Program Management Plan (QAPP) Measurement Quality Objectives, or 2) have a Quality Assurance Project Plan that has been approved by SWAMP; in addition data must be formatted to match the database requirements of the SWAMP Information Management System. Adherence to the measurement quality objectives in the Southern California Bight 2008 ASBS Regional Monitoring Program QAPP and data base management comprises being SWAMP comparable.

Waterfront Operations - Piers, launch ramps, and cleaning stations in the water or on the adjacent shoreline.

Attachment 1
Special Protections Sections I(A)(3)(e) and I(B)(3)(e)
Flowchart to Deteremine Compliance with natural Water Quality



*** When an exceedance of natural water quality occurs, the discharger must comply with section I.A.2.h (for permitted storm water) or section I.B.2.c (for nonpoint sources). Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.**

San Mateo County Proposed Map