

# DRAFT

## STAFF REPORT

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY ORDER NO. 2011-XXXX-DWQ

### STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

#### **INTRODUCTION**

In May 2006, the State Water Resources Control Board (State Water Board) adopted statewide general waste discharge requirements (WDRs) and a monitoring and reporting program (MRP) for sanitary sewer systems as Water Quality Order No. 2006-0003-DWQ. These are referred to as the Sanitary Sewer System Waste Discharge Requirements (SSS WDRs). The SSS WDRs were developed over 14 months in collaboration with a Sanitary Sewer Overflow (SSO) Guidance Committee that included stakeholders from the Regional Water Quality Control Boards (Regional Water Boards), publicly-owned sanitary sewer system agencies, Environmental Protection Agency (USEPA), and non-governmental environmental organizations. The purpose of the SSS WDRs was to provide consistent statewide requirements for quantifying and reducing both the number of SSOs and the volume of wastewater spilled in the state.

Following approximately three years of implementation, State Water Board staff initiated a review and update of the SSS WDRs in September 2009.

Activities conducted for the review and update are summarized below.

- **Staff Public Meetings**

Staff held informal public meetings on September 15, 2009 in Orange County (82 participants) and on September 29, 2009 in the City of Oakland (101 participants).

- **Comment Letter Solicitation**

In follow-up to the staff workshops, comment letters were solicited. A total of 38 comment letters were received from the public and 4 comment letters were provided by Regional Water Quality Control Boards (Regional Water Boards). The San Francisco Bay, Central Coast, and San Diego Regional Water Boards responded.

- **Workshop with Regional Water Board Staff**

A workshop with participating Regional Water Board staff from the North Coast, San Francisco Bay, Central Coast, Central Valley and San Diego Water Boards was conducted on January 19, 2010.

- **Data Review Committee**

As part of the staff workshops, a committee of WDRs stakeholders was formed to review California Integrated Water Quality System (CIWQS) SSO data collected to date. The goals of the Data Review Committee were to: (1) review the SSO data collection process and improve it to enhance the value of collected spill data for all stakeholders; (2) redesign the spill database and report forms to be event based instead of location-based since a blockage may cause overflows at several locations; and (3) evaluate and develop indices of collection system performance to be used in California. A total of 129 stakeholders representing industry trade groups (e.g., Central Valley Clean Water Association), current enrollees, and environmental advocacy organizations (e.g., Baykeeper) registered for the Data Review Committee. Work products and progress of the group can be reviewed at the Groups Google site (<http://groups.google.com/group/ssodata-review-committee>).

- **California Emergency Management Agency (Cal EMA) Coordination**

A meeting was held with Cal EMA staff on March 4, 2010 to discuss statewide spill notification procedures in relation to the SSS WDRs. State Water Board staff gained information on how the SSO notification procedures can be streamlined in the update of the SSS WDRs.

- **Local Health Department Coordination**

Local Health Department staff was solicited to provide input on revisions to the SSS WDRs via a survey form that State Water Board staff distributed through the California Conference of Directors of Environmental Health, Land Use Committee.

In all, 341 comments in the 22 categories listed in Table 1 were received from the two staff public meetings, a workshop with Regional Water Quality Board (Regional Board) staff, a coordination meeting with California Emergency Management Agency (Cal EMA), solicited comment letters, and a survey of local health department staff.

Of all comments received, comments in the “WDRs Review and Update Timing” category were the only category of comments that were not included in the sample questions distributed to initiate comment solicitation.

The most significant issues raised from the comments received on the draft revisions to the SSS WDRs fall into the following categories:

- 1) **Private Laterals:** Should agencies be required to report sewage spills from private laterals when they become aware of them?
- 2) **Operator Certification:** Should collection system operators be certified?
- 3) **Notification:** Should required notification of SSO events by telephone be streamlined to reduce the number of parties to be notified and eliminate duplicative spill notifications and should enrollees be required to certify, within 24 Hours, to their Regional Water Board that they made the notification call?
- 4) **De-minimis Spill Volume:** Should small volume SSOs be exempt from notification and reporting requirements?
- 5) **Private Collection Systems:** Should private collection systems be subject to the SSS WDR?
- 6) **Prohibitions:** Should the SSS WDRs prohibit all SSOs, not just those that reach surface water or create a nuisance?

Comment Category	# Comments
Private Laterals	50
WDR Review and Update Timing	41
Miscellaneous Comments	27
Enforcement	23
Operator Certification	21
Notification	19
Sewer System Management Plans	18
CIWQS SSO Report Module	17
De-minimis Spill Volume	17
Questions	17
Education and Outreach	13
Reporting	13
Data review Committee	12
Private Collection Systems	11
Prohibitions	8
WDR Interpretation	8
Combined Collection Systems	7
WDR - NPDES	6
Sampling	4
Seasonal Facilities	4
Wastewater Treatment Plant Spills	4
GIS Maps	1
Total	341

**Table 1 – SSS WDR Review & Update Comment Categories and Counts**

- 7) **WDRs-NPDES:** Should the order be a National Pollutant Discharge Elimination System (NPDES) Permit or Waste Discharge Requirements (WDRs)?
- 8) **Sewer System Management Plans:** Should the requirements for Sewer System Management Plans be modified?

During the adoption process for the SSS WDRs in 2005-2006, many of the issues reflected in comments for this review and update were also prominent and formed a nexus of issues that shaped the current form of the SSS WDRs.

## **SUBSTANTIVE COMMENTS AND STAFF RECOMMENDATIONS**

A brief summary of comments received in the categories noted above and staff recommendations for addressing them in the SSS WDRs update are provided below by comment category.

### **PRIVATE LATERALS**

Commenters suggested that:

- (1) The SSS WDRs should be updated to require mandatory reporting of private lateral sewage discharges (PLSDs);
- (2) PLSD reporting should remain voluntary; and
- (3) The option of reporting PLSDs, voluntary or otherwise, should be removed from the WDRs.

Based on data from the San Diego Regional Water Board, where PLSD reporting has been mandatory, and a study of Orange County PLSDs occurring from 2002 through 2006:

- There are likely as many PLSDs as SSOs;
- The total volume of sewage from PLSDs is about 5% of the total volume of sewage from SSOs; and
- A PLSD event has the potential to cause similar impacts to surface waters as an SSO event.

In addition, the fact that PLSD spills are loosely associated with the reporting collection system has created disincentives for enrollees to report PLSDs and, indirectly, disincentives for enrollees to maintain ownership of laterals.

To get a better picture of the magnitude of private lateral spills in California, to better identify collection systems with systemic issues with private laterals, and to level the field of enrollee spill reporting, State Water Board staff (hereinafter “staff”) has revised requirements in the SSS WDRs to mandate reporting of PLSDs when enrollees become aware of them. This is an alternative to keeping or eliminating voluntary reporting provisions. In addition, staff is streamlining the PLSD reporting form, adding features to allow batch upload of spills to CIWQS functionality, and making changes to the California Integrated Water Quality System (CIWQS) SSO Reports module to clarify that these spills are not from enrollee-owned sewer pipes.

## **OPERATOR CERTIFICATION**

Commenters suggested that the SSS WDRs:

- (1) Should be updated to require certification of collection system operators; and
- (2) Should not be updated to do this.

Comments stated that collection system performance improves when certified operators are employed, but issues of union bargaining, compensation, and cost and availability of training may be significant.

Staff recognizes that collection system operator certification can improve collection system performance and SSS WDRs compliance. However, staff has decided to not add operator certification requirements to the draft SSS WDRs at this time. Staff does not have data fully supporting the need to require collection system operator licensing; the State Water Board does not have the resources to develop and implement a licensing program for collection system operators; and the increased costs of certifying collection system operators or employing certified operators may become an economic burden to small and disadvantaged communities.

## **NOTIFICATION**

Commenters suggested that the SSS WDRs spill notification requirements:

- (1) Should be simplified, because they are burdensome; and
- (2) Should be made more stringent.

Health and Safety Code section 5411.5 requires the local health department to be contacted directly for all spills that reach surface water. Water Code section 13271, however, established the Office of Emergency Services (OES) (now Cal EMA) as the point of contact for reporting sewage spills. Water Code section 13271 requires that “reportable amounts” of spilled sewage, defined in the

California Code of Regulations Title 23, section 2250 as 1,000 gallons or more of sewage, be reported to Cal EMA. Subsequently, Cal EMA must notify the Regional Water Board and the local health department.

The current MRP for the SSS WDRs requires notification of Cal EMA, the local health department, and the Regional Water Board for any spill amount.

Staff is proposing in the revised MRP to eliminate the duplicative notifications to the Regional Water Boards and local Health Departments, and to require that only Cal EMA be notified when spills to surface water of any volume occur. In addition, staff would also pursue a rulemaking to modify California Code of Regulations Title 23, section 2250 to state that a “reportable amount” is any amount of sewage spilled to surface water.

In terms of the two hour notification call required for spills that reach or may reach surface waters of the state, staff modified this requirement in the MRP to be consistent with Water Code section 13271 by adding the conditions under which the two hour notification time line applies as follows:

...the Enrollee shall, as soon as possible, but not later than two (2) hours after (A) that person 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 California Emergency Management Agency (Cal EMA).

This change will help resolve issues regarding meeting the two hour notification requirement where site access, lack of phone service, and/or response activities result in delayed (i.e., over two hours) spill notification calls. This will allow enrollees to better prioritize spill response based on specific conditions of the spill and/or spill site. With the current requirement that the notification call be made in two hours, enrollees may, in some cases, have to forgo immediate corrective actions to abate a spill in order to make the notification call on time which may result in overall greater impacts to public health and the environment than if corrective actions were taken immediately.

The requirement to certify within twenty-four hours to the Regional Water Board that Cal EMA was notified was also removed in the draft SSS WDRs based on comments from Regional Water Board staff in some regions indicating that this was not necessary since Cal EMA notifies them immediately when they receive a spill report. Note that individual Regional Water Boards may impose additional notification and reporting requirements in their regions.

## **DEMINIMIS SPILL VOLUME**

Commenters suggested that the SSS WDRs should be updated to either significantly simplify or eliminate notification and reporting requirements for low volume spills.

All spills from collection systems are relevant since they are failures that prevent proper system functioning. In addition, they provide valuable information regarding the physical condition and adequacy of collection system operation and maintenance.

Currently, Category 1 SSOs are defined as spills of any volume to surface water or a drainage channel, a discharge of any volume to a storm drain that is not fully captured and, spills 1,000 gallons or more regardless of spill destination. Category 2 SSOs are defined as all other SSOs.

In the interest of public health and the environment, staff has retained the requirement that all spills be reported in the revised MRP for the SSS WDRs. In addition, staff has retained requirements that enrollees provide notification for spills of any volume that reach surface water. To address issues raised regarding the resources required to provide notification and reporting for small volume spills, staff has revised the spill report forms to streamline the reporting requirements for all SSOs. Staff has streamlined the reports by reducing data entry and by providing the capability to batch upload all Category 2, Category 1, and PLSD spills to CIWQS. In addition, revisions to the SSS WDRs notification requirements set forth under the "Notification" category above will simplify notification and reduce the time required for notification for all spills.

## **PRIVATE COLLECTION SYSTEMS**

With respect to requiring private collection systems to be enrolled under the SSS WDRs, commenters recommend:

- (1) That the SSS WDRs should be amended to require private collection systems to be covered under the WDRs; and
- (2) That the SSS WDRs should not be amended to do this.

Private collection systems include satellite systems connected to enrollee collection systems (e.g., shopping malls, private gated communities, mobile home parks) and other private collection systems that have NPDES or WDR permitted treatment systems. Currently, some spills from private collection systems, where the private collection system is connected to a collection system enrolled in the SSS WDRs, are voluntarily reported as PLSDs by enrolled collection system staff.

Regulating private collection systems will bring equity to the SSO Reduction Program because it would be regulating public and private collection systems with an even hand. Regulating private collection systems will also resolve issues with federal facility participation in the SSS WDRs.

Staff has revised the SSS WDRs to require coverage of private collection systems since spills from private systems appear to be as prevalent as spills from publicly owned systems and including private collection systems will bring equity to the program. Staff has revised the SSS WDRs by adjusting the WDRs enrollment applicability criteria to be based on mileage of sewer pipe owned and the magnitude of peak daily discharge from the system. The proposed applicability requirements also affect public enrollees by relieving some of the smallest and most fiscally challenged collection system agencies from the requirements of the SSS WDRs. SSS WDRs enrollment applicability criteria have been revised as follows:

1. Applicability Criteria and Deadlines for Application – All public and private entities that currently own sanitary sewer systems within the State of California meeting both of the following two applicability criteria must apply for coverage under this General Permit within six (6) months of it's adoption. Additionally, public and private entities that acquire sanitary sewer systems meeting both of the two applicability criteria noted below or whose sanitary sewer systems are expanded in size such that they will now meet both of the two applicability criteria noted below, after the date of adoption of this General Permit, must apply for coverage under this General Permit at least three (3) months prior to operation of those facilities.

Applicability Criteria:

- (a) The sanitary sewer system has a connected system of pipes greater than one mile in contiguous length, and
- (b) The sanitary sewer system collects and conveys, on any single day, more than 25,000 gallons per day of untreated or partially treated wastewater to a publicly or privately owned treatment facility or sanitary sewer system.

For the purpose of establishing applicability for enrollment on the basis of flows, either the measured peak daily flow rate or calculated peak daily flow rate based on industry accepted peak wastewater generation rates for land uses in the sanitary sewer system service area may be used.

2. Enrollees who own multiple sanitary sewer systems meeting the above applicability criteria and that are not physically connected are required to enroll each distinct sanitary sewer system separately under this General Permit if they are managed as distinct assets in the form of separate sanitation districts, under separate operations and maintenance and/or capitol improvement budgets, or are otherwise managed as distinct and separate sanitary sewer systems.

3. Where an Enrollee owns at least one sanitary sewer system meeting the applicability criteria in (1) above in addition to sanitary sewer systems with connected systems of pipes less than one mile in contiguous length that are not physically connected to their enrolled sanitary sewer system, the enrollee is required to comply with the requirements of this General Permit for those sanitary sewer systems under one mile in contiguous length and manage them under a Sanitary Sewer Management Plan.

## **PROHIBITIONS**

Commenters suggested that the SSS WDRs should be amended to prohibit all SSOs, not just those to surface waters and those that create a nuisance.

SSO data collected to date indicates that spills that do not reach surface water are high frequency but low volume (i.e., 87% of reported SSOs have not reached surface water and account for 18% of the total reported volume of wastewater spilled, whereas 13% of SSOs reach surface water and account for 82% of the total reported volume of wastewater spilled). As this data clearly demonstrates, the highest risk spills have been covered by the explicit prohibitions in the SSS WDRs as originally adopted in May 2006.

To eliminate confusion regarding what constitutes a prohibited spill; staff has adjusted the prohibition and added definitions. Specifically, staff changed the prohibition from prohibiting discharges to “waters of the United States” to a prohibition against spills to “surface waters of the state” where “surface waters of the state” have been defined as any surface water body, including saline waters, within the boundaries of the state. “Surface waters of the state” do not include groundwater.

## **WDRs vs. NPDES**

Commenters recommended:

- (1) Adopting the SSS WDRs as a National Pollutant Discharge Elimination System (NPDES) permit under the federal Clean Water Act;
- (2) Adopting the SSS WDRs as a two-tiered WDRs and NPDES permit; and
- (3) Re-adopting the SSS WDRs as only WDRs.

### NPDES Permit

With respect to recommendation #1, past court decisions addressed the states’ and the United States Environmental Protection Agency’s (U.S. EPA) ability to regulate discharges that are “potential” under an NPDES permit and have

affirmed that an NPDES permit cannot regulate “potential” discharges. Because not all SSOs reach or result in a discharge to waters of the United States, not all SSOs would require an NPDES permit or violate the NPDES permitting requirements. Therefore, an NPDES permit can not be issued to all collection system owners in the state.

The U.S. EPA is developing national regulations for SSO notification, reporting, and collection system asset management. When the U.S. EPA adopts national requirements for sanitary sewer systems, the State Water Board may be required to adopt the SSS WDRs as an NPDES or two-tiered WDRs and NPDES permit.

#### Two-Tiered WDRs and NPDES Permit

With respect to recommendation #2, a two-tiered WDRs and NPDES permit would require Enrollees that have had at least one SSO that has reached waters of the U. S. to seek coverage under the NPDES permit. Enrollees that have never had any SSO that reached waters of the United States would be required to seek coverage under the WDRs. When an Enrollee covered under the WDRs reports an SSO that has reached waters of the U. S., the Enrollee would have to switch coverage from the WDRs to the NPDES permit.

Under this permitting scheme, the issue of “potential” discharges associated with the NPDES permit would be avoided since only agencies that have a demonstrated history of at least one discharge to waters of the United States would be required to seek coverage under the NPDES provisions of the permit.

This is an untested regulatory scheme because NPDES permits have not historically regulated satellite collection systems that are not owned or operated by a POTW. In addition, to date the U.S. EPA has not implemented a national program for regulation of satellite collection systems under the NPDES program; however, U.S. EPA has and continues to work on such national requirements for sanitary sewer systems.

The San Francisco Bay Regional Water Quality Control Board has issued collection system permits to agencies with satellite collection systems connected to the East Bay Municipal Utility District regional collection system that contain both WDR and NPDES provisions. These include Clean Water Act and Porter Cologne prohibitions, Federal standard conditions, and require compliance with the SSS WDRs.

In all, approximately 35% of Enrollees reported spills that reached surface water. So, under the two-tiered permit proposal, approximately 35% of current enrollees would be subject to an NPDES permit.

Advantages of adopting the SSS WDRs as a two-tiered WDRs and NPDES permit include:

- This will simplify enforcement somewhat by allowing the State Water Board to cite Water Code section 13385 in enforcement actions, allowing

a lower burden of proof for spill enforcement, and allowing for the imposition of higher monetary penalties.

- This change would allow for third-party (e.g., U.S. EPA, citizens, NGOs) lawsuits to not only address Clean Water Act violations for discharges to waters of the United States as is currently provided for but also for violations of the notification, reporting, and SSMP development provisions of the NPDES permit.

Issues with adopting the SSS WDRs as a two-tiered WDRs and NPDES permit include:

- An NPDES permit would prohibit spills to waters of the United States whereas the proposed WDRs revisions would prohibit spills to surface waters of the state which is a broader prohibition covering a wider range of water bodies in the state.
- The two-tiered WDRs and NPDES permit would be more complex and require more staff resources to implement. These additional staff resources would be better utilized towards improving the current Sanitary Sewer Overflow Reduction Program and conducting enforcement of the SSS WDRs.

Additional staff resources required to manage a two-tiered permit would include, but not be limited to: ensuring each collection system is properly enrolled under the correct permit type (i.e., WDRs or NPDES) and enrollments are transitioned from WDRs to NPDES when NPDES permit triggers occur. In addition, Enrollees may challenge being transitioned into the NPDES permit based on self reported spill data. This may require more staff resources to make findings in specific cases that discharges to waters of the United States actually occurred.

- Allowing the U.S. EPA to develop the NPDES program for collection systems first and then adapting to the federal program will result in less confusion and potential back-tracking compared to the state forging NPDES policy in this area and having to adapt later to national requirements that may differ from adopted state requirements.

### WDRs

For recommendation #3, the SSS WDRs would be re-adopted as WDRs. This is the form of the sanitary sewer systems permit the SSO Guidance Committee and State Water Board determined at the time of original adoption in 2006 would best accomplish the goals of the SSO Reduction Program.

Advantages of adopting the SSS WDRs as WDRs include:

- The proposed WDRs revisions would prohibit spills to surface waters of the state which is a broader prohibition covering a wider range of water bodies in the state than an NPDES permit which would limit the prohibition to spills to waters of the United States.
- Porter-Cologne covers all existing and proposed waste discharges that could affect the quality of state waters thereby avoiding the issue of “potential” discharges associated with application of an NPDES permit. In addition, WDRs under Porter-Cologne can address both protection of water quality as well as the prevention of public nuisance associated with waste disposal (*Id.* §13263). There is no equivalent NPDES provision to address a prohibition against creating nuisance conditions.
- The SSS WDRs have been well established over the past four years and are functioning as WDRs. The SSO reduction Program has been implemented as WDRs and keeping the program under the proposed revised WDRs will result in minimal confusion and disruption to the SSO Reduction Program and its enrollees. In comparison, the NPDES permitting of satellite collection systems is a relatively new and untested mechanism for regulating sanitary sewer systems.

Issues with adopting the SSS WDRs as a WDRs include:

- Enforcement of WDRs under the Porter Cologne Water Quality Control Act requires a higher burden of proof for spill enforcement than an NPDES permit and WDRs do not allow for the imposition of monetary penalties as large as an NPDES permit.
- WDRs do not allow for third-party (e.g., U.S. EPA, citizens, NGOs) lawsuits to address violations of the notification, reporting, and SSMP development provisions of the WDRs.

However, State Water Board staff has conducted and continues to conduct enforcement for participation under the current SSS WDRs both in terms of failure to provide spill reports, no-spill certifications, and SSMP development and for failure to enroll for coverage under the WDRs.

Staff believes that the current SSS WDRs are functioning well as WDRs and that administering a two-tiered WDRs and NPDES permit would create administrative complexities because agencies would be subject to different orders depending upon their history of SSOs and, agencies would need to be transitioned from WDRs to an NPDES permit when the NPDES triggers occur. The staff time required to constantly maintain agencies under the correct form of sanitary sewer systems permit would be better utilized in further improving the SSO reduction Program and conducting enforcement. There is also uncertainty in what U.S. EPA will propose as national NPDES sanitary sewer system requirements. Adopting an NPDES permit component at this time may result in the need to change the permit again when the U.S. EPA implements an NPDES permit for

satellite sanitary sewer systems. This could result in more confusion amongst enrollees and Water Board staff and increased staff resources to change the permit again. Therefore, staff prefers to wait until after U.S. EPA develops regulations for sanitary sewer systems before changing the SSS WDRs to an NPDES permit or two-tiered WDRs and NPDES permit.

## **SANITARY SEWER MANAGEMENT PLANS**

Commenters recommended:

- That Sewer System Management Plan (SSMP) requirements be changed and/or clarified in the revised WDRs;
- That SSMP requirements should not be changed at this time; the State Water Board should wait until two to three years after the SSMPs are fully implemented to make any changes; and
- That extension of the SSMP development and implementation timelines should be provided in the revised WDRs.

Commenters recommend the following changes to the SSMP requirements:

- Changing and clarifying the Fats Oils & Grease Control Program requirements;
- Adding requirements to address unsecured access to collection system components and require access vulnerability assessments;
- Requiring inclusion of information regarding use of automated monitoring in the collection system;
- Clarifying the System Evaluation and Capacity Assurance Plan (SECAP) requirements and deadlines;
- Requiring that a private sewer lateral inspection and replacement program be included in the SSMP;
- Requiring risk assessment and mitigation planning for sewer force main failures;
- Requiring satellite and receiving collection systems to plan for management of peak wet weather flows;
- Requiring schedules for asset replacement and development of design and performance standards for sewer rehabilitation and replacement;
- Requiring financial analysis and planning that ensures adequate funding of the SSMP;
- Clarifying schedule requirements for internal audits; and
- Changing the ordering of required SSMP elements in the WDRs.

Development and implementation of SSMPs by SSS WDRs enrollees has just been completed statewide and these plans need to be allowed to be fully implemented so their effectiveness and shortcomings can be identified. Dramatically changing SSMP requirements before full implementation could lead to confusion regarding the SSMP requirements amongst enrollees, the public,

and Water Board staff. However, some of the issues raised in the comments noted above and issues observed with several SSMPs reviewed during collection system audits have been addressed in the revised WDRs.

SSMP items addressed in the revised WDRs include adjusting audit and governing board approval schedules, clarifying items required to be included in the SSMP, addition of more prescriptive language in relation to requirements for training of operators and contractors, addition of more prescriptive language in relation to addressing O&M and CIP budgets and funding sources in the SSMP, and revisions to the requirements for SSMP submission to the State Water Board. Additional items will be addressed by staff through the development of guidance documents and fact sheets.