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United States Environmental Protection Agency Pacific Southwest Region (Region 9)



Clean Water Act Compliance Evaluation Inspection Sewerage Agency of Southern Marin Wastewater Collection System WWTP NPDES No. CA

Date of Inspection: October 30, 2007

Inspection team: Fatima Ty, EPA

Max Kuker, PG Environmental

Facility representatives: Stephen Danehy

Report prepared by: Max Kuker, PG Environmental

Date prepared: February 11, 2008

Background

On 10/30/2007, USEPA Region 9 and its contractor inspected the Sewerage Agency of Southern Marin's (SASM) sanitary sewer system located in Mill Valley, California. Spills and sanitary sewer overflows (SSOs) from the sewer system are prohibited by the Clean Water Act. Additionally, spills and SSOs from SASM's sewer system are prohibited by Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, WQO No. 2006-0003. SASM is an enrollee under the Statewide General Waste Discharge Requirements. Additionally, SASM is required to comply with the San Francisco Bay Regional Water Quality Control Board's July 2005 Section 13267 of the California Water Code letter that establishes earlier deadlines for submittal of Sewer System Management Plan (SSMP) components than the SSMP deadlines present in WQO No. 2006-003. As such, SASM must comply with both the Section 13267 letter and WQO No. 2006-003 requirements.

The primary purpose of the inspection was to document the history of sewage spills, determine the adequacy of the SASM's spill response and prevention programs, sewer maintenance activities and the accuracy and reliability of their spill reporting procedures. SASM's representative during the inspection was Mr. Stephen J. Danehy. Mr. Danehy is responsible for overseeing the operation and maintenance of the sewage collection system for SASM and is also the General Manager of the SASM Wastewater Treatment Plant (WWTP). Mr. Danehy stated that approximately 10-15 percent of his 40-hour work week is spent overseeing the collection system while the remaining time is spent as General Manager of the WWTP. Mr. Max Kuker from PG Environmental, LLC led the inspection accompanied by Ms. Fatima Ty from USEPA Region 9.

SASM was formed in 1979 to consolidate the wastewater collection, treatment, reclamation and disposal interests of the residents in Southern Marin County. SASM is comprised of six member agencies including: City of Mill Valley, Tamalpais Community Services District, Almonte Sanitary District, Alto Sanitary District, Homestead Valley Sanitary District, and Richardson Bay Sanitary District. Each of the six agencies owns and operates their own separate collection system that feeds into SASM's collection system for transportation to the WWTP. All collected sewage is conveyed to the SASM WWTP for treatment and discharged to Raccoon Strait. Discharges from the WWTP are regulated under NPDES Permit No. CA0037711. Although SASM was formed almost 30 years ago, Mr. Danehy stated that SASM only assumed ownership of the main trunk lines in 2004.

Under section 301(a) of the Clean Water Act (CWA), it is unlawful for any person to discharge any pollutant from a point source into "waters of the United States" except in compliance with a NPDES permit. SASM's NPDES permit does not authorize the discharge of sewage spills. Therefore, any sewage spill from SASM's collection system that flows to "waters of the United States" constitutes a violation of the Clean Water Act.

SASM's collection system serves a population of approximately 28,000 people. SASM owns and operates approximately 5 miles of sewer, consisting mostly of gravity sewer. SASM recently completed (2-3 months prior to the inspection) a large force main project (Rosemont Force Main Project) to alleviate known and long standing capacity issues in the southern portion of the system. The project included the installation of a new 12" High Density Polyethylene (HDPE) line. SASM owns and maintains a total of 6 lift stations (Camino Alto, Ricardo Road, Trestle Glen, Salt Works, Sutton Manor, and Rosemont).

At the time of the inspection, the SASM WWTP estimated its average dry weather flow at approximately 2.5 million gallons per day (mgd) and their average peak wet weather flow at approximately 17-20 mgd. This indicates a wet weather peaking ratio of approximately 6.8:1 to 8:1. It was stated that SASM charges the member agencies based on the number of connections within their system rather than by flow.

SASM currently and historically has had an un-written agreement with Roto-Rooter and Roy's Sewer Service (Roy's) for system maintenance and spill response. This agreement is for 'on-call' sewer maintenance, blockage, and spill response. The extent of sewer maintenance completed by Roto-Rooter and/or Roy's (contractors) was unclear due to a lack of documentation. According to the "Sewage Overflow Report – What to do when the Public Calls" reference sheet (Attachment 1), if an individual calls to report an overflow or blockage that is within the SASM collection system, they are first directed to Mr. Danehy to notify him of the spill and are then directed to call Roto-Rooter or Roy's to investigate and correct the problem. The contractors then provide documentation to Mr. Danehy regarding the volume of the spill, the cause of the spill, and the corrective actions taken to mitigate the spill, along with an invoice for their services. The invoices are entered and tracked via a spreadsheet briefly describing the invoice, the service provided, and amount charged. SASM does not have any staff or equipment for spill response, therefore, spill response is performed entirely by the contractors.

Attached to this inspection report are the following documents:

- Attachment 1 SASM's "Sewage Overflow Report What to do when the Public Calls" brochure
- Attachment 2 examples of "Post-it" type notes used to document possible sewage spills
- Attachment 3 "Sewerage Agency of Southern Marin Sanitary Sewer Overflow Report"
- Attachment 4 SASM WWTP Daily Operational Log for Wednesday, January 5, 2005
- Attachment 5 Roto-Rooter Invoice No. M-36292, dated December 22, 2005

Findings

1. Occurrence of spills. Discharges to waters of the United States without a permit are prohibited under Section 301(a) of the Clean Water Act. Additionally, as per Part C.1 Prohibitions of the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, WQO No. 2006-0003, any spill that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited. SASM reported three sewage spills in reporting year 2005 (includes December 2004) and zero sewage spills in calendar year 2006 from its collection system. According to the reports, all three spills in the 2005 reporting period were a result of Inflow and Infiltration (I&I) caused by a large storm event in December 2004. Combined, the three spills resulted in approximately 7,800 gallons reaching waters of the State and 0 percent of the spill volume was recovered. The 2005 spills were reported to the San Francisco Bay Regional Water Quality Control Board via the Regional Water Board's SSO website and within SASM's Annual Report. Based on 5.5 miles of sewer in the SASM system, the spill rate was 54.5 spills/100 miles/yr in 2005 and was 0 spills/100 miles/yr in 2006.

Since May 2007, SASM has been required to report all sewage spills from its collection system to the State Water Resources Control Board via the California Integrated Water Quality System (CIWQS) website. Following the inspection, the EPA inspector reviewed the CIWQS website which indicated that SASM had not reported any spills since the website became active in May 2007.

Table 1. Reported Spills for 2005 from the SASM Collection System

Incident Date	SSO Estimated Volume (gal)	SSO Estimated Volume Recovered	SSO Destination	Cause of SSO
12/27/2004	600	0	STORM DRAIN	INFLOW & INFILTRATION
12/27/2004	1200	0	STORM DRAIN	INFLOW & INFILTRATION
12/27/2004	6000	0	STORM DRAIN	INFLOW & INFILTRATION

2. Failure to maintain adequate records for reported spills. As per Part B.5 of Monitoring and Reporting Program (MRP) No. 2006-0003-DWQ, SASM is required to maintain records of all SSOs. Observations made during the inspection indicated that there was an overall lack of sufficient documentation regarding past spills. During the interview portion of the inspection, Mr. Danehy stated that a "Sewerage Agency of Southern Marin Sanitary Sewer Overflow Report" was to be used by SASM staff for documenting spill notifications and for the contractors to document spill information. During the review of the spill documentation, the inspectors observed that only "Post-It" type notes (examples provided as Attachment 2) were used to document calls from the community or

other entities notifying SASM of possible spills. These "Post-It" notes were used exclusively prior to October 2007 and there were no additional records or documentation of past spills available at the SASM office. Subsequent review of Roto-Rooter invoices at the Mill Valley City Hall and the SASM WWTP Daily Operating Log did not provide additional documentation of past spills. Therefore, very little documentation was available to confirm the accuracy of the information submitted to the Regional Water Board regarding spills prior to October 2007. In October 2007 SASM initiated the use of the "Sewerage Agency of Southern Marin Sanitary Sewer Overflow Report" (Attachment 3) to document reports of possible sewage spills; however Mr. Danehy stated this form had yet to be fully implemented as the "Post-It" type notes are still used on occasion.

SASM personnel entered relevant and required SSO information directly in to the state's reporting website without retaining supporting documentation. Records of service calls, receipts from contractors, and SSO reports were maintained individually rather than compiled together as a traceable document. Overall, the SSO documentation was judged to be poor and unreliable.

3. Possible failure to report past SSOs. State law requires sewage collection agencies to report large sewage spills (greater than 1,000 gallons) or spills that reach waters to the State of California, Office of Emergency Services (OES). Additional reporting requirements have been established by the Regional and State Water Boards. In 2004, the San Francisco Bay Regional Water Quality Control Board issued a 13267 letter that required collection agencies to electronically report spills to the Board and to submit annual spill reports. Beginning in May 2007, the Regional Board reporting requirements were superseded by the Statewide General Waste Discharge Requirement for Sanitary Sewer Systems (WQO No. 2006-0003) that requires electronic spill reporting to the State Board. This inspection included an examination of spill data reported to the Regional and State Boards. In addition, Part A. of MRP No. 2006-0003-DWQ, requires the District to report the occurrence of spills. During the review of the SASM Daily Operational Log and Roto-Rooter invoices, two instances of failure to report spills may have been identified.

The SASM Daily Operational Log for Wednesday, January 5, 2005 contains an entry at 12:55 PM that states that Roto-Rooter was called to a reported stoppage and that Roto-Rooter had an estimated time of arrival of 1 hour (Attachment 4). The inspectors could not locate or identify additional information regarding this incident (including a Roto-Rooter invoice) or that this incident was reported to the Regional Water Board.

Roto-Rooter Invoice No. M-36292, dated December 22, 2005, for apparent emergency response to an overflowing manhole at job address "Wisteria" in Mill Valley was billed to and paid for by SASM (Attachment 5). The job description listed on the invoice states "(Emergency) Checked overflowing manhole. Checked all manholes on Almonty & Miller. Very High Tide." The description

also contains additional illegible information. The Cause of Stoppage is listed as "Other" and "Tide" is hand written into the "Cause of Stoppage" box.

Neither the San Francisco Bay Regional Water Quality Control Board's SSO website nor the State Board's CIWQS website has a record of these potential SSOs. SASM needs to investigate these incidents and report to EPA their findings and clarify if these incidents were in fact spills and whether they were reported.

- 4. Failure to contain and mitigate the impacts of an SSO. As per Part D.3 of WQO No. 2006-0003, in the event of a spill, the enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO. SASM does not have the equipment to respond to and contain spills and mitigate the impacts. SASM relies on a verbal agreement with contractor's to respond, contain and mitigate all spills. The average distance between SASM and Roto-Rooter in Novato is approximately 18 miles; therefore, it is unlikely that a response time would be less than 25 minutes. Other factors could lengthen the time considerably, e.g., traffic on US 101. According to the facility representative, the response times of the contractors vary but it typically takes approximately 1-hour. In addition, there is no written or verbal agreement between SASM and the contractors regarding adequate or expected response procedures or maximum response times. The lack of equipment and formal written agreements does not appear to be in compliance with Part D.3 requirements, and SASM appeared ill prepared to respond to a spill, catastrophic or otherwise.
- 5. Lack of adequate I&I reduction. SASM has experienced several spills in December 2004 that were a direct result of I&I. Mr. Danehy stated that the SASM WWTP had experienced problems with total suspended solids (TSS) during periods of heavy rainfall and with conductivity during periods of high tides. These problems are typically associated with I&I issues within a collection system. Mr. Danehy stated that an I&I study was completed by Black and Veatch for all member agencies in 1983/1984 and that almost all the SASM sewer lines had been televised, but that little remedial action had occurred based on the results of the study. Mr. Danehy stated that a project is underway to summarize current I&I reduction measures through the member agencies and to identify and evaluate potential I&I projects throughout the WWTP's collection system as a whole. To complete this task, SASM has recently contracted with T-Engineering to complete a new I&I study which will also include all of the member agencies.

SASM has taken steps to address the amount of wet weather flow through their system due to I&I in contributing collection systems. As previously mentioned, the Rosemont Force Main project was completed to alleviate a back up of sewage in the southern portion of the collection system, but it does not appear that adequate measures have been taken to ensure that the contributing collections systems reduce the amount of I&I entering the SASM system and ultimately the SASM WWTP. Mr. Danehy stated that SASM also has plans to increase the capacity of the SASM WWTP wet weather equalization ponds. Mr. Danehy

stated that SASMs budget includes \$20,000 for FY 2006/2007 and \$380,000 for FY 2007/2008 for equalization basin improvements and restoring the existing equalization ponds to their original elevation as the ponds have settled over years due to bay mud.

Summary

Overall, SASM appears to have relatively infrequent spills from its collection system, but several items including recordkeeping, reporting, spill response, and I&I reduction need improvement. SASM personnel appear to be attempting to implement changes that will address the need for better recordkeeping and reporting and is encouraged to continue to improve these processes.

From the information gathered during the inspection it appears the routine and event driven maintenance of the SASM's sanitary sewer collection system has been and will continue to be contracted to Roto-Rooter and Roy's. The use of the contractor is indicative of a reactive program rather than proactive program and response times tend to be slower. Additionally the details provided in work orders to the contractor, records of work performed by the contractor and spill response and reporting were judged to be minimal.

In addition, SASM is encouraged to develop and lead a program that promotes coordination and communication (i.e., sharing of program information) between member agencies that contribute to the SASM WWTP. Although it is recognized that each agency is a separate entity, many procedures, public outreach, forms, and data tracking approaches could be shared to ease the burden on each of the member agencies and facilitate consistency. Since the member agencies are relatively small in size, all of the agencies would appear to greatly benefit from the sharing of information such as spill response forms and procedures. For example, a majority of the member agencies rely on Roto-Rooter or Roy's Sewer Service to respond to sewer overflows or spills. A majority of these member agencies have developed and provided their own forms and procedures and have provided them to their contractor to be completed during spill response. Therefore, the contractor must determine which form and procedures to follow depending on which agency requests the response. The completion and accuracy of the reports provided by the contractors would likely increase if standardization occurred.

SASM must take steps to decrease I&I entering their sewer system, especially from member agencies. SASM is encouraged to initiate a more aggressive approach to I&I reduction for themselves and their member agencies and to continue to sponsor studies and activities focused on I&I. Focused and sustained efforts to reduce I&I and ultimately reduce wet weather peaking ratios will benefit both SASM and the member agencies by reducing or eliminating capacity-related SSOs, unnecessary and costly WWTP upgrades, and the need for blending and/or bypasses at the WWTP.

SASM "Sewage Overflow Report – What to do when the Public Calls" brochure

Sewage overflow reports What to do when the public calls

1. Get the specific location of the overflow -

Name, address and contact telephone number, if possible.

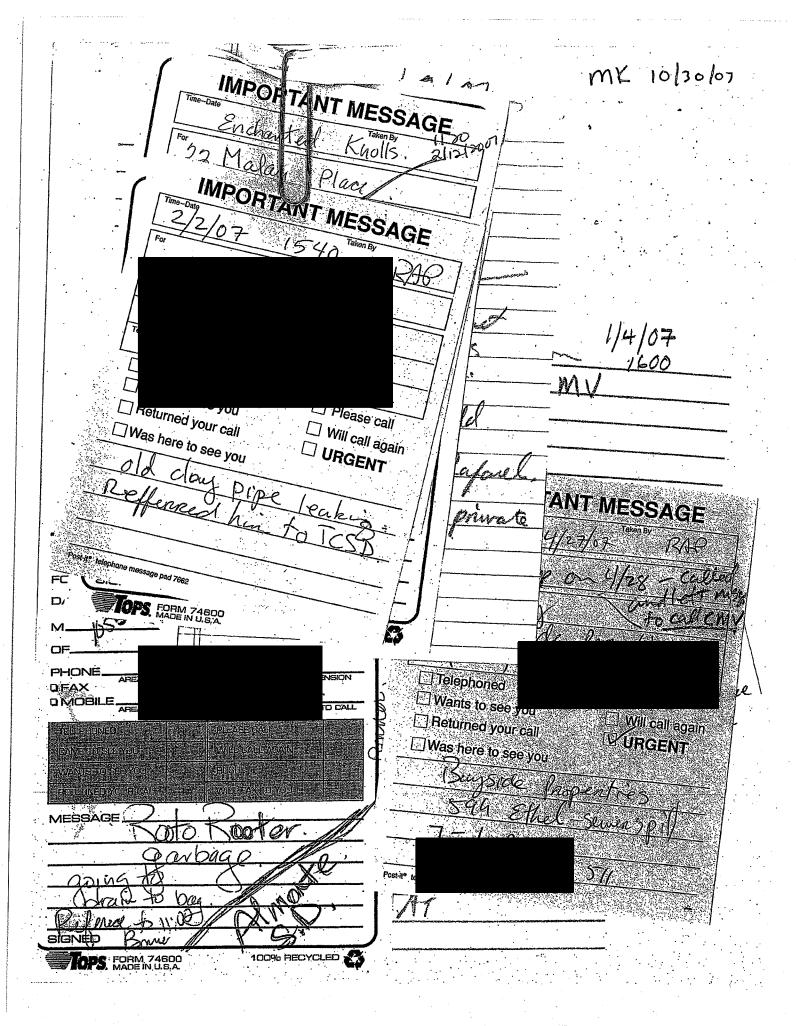
- 2. Determine responsible agency.
 - 2.1. Use SASM sewer map.
 - ☐ If it appears to be a SASM spill.
 - □ Immediately contact Danehy by cell phone.
 - Steve:
 - Field confirm that it is a SASM spill (use detailed SASM sewer map)
 - Call Roto Rooter and/or Roy's to clear the blockage.
 - Whoever can come quickest.
 - Roto Rooter: 388-2740
 - Roy's Sewer Service: 456-2320

IF NOT SASM

- 2.2. Use AAA agency boundary map to determine responsible Member Agency.
 - Refer caller to responsible agency.
 - Almonte Sanitary District: 388-8775
 - Alto Sanitary District: 388-3696
 - Belvedere, City of: 435-3838
 - Alto Sanitary District: 388-3696
 - Homestead Valley Sanitary District: 388-4796
 - Marin Co. Department of Public Works: 499-6528
 - Mill Valley Department of Public Works: 388-4033
 - Richardson Bay Sanitary District: 388-1345
 - Sanitary District No. 2: 927-8801 (Bracken & Keene)
 - Sanitary District No. 5: 435-1501
 - Sausalito, City of: 289-4100
 - Sausalito/Marin City Sanitary District: 332-0244
 - Tamalpais Community Services District: 388-6393
- 3. Complete "SASM Sanitary Sewer Overflow Report".

If the caller does not want to make another phone call to the Member Agency, then contact Roto Rooter or Roy's Sewer Service with the information you have recorded. Indicate on the Report Form you called the emergency service for the caller.

Examples of "Post-It" type notes used to document possible sewage spills



Sewerage Agency of Southern Marin Sanitary Sewer Overflow Report

Sewerage Agency of Southern Marin SANITARY SEWER OVERFLOW REPORT

FOR OFFICE/DISPATCH USE		. '
DATE CALL RECEIVED: 10 24 07 TIME: 1	AM/PM (Circle One)	
RECEIVED BY: RECEIVED BY:	(
CALLER'S NAME:		٠.
CALLER'S PHONE NO:	-	٠
SPILL LOCATION: 930 W. California		
CROSS ST: LOTWY		
LOCATION MAP COORDINATES: LAT: (Reference: SASM Map) DEG. MIN. SEC	LON: DEG. MIN. SEC.	
(UDISDICTION 1) A /A	District/SASM Member Agency)	
SPILL START TIME: 7. AM/PM (Circle One) TIME		
TIME CREW DISPATCHED:AM/PM (Circle One)	NOTIFIED BY:	
NAMES OF CREW MEMBERS DISPATCHED:		
DESCRIPTION OF COMPLAINT: Spurage Cound	in side wand	
Explained that is probably her	oroblem but	
gave her The HVSD phode #	just in case.	

FIELD REPORT (FO					
DATE ARRIVED AT			AM/F	PM (CIRCLE ONE)	
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TIME OVERFLOW S					
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ESTIMATED OVERF		TION OTHER:			•
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PIPE MATERIAL:		•			
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· ·				. •	
		:			
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SPILL RESPONSE AC RESTORED FLOW CLEANED UP BY R CONTAINED A POR	EMOVING SOLI			· .	
☐INSPECTED SEWE					
OTHER					
SPILL TO CREEK OR	BAY:	YES 🗆 NO 🗆			• .
HEALTH WARNINGS I			·		
NOTIFIED COUNTY E	NVIRONMENTAL		7) YES 🗌 NO 🗀]	
CREEK/BAY SAMPLES		YES 🗆 NO 🗆			
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LOCATION OF SAMPL			•		
SAMPLES ANALYZED	FOR: DISS	OLVED OXYGEN		•	
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ESTIMATE AMOUNT S	PILLED TO CRE	EK OR BAY:	GALS	•	
NAME OF IMPACTED (CREEK OR BAY:				
PICTURES TAKEN:	•	YES 🗌 NO 🗌			

REGULATORY AGENCIES NOTIFIED:

◆SPILLS GREATER THAN 1,000 GALLONS MUST BE REPORTED TO THE STATE OFFICE OF EMERGENCY SERVICES AND TO THE REGIONAL BOARD WITHIN 24 HOURS.

OES (800) 852-7550	YES NO NO		· · · · · · · · · · · · · · · · · · ·	CONTROL#
RWQCB (510) 622-2312	CONTACT NAM YES NO CONTACT NAM	DATE/TIME		
COMMENTS:	•			
	•			
REPORT COMPLETED BY:	/PRINT N	ANAEN	_DATE:	

SASM WWTP Daily Operational Log for Wednesday, January 5, 2005

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Roto-Rooter Invoice No. M-36292, dated December 22, 2005

(ALC GATACLO (SEOSIE) PLUMBERS

USIOMER:

OB ADDRESS

P.O. Box 3415

San Rafael, CA 94912:3416 (416) 898-2700 • Fax (416) 896-6074 Ucense #288461 Federal ID # 94-172489

M/c 10/30/07

INVOICE 1-18-36292

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21:51 FAX

NAME BOOK

"中国 经营业

ROTO ROOTER BAGSHOWER BAGSHOWER RICHEN SINK

MAINLINER LOCATING

LINE REPAIR / INSTALL ST. IRENOHLESS REPLACE. CAMEL / HYDRO DUMP RES

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DESCRIPTION

PAYMENT RECEIVED 1012

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CREDIT CARD / AUTH. #.

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PYCELLENIT

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