

Attachment A
to
Administrative Civil Liability
Complaint No. R2-2017-1024
Sewer Authority Mid-Coastside

**Factors in Determining
Administrative Civil Liability**

**SEWER AUTHORITY MID-COASTSIDE
FEBRUARY 28 TO MARCH 3, 2017, GRANADA FORCE MAIN
SANITARY SEWER OVERFLOW (SSO)
HALF MOON BAY, SAN MATEO COUNTY**

The State Water Resources Control Board Water Quality Enforcement Policy (Enforcement Policy) establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors required by Water Code sections 13327 and 13385, subdivision (e). Each factor in the Enforcement Policy and its corresponding category, adjustment, and amount for the alleged violation, is presented below. The Enforcement Policy is at:

http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf

ALLEGED VIOLATION

From February 28 to March 3, 2017, the Sewer Authority Mid-Coastside (Discharger) had a sanitary sewer overflow (SSO) that discharged a total of 357,000 gallons (gal) of untreated sewage to the Pacific Ocean due to a force main failure, resulting in a violation of Discharge Prohibition E of Order No. R2-2012-0061, National Pollution Discharge Elimination System (NPDES) No. CA0038598 (SAM Permit).¹ Of the 357,000 gal, the Discharger recovered 13,000 gallons and returned it to its collection system.² The SSO discharged to an unnamed creek located in Half Moon Bay and ultimately into the Pacific Ocean, a water of the United States. Discharge Prohibition III.E of the SAM Permit prohibits any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States.

In its April 14, 2017, SSO Technical Report, the Discharger stated the failure in the “Granada” force main was most likely caused by internal cavitation as well as the age of the sewer pipe and abrasive wear due to grit.

For the above violation, the Discharger is subject to administrative civil liabilities pursuant to Water Code section 13385, subdivision (a)(2).

¹ In an August 10, 2017, email, the Discharger provided its 357,000 gallon SSO volume calculation based on flows from the Portola and San Pablo Pump Stations, measured flow from Frenchman’s Creek, and treatment plant influent flow.

² California Integrated Water Quality System certified SSO report for Event ID 833531.

PENALTY FACTOR	ASSESS- MENT	DISCUSSION
Harm or Potential Harm to Beneficial Uses for Discharge Violations	3	Harm or Potential for Harm — Above Moderate An “above moderate” potential for harm is selected for the SSO because the impacts fit the Enforcement Policy definition for above moderate harm (“impacts are observed or likely substantial, temporary restrictions on beneficial uses [e.g., less than five days]...”). The San Francisco Bay Water Quality Control Plan designates the following beneficial uses of the Pacific Ocean: industrial service supply (IND), commercial and sport fishing (COMM), shell harvesting (SHELL), marine habitat (MAR), fish migration (MIGR), preservation of rare and endangered species (RARE), fish spawning (SPWN), wildlife habitat (WILD), water contact recreation (REC1), noncontact water recreation (REC2), and navigation (NAV). The discharge of untreated wastewater caused a three-day beach closure, which was a temporary restriction of the REC1 beneficial use. ³ At a minimum, the three-day beach closure was a four-day restriction on the water contact recreation beneficial use, meeting the definition for an above moderate factor.
Physical, Chemical, Biological, or Thermal Characteristics (Degree of Toxicity)	3	Degree of Toxicity — Above Moderate An “above moderate” degree of toxicity is selected because the sewage discharged was not treated, potentially toxic to aquatic organisms, and contained bacteria at levels exceeding human health standards. Therefore, the discharge posed an above moderate risk to potential receptors.
Susceptibility to Cleanup or Abatement	1	Susceptibility to Cleanup — No Less than 50 percent of the SSO was amenable to cleanup or containment because, once it discharged to the ocean, the ocean current prevented cleaning up or containing the untreated sewage.
Per Gallon Factor for Discharge Violations	0.60	Deviation from Requirement — Major Discharge Prohibition E of the SAM Permit prohibits discharge of untreated sewage to waters of the United States. By discharging to waters of the United States, the discharge rendered this prohibition ineffective in its essential functions. This represents a “major” deviation from the requirement based on Table 2 of the Enforcement Policy.
Adjustment for High Volume Discharges	\$2/gal	The Enforcement Policy allows for an adjustment of liability from \$10 per gallon for high volume discharges, provided the adjustment “...does not result in an inappropriately small penalty.” The Enforcement Policy recognizes sewage spills can be very large and recommends an amount of \$2 per gallon for large sewage spills. The discharge totaled 344,000 gallons, which is a high volume. Application of an adjusted liability of \$2 per gallon is appropriate for the SSO because the volume of the SSO was high and it does not result in an inappropriately small penalty.
Per Day Factor	0.60	Deviation from Requirement — Major Discharge Prohibition E of the SAM Permit prohibits discharge of untreated or partially-treated wastewater to waters of the United States. By discharging untreated sewage to waters of the United States, the Discharger rendered this prohibition ineffective in its essential functions. This represents a “major” deviation from the requirement based on Table 3 of the Enforcement Policy.
Days	4	The SSO occurred over four days, from February 28, 2017, through March 3, 2017.
Statutory Max Per Day	\$10,000	The statutory maximum per-day liability is \$10,000 per Water Code section 13385, subdivision (c)(1).

³ San Mateo County Environmental Health July 13, 2017, email.

PENALTY FACTOR	ASSESSMENT	DISCUSSION
Initial Liability	\$435,600	The initial liability is determined as follows: Initial Liability = [(per gallon factor) x (per gallon liability) x (gallons discharged to surface water minus 1,000 gallons)] + [(per day factor) x (maximum per day liability) x (days of SSO duration)] = [(0.6) x (\$2/gallon) x (343,000 gallons)] + [(0.6) x (\$10,000/day) x (4 days)].
Adjustments for Discharger Conduct		
Culpability	1.2	A higher than neutral culpability factor is appropriate because the Granada force main that failed is approximately 34 years old and is past its expected life expectancy of 25 years. ⁴ In addition to the age of the pipe, the Discharger has been aware of the occurrence of internal cavitation and grit wear in the failed force main since November 2009. ⁵ The Discharger should have known that the force main's service life was well-expired. The Discharger should have replaced it before allowing the force main to fail.
Cleanup and Cooperation	1	A neutral cleanup and cooperation factor is appropriate because the Discharger cooperated during investigations, timely reported the SSO, and timely submitted the required SSO Technical Report.
History of Violations	1	A neutral history of violations factor is appropriate because the Regional Water Board has not previously taken formal enforcement against the Discharger for SSOs.
Total Base Liability	\$522,720	Each factor relating to the Discharger's conduct is multiplied by the initial liability for each violation to determine the total base liability. Total Base Liability = (435,600) x (1.2) x (1) x (1)
Ability to Pay and Continue in Business	1.0	The ability of a discharger to pay the recommended administrative civil liability is determined by its revenues and assets. The Discharger's General Budget (for Fiscal Year 2016/17 is \$5.1 million. ⁶ The Discharger receives nearly all its revenue from its three member agencies and remaining revenue comes from direct service fees and miscellaneous revenue. Based on the overall budget and sources of revenue for the Discharger, the Discharger has the ability to pay the proposed liability amount and stay in business.
Economic Benefit	\$179,000	Pursuant to Water Code section 13385, subdivision (e), civil liability, at a minimum, must be assessed at a level that recovers the economic benefit, if any, derived from the acts that constitute a violation. As documented in this complaint, the Discharger's failure to address structural issues in the Granada force main is likely to have contributed to the pipe failure resulting in the SSO. The BEN financial model provided by the U.S. Environmental Protection Agency was used to compute the total economic benefit of noncompliance. ⁷ Cost estimate and other assumptions are detailed in the attached Table 1. The general assumptions used to determine the economic benefit are summarized below. The SSO identified in this complaint is likely the result of significant internal deterioration of the force main, a condition the Discharger has been aware of since at least November 2009, as documented in the SAM Intertie Pipeline System Review and Evaluation Report that SRT Consultants prepared for the Discharger in December 2009. In the report, SRT Consultants describes the cause of a force main failure resulting in a SSO on November 1, 2009, as "an internal degradation mechanism, most likely [from] sediment impingement or scouring." The 14-inch-diameter ductile iron force main was installed in 1979, with an estimated service life

⁴ Discharger's April 14, 2017, SSO Technical Report

⁵ December 2009 SRT Consultants SAM Intertie Pipeline System Review and Evaluation Report

⁶ <http://samcleanswater.org/documents>

⁷ U.S. EPA's Economic Benefit Model (BEN) calculates a discharger's economic benefit of noncompliance from delaying or avoiding compliance with environmental regulations. See <https://www.epa.gov/enforcement/penalty-and-financial-models> for additional information.

PENALTY FACTOR	ASSESSMENT	DISCUSSION
		<p>of 25 years. Therefore, the force main had already exceeded its service life at the time of the 2009 SSO.</p> <p>The cost of replacing 7,100 linear feet of the Granada force main will exceed \$771,000 (with an estimated completion date of October 2018, nearly 9 years after the November 2009 SSO identified structural deficiencies and 14 years beyond the force main's estimated service life).⁸ By delaying construction and replacement, the Discharger has enjoyed an economic benefit. Using the penalty payment date as the date of the hearing of November 8, 2017, the total economic benefit of delayed action was approximately \$179,000. Changes to the payment date, or the compliance dates (construction completion), would affect the total economic benefit.</p>
Other Factors as Justice May Require		
Staff Costs	None	For this case, no Regional Water Board staff costs are assessed.
Maximum Liability	\$3.47 M	Water Code section 13385, subdivision (c) allows up to \$10,000 for each day in which the violation occurs, and \$10 for each gallon exceeding 1,000 gallons that is discharged and not cleaned up. The maximum liability is based on 344,000 gallons and four days of violation.
Minimum Liability	\$196,469	Water Code section 13385, subdivision (e) requires that, at a minimum, the economic benefit received as a result of the violation be recovered. The Enforcement Policy (p. 21) states that the total liability must be at least 10 percent higher than the economic benefit, "so that liabilities are not construed as the cost of doing business and the assessed liability provides meaningful deterrent to future violations." Therefore the minimum total liability associated with the economic benefit was determined to be \$196,469.
Final Liability	\$522,700 (rounded)	The final liability amount is the total base liability after appropriate adjustments for ability to pay, economic benefit, other factors as justice may require, maximum liability, and minimum liability. In this case, the final liability is the same as the total base liability.

⁸ December 2009 SRT Consultants SAM Intertie Pipeline System Review and Evaluation Report

Table 1 – Economic Benefit Analysis

Economic Benefit Analysis Sewer Authority Mid-Coastside													
Compliance Action	Capital Investment				One-Time Non-Depreciable Expenditure				Non-Compliance Date	Compliance Date	Penalty Payment Date	Discount Rate	Benefit of Non-Compliance
	Amount	Basis	Date	Delayed?	Amount	Basis	Date	Delayed?					
Design - Segment 1 & 2					\$ 164,050	ECI	4/14/2017	Y	11/1/2009	5/31/2017	11/8/2017	4.10%	\$ 29,629
Construction - Segment 1 & 2	\$ 212,379	CCI	1/1/2015	Y					11/1/2009	10/31/2017	11/8/2017	4.10%	\$ 52,581
Design - Segment 3 & 4					\$ 164,050	ECI	4/14/2017	Y	11/1/2009	4/30/2018	11/8/2017	4.10%	\$ 32,393
Construction - Segment 3 & 4	\$ 231,118	CCI	1/1/2015	Y					11/1/2009	10/31/2018	11/8/2017	4.10%	\$ 64,005
Income Tax Schedule: Municipality USEPA BEN Model Version: Version 5.6.0 (April 2016) Analyst: Bryan Elder Date/Time of Analysis: 8/16/2017 13:59 Total Benefit: \$ 178,608 Assumptions: <ol style="list-style-type: none"> 1 Design cost estimate for Segments 1 and 2 of the pipeline replacement project was estimated by SRT Consultants to be \$164,050 in a proposal dated 4/14/17. 2 Construction cost estimate for Segments 1 and 2 is detailed on the following page. Construction costs are assumed to be a capital investment, with a service life of 50 years (standard for HDPE pipe). 3 Design costs are indexed using the Employment Cost Index (ECI) as the expenses are assumed to be comprised mainly of labor. 4 Construction costs are indexed using the Construction Cost Index (CCI) as expenses are primarily associated with construction activities. 5 Design cost estimate for Segments 2 and 3 of the pipeline replacement project was assumed to be the same as that proposed by SRT Consultants for Segments 1 and 2. 6 Construction cost estimate for Segments 3 and 4 is detailed on the following page. 7 Cost estimate date for design activities is based on the date of the proposal submitted to SAM by SRT Consultants - 4/14/17. 8 Cost estimate date for construction activities is assumed to be 1/1/2015 based on the 2015 RSMMeans Heavy Construction Cost Data resource used in this analysis. 9 Non-compliance date is estimated to be 11/1/2009, when a leak occurred on the Granada force main that was determined to be due to an "internal degradation mechanism". As the ductile iron force main was originally installed in 1979 with a 25 year expected service life (2004 estimated replacement), this is considered a conservative estimate. 10 Compliance date for the design of segment 1 and 2 is assumed to be as proposed by SRT Consultants as May 2017 (5/31/2017 chosen). 11 Compliance date for the construction of segment 1 and 2 is assumed to be as proposed by SRT Consultants as October 2017 (10/31/2017 chosen). 12 Compliance date for the design of segment 3 and 4 is assumed to be six months following completed construction of segments 1 and 2 (4/30/18 chosen). 13 Compliance date for the construction of segment 3 and 4 is assumed to be six months following completed design (10/31/2018 chosen). 14 Penalty payment date is assumed to be 11/8/17 for computational purposes. 													