

Penalty Calculation Methodology

A. Enforcement Policy Background

The State Water Resources Control Board (State Water Board) adopted the current version of the [Water Quality Enforcement Policy](#)¹ in 2017 with the goal to protect and enhance the quality of the waters of the State by defining an enforcement process that addresses water quality problems in the most fair, efficient, effective, and consistent manner. According to the Enforcement Policy, enforcement is a critical component in creating the deterrence needed to encourage the regulated community to anticipate, identify, and correct violations. Formal enforcement should always result when a non-compliant member of the regulated public begins to realize a competitive economic advantage over compliant members of the regulated public. Formal enforcement should be used as a tool to maintain a level playing field for those who comply with their regulatory obligations by setting appropriate civil liabilities for those who do not.

California Water Code (Water Code) section 13385(e) requires the San Diego Water Board to consider several factors in determining administrative civil liability, including the nature, circumstances, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and other matters that justice may require. The Enforcement Policy incorporates these factors in a methodology for determining administrative civil liability in instances of noncompliance. This document describes the methodology and factors determined by the San Diego Water Board's Prosecution Team (Prosecution Team) for each of the alleged violations presented below.

B. SSO Background

The City of Oceanside (City) owns and operates its own municipal sanitary sewer system. The City's sewer system consists of approximately 460 miles of gravity sewer pipeline, 135 miles of force mains, 33 lift stations, and two wastewater treatment plants: the La Salina Wastewater Treatment Plant and San Luis Rey Water Reclamation Facility (SLRWRF). The SLRWRF treats approximately 9.5 million gallons per day (MGD) of sewage from Oceanside, Vista, Fallbrook and Rainbow Municipal Water District. There are also approximately 200 miles of private sewer laterals which connect

¹ A copy of the 2017 Enforcement Policy is available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/040417_9_fi nal%20adopted%20policy.pdf

to the City's sewer system. Treated wastewater from the SLRWRF is discharged into the Pacific Ocean via the City's Oceanside Ocean Outfall.

A significant rain event occurred on April 5-10, 2020. During that period, the City received a total of 5.75 inches (as measured at the Oceanside number 27039 weather station); equating to a 50-year, 5-day storm (using the NOAA Atlas 14 Point Precipitation Frequency Estimate tables, available through NOAA's Hydrometeorological Design Studies Center at <https://hdsc.nws.noaa.gov/hdsc/pfds/>). The City received the majority of that rain (i.e. 3.09 inches) between April 9 and 10, classifying this period as a 25-year, 24-hour storm.

On April 10, 2020, two high volume sanitary sewer overflows (SSOs) occurred from the City's collection and treatment system due to hydraulic overloading and flooding associated with storm water flows. The Buena Vista Lift Station (BVLS) was flooded due to Buena Vista Creek overtopping its banks, overtopping the berm surrounding the BVLS, and rendering the lift station inoperable. This resulted in 1,121,000 gallons of raw sewage discharging into Buena Vista Creek and Buena Vista Lagoon as reported by the City in its 45-day technical report.

Hydraulic overloading also overwhelmed the SLRWRF resulting in a discharge of 820,000 gallons of raw sewage to Windmill and Pilgrim Creek on April 10, 2020 (see Figure 1). Hydraulic overloading occurs when the incoming wastewater flow rate exceeds the system's designed flow rate. When this happens, the system can't treat the wastewater effectively.

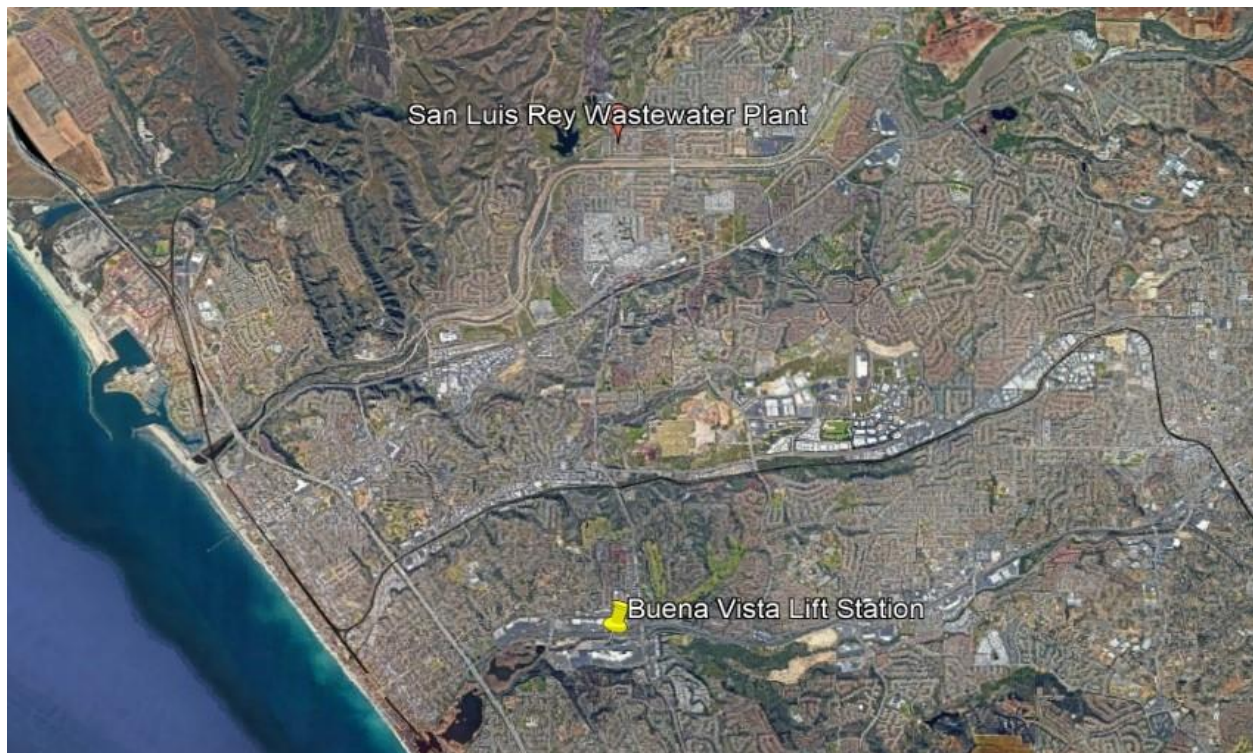


Figure 1. SSO Locations

On August 5, 2020, the San Diego Water Board issued Notice of Violation No. R9-2020-0202 and Investigative Order No. R9-2020-0203 to the City for alleged violations associated with the BVLS SSO and issued Notice of Violation No. R9-2020-0210 and Investigative Order No. R9-2020-0211 for the SSO at the SLRWRF. The Investigative Orders required the City to submit information pertaining to the SSOs no later than September 19, 2020.

On September 9, 2020, the City requested a 60-day extension of the due date for the Investigative Order responses. The additional time was requested primarily to expand on the bioassessment analysis conducted by Weston Solutions and to receive a response from the State of California Department of Fish and Wildlife (CDFW) for a Public Records Act (PRA) request made on August 31, 2020. Additionally, the City cited staff availability constraints related to the COVID-19 pandemic that caused some internal delays in compiling the required information. On September 14, 2020, the San Diego Water Board granted an extension to the due date of the Investigative Order responses to November 18, 2020.

On November 17, 2020, the City requested an additional 45-day extension for the Investigative Order responses, citing the volume of documents provided by the City of Carlsbad and other public record requests. The San Diego Water Board did not grant the second extension request. On December 24, 2020, the City indicated that as the Investigative Order responses were being finalized a staff member became ill and could not finalize the responses. On February 23, 2021 and April 1, 2021 the San Diego Water Board requested status updates on the responses to the Investigative Orders. The City then submitted a Technical Report covering both investigative orders on April 9, 2021, almost one year after the SSOs, and 4 months late from the required submittal date.

C. Buena Vista Lift Station SSO

Buena Vista Lift Station SSO Site Background

The BVLS site is operated by the City and consists of two separate lift stations. The Upper Buena Vista Lift Station (Upper Station) is the primary station used to handle everyday sewer flows. The Lower Buena Vista Lift Station (Lower Station) is used as an emergency overflow station. The Lower Station is operated when higher than normal flows are received or when maintenance is being performed on the Upper Station. The BVLS is directly adjacent to Buena Vista Creek and approximately 0.6 miles upstream of Buena Vista Lagoon, a sensitive waterbody with important ecological functions. Buena Vista Creek and Buena Vista Lagoon are waters of the United States (U.S.).

Buena Vista Creek is in the Carlsbad Watershed Management Area, Buena Vista Creek hydrologic subarea (904.21). As designated in the Water Quality Control Plan for the San Diego Basin (Basin Plan), Buena Vista Creek supports many beneficial uses, including agricultural supply (AGR), industrial service supply (IND), rare, threatened, or endangered species habitat (RARE), water contact (REC-1) and non-contact recreation (REC-2), warm freshwater habitat (WARM), and wildlife habitat (WILD). Buena Vista

Creek is listed on the Clean Water Act Section 303(d) list for the following pollutants: Benthic Community Effects, Indicator Bacteria, Nitrogen, Phosphorus, Total Dissolved Solids, Toxicity, Selenium and various pyrethroid insecticides (Bifenthrin, Cyfluthrin, Cypermethrin, Permethrin).

Buena Vista Lagoon supports many beneficial uses, namely biological habitat of special significance (BIOL), estuarine habitat (EST), marine habitat (MAR), rare, threatened, or endangered species habitat (RARE), water contact (REC-1) and noncontact recreation (REC-2), warm freshwater habitat (WARM) and wildlife habitat (WILD). Because the receiving waters support multiple ecologically important beneficial uses, and in accordance with San Diego Water Board Resolution No. R9- 2017-0030, the San Diego Water Board has identified Buena Vista Creek and Buena Vista Lagoon as key areas and a priority for protection within the region. Buena Vista Lagoon is listed on the Clean Water Act Section 303(d) list for the following pollutants: Indicator Bacteria, Nutrients, Sedimentation/Siltation and Toxicity.

Buena Vista Lift Station Regulatory Framework

Clean Water Act section 301 and Water Code section 13376, prohibit the discharge of pollutants to surface waters except in compliance with a National Pollutant Discharge Elimination System permit.

The San Diego Basin Plan Waste Discharge Prohibition No. 1 states “[t]he discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.”

The San Diego Basin Plan Waste Discharge Prohibition No. 9 states “[t]he unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.”

The City is enrolled in Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (Statewide General Order), which regulates all entities that own or operate a sanitary sewer system greater than one mile in length that collects or conveys untreated or partially treated wastewater to a publicly owned treatment facility in the State of California. The City is also enrolled in San Diego Water Board Order No. R9-2007-0005, *Waste Discharge Requirements for Sewage Sanitary sewer Agencies in the San Diego Region* (Regional General Order), which also regulates owners and operators of sanitary sewer systems.

Prohibition C.1 of the Statewide General Order states that “[a]ny SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.” Prohibition B.1 of the Regional General Order states that “The discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant is prohibited.”

Each of the violations alleged herein give rise to liability under Water Code section 13385. Violation #1 also gives rise to liability under Water Code section 13350; however, because this Complaint seeks to impose liability pursuant to Water Code section 13385, it does not propose liability pursuant to section 13350.

SSO Causes and City's Response

The April 10, 2020 rain event caused catastrophic flooding in the area of the Buena Vista Creek watershed. Flooding in the Creek closed all eastbound and westbound lanes on California State Route 78 at the El Camino Real overpass. At the time Buena Vista Creek was flooding, storm water overtopped the berm surrounding the facility and began filling in the BVLS (see Figures 2 & 3). When the creek breached the berm, stormwater flooded the dry well and shorted out the pumps, rendering the lift station inoperable.

Due to the road closures during the flood, collections staff arrived on site at 10:30 am on April 10 and at this point, the station was nearly underwater. It was difficult to access the station and assess the damage due to multiple road closures.

The staff immediately began mobilizing trash pumps and ordering equipment to respond to the flood damage. According to readings from the SCADA system, the last pump at the BVLS was submerged at 10:36 am on April 10, 2020. City staff immediately began setting up three 6" trash pumps and one 8" trash pump and began pumping flood waters and untreated sewage to Buena Vista Creek when the storm subsided enough for transfer over the bank, back to the creek.

In response to the flooding of the lift station, the City attempted to conduct bypass operations. The bypass to Encina Wastewater Treatment plant was finally established on April 11, 2020 at 4:15 pm, under an existing contract for portable pumping equipment, pipes, hoses and 24-hour staffing to operate the pumps. The delay pumping out the facility and instituting the bypass resulted in a spill of 1,121,000 gallons of sewage.

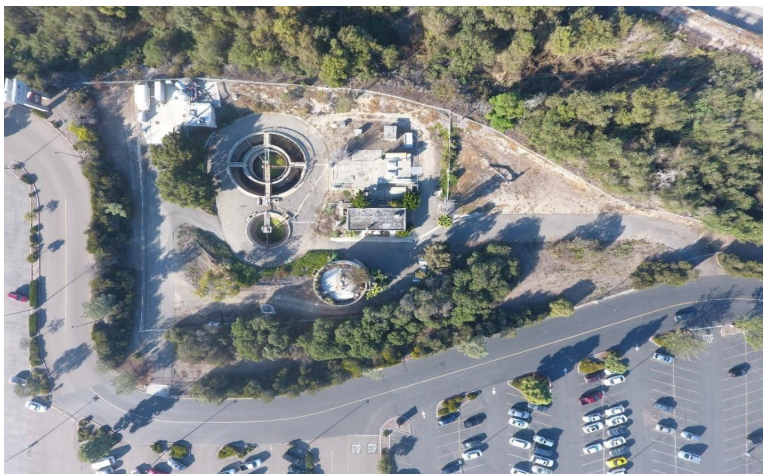


Figure 2. Buena Vista Lift Station prior to April 2020 storm.



Figure 3. Buena Vista Lift Station April 10, 2020.



Figure 4. Dense vegetation within Buena Vista Creek, upstream of Buena Vista Lagoon

The City contends in its response to the Investigative Order that if the dense perennial vegetation (see Figure 4) and associated sediment build up in Buena Vista Creek had been maintained to promote adequate flow, the Creek would not have overtopped and the resulting SSO could have been avoided. The City does not have jurisdiction over maintenance activities within Buena Vista Creek. Buena Vista Creek is managed by the City of Carlsbad through the Buena Vista Creek Channel Maintenance District. The City of Carlsbad currently maintains 11.2 acres of Buena Vista Creek from Jefferson Street bridge east, to the South Vista Way bridge.

The permits² issued by some of the resource agencies (i.e. CA Department of Fish and Wildlife, CA Coastal Commission) have restrictions on the amount of creek clearing that is allowed each year; they also specifically prohibit dredging sediment buildup in the creek bed. Vegetation removal is only allowed using hand tools.

D. Violation 1: Failure to Prohibit the Discharge of 1.121 Million Gallons of Untreated Sewage to Waters of the U.S from the Buena Vista Lift Station.

Ten-Step Penalty Calculation Methodology

Step 1. Actual Harm or Potential for Harm for Discharge Violations

For discharge violations, the Enforcement Policy procedure consists of calculating a value using a three-factor scoring system to quantify: (1) the degree of toxicity of the discharge; (2) the actual harm or potential harm to beneficial uses; and (3) the discharge's susceptibility to cleanup or abatement. Application of the three-factor scoring system to is set forth below.

Factor 1: Degree of Toxicity of the Discharge = Above Moderate (3)

The Enforcement Policy requires an evaluation, using a scale from zero to four (negligible to significant risk), of the degree of toxicity of the discharged material. The evaluation considers the physical, chemical, biological, and/or thermal characteristics of the discharge and the risk of damage the discharge could cause to the receptors or beneficial uses. A score of three, or "above moderate" degree of toxicity, is appropriate when the discharged material poses an above-moderate risk or a direct threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material exceed known risk factors or there is substantial threat to potential receptors). "Potential receptors" are those identified considering human, environmental and ecosystem health exposure pathways.

The unauthorized discharge resulting from the SSO represented an "above moderate" risk level because untreated sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease, trash, and other pollutants known to exceed existing water quality standards. These pollutants exert varying levels of impacts to beneficial uses of the receiving waters. The high degree of toxicity in untreated sewage poses a direct threat to human and ecological receptors.

² Permits include but are not limited to: CA Department of Fish & Wildlife Section 1602 Streambed Alteration Agreement #1600-2013-0135-R5, CA Coastal Commission Coastal Development Permit # 6-13-0713

Factor 2: Potential for Harm to Beneficial Uses = Moderate (3)

The Enforcement Policy requires a determination, using a scale from zero to five (negligible to major harm), of the actual or potential harm to beneficial uses in the affected receiving waterbody. This risk may result from exposure to the pollutants or contaminants in the discharge, consistent with the statutory factors of the nature, circumstances, extent, and gravity of the violation(s). A score of three, or “moderate,” is typified by observed or reasonably expected potential impacts, but harm or potential harm to beneficial uses is moderate and likely to attenuate without appreciable medium or long term acute or chronic effects.

Under normal circumstances, the discharge of raw sewage, which contains harmful pathogens and toxic substances, could negatively affect the recreational beneficial uses of Buena Vista Creek, Lagoon, and Pacific Ocean. Elevated levels of enterococci, fecal and total coliforms were detected the week after the spill. However, because the SSO occurred during the first full month after Covid-19 related stay-at-home orders were issued by San Diego County, actual impacts of the SSO to recreational beneficial uses were most likely lowered. At that time, beaches throughout the region were closed to limit the spread of Covid-19. However, a spill of 1.121 million gallons of untreated sewage would only serve to exacerbate already existing impairments and further degrade other existing beneficial uses of the waters exposed to it.

On April 17, 2020, staff from Helix Environmental conducted a biological assessment of the BVLS spill site. The May 12, 2020 report submitted to the City included photographs taken in the vicinity of the spill, and a brief finding of no biological impact. There were no formal biological surveys taken in the vicinity of the spill or downstream of the discharge. The Helix report was included in the City’s 45 day technical report.

Subsequently, in response to Investigative Order R9-2020-0203, the City contracted Weston Solutions to evaluate the potential short and long-term impacts to Buena Vista Creek and Buena Vista Lagoon. The key findings of their April 2, 2020 report were as follows:

- “Although no formal fish surveys were conducted, based on interviews with local residents, no fish kills were observed or reported within Buena Vista Lagoon.”
- “The CRAM surveys conducted in Buena Vista Creek in 2010 and 2020, 180 meters upstream of the Jefferson St Bridge over Buena Vista Creek indicated that the creek habitat is stressed by many factors associated with urbanization. Similarly, the CRAM survey conducted in Buena Vista Lagoon indicated that many stressors common to urban wetlands are likely contributing to a similarly degraded habitat.” Although post-SSO CRAM surveys were not conducted until September 2020, the surveys did not reveal any observable long-term impacts associated with the SSO.”

- “Exceptionally high storm flows in Buena Vista Creek associated with the rain event may have provided some degree of dilution to the comingled discharge from BVLS basin, which could reduce both nutrient and fecal indicator bacteria concentrations.”
- “Although the specific residence time within Buena Vista Lagoon associated with the BVLS SSO in April 2020 cannot accurately be estimated, the fact that the Buena Vista Lagoon river mouth was open and flowing during the event likely greatly reduced ecological impacts associated with the SSO.”

The Weston report was of limited value in determining actual harm to habitats and ecosystems in the receiving waters because it was conducted almost a year after the spills and no post-spill biological surveys were performed following the SSO. Nevertheless, in consideration of some of the concepts presented above, a “moderate” potential for harm score seems appropriate since impacts to the beneficial uses of the Buena Vista Creek and Buena Vista Lagoon are reasonably expected and may attenuate without appreciable medium or long term acute or chronic effects.

Factor 3: Susceptibility to Cleanup or Abatement = 1

A score of one is assigned for this factor if less than 50 percent of the discharge is susceptible to cleanup or abatement, or if the Discharger failed to cleanup 50 percent or more of the discharge within a reasonable amount of time. A score of 1 is appropriate because none of the discharged sewage was cleaned up.

The Potential for Harm score for the April 10, 2020 Buena Vista Lift Station SSO is:

$$\text{Potential for Harm} = 3 [\text{Factor 1}] + 3 [\text{Factor 2}] + 1 [\text{Factor 3}] = 7$$

Step 2. Assessment for Discharge Violations

The Discharger’s initial liability is based on the potential for harm score from Step 1 and the extent of deviation from requirement. The deviation from requirement must be characterized as either minor, moderate, or major.

The deviation from requirement is **major** because, according to the Enforcement Policy, a major deviation from requirement occurs when the requirement was rendered ineffective (e.g., the requirement was rendered ineffective in its essential functions). The discharge of 1.121 million gallons of untreated sewage is a major deviation from the Discharge Prohibitions in statewide and regional waste discharge requirements for sanitary sewer systems, as well as Discharge Prohibitions 1 and 9 of the Basin Plan, Clean Water Act section 301, and California Water Code section 13376. The discharge of untreated sewage to waters of the state clearly causes or threatens to cause a condition of pollution, contamination, or nuisance.

The per-gallon liability assessment is the per gallon factor from Table 1 of the Enforcement Policy multiplied by the maximum per gallon amount allowed under the Water Code. Using a potential for harm score of 7 and a major deviation from requirement, the per-gallon factor from Table 1 is 0.41. Using a maximum of \$2.00 per gallon for high volume discharges as allowed by the Enforcement Policy, the initial liability assessment calculated on a per gallon basis is:

$$[\$2.00 \text{ (per gallon maximum)} \times 0.41 \text{ (per gallon factor)} \times (1,121,000 - 1,000 \text{ gallons})] = \mathbf{\$918,400}$$

The per-day liability assessment is the per day factor from Table 2 of the Enforcement Policy multiplied by the maximum per day amount allowed under the Water Code. Using a potential for harm score of 7, and a major deviation from requirement, the per-day factor from Table 2 is 0.41. The SSO started approximately at 10:36 am, April 10, 2020 and ended at 4:15 pm April 11, 2020 (1 day and 5 hours). The initial liability assessment calculated on a per day basis for this violation is:

$$[\$10,000 \text{ (per day statutory maximum)} \times 0.41 \text{ (per day factor)} \times 2 \text{ (days of violation)}] = \mathbf{\$8,200}$$

The Initial Base Liability is $\$918,400 + \$8,200 = \mathbf{\$926,600}$.

Step 3. Per Day Assessment for Non-Discharge Violations

This step is not applicable.

Step 4. Adjustment Factors

The San Diego Water Board must consider three additional factors for potential modification of the administrative civil liability amount: the Discharger's degree of culpability, the Discharger's prior violation history, and the Discharger's voluntary efforts to clean up and cooperate with regulatory authorities after the violation.

Degree of Culpability = 0.75

Lower penalties should result from accidental or non-negligent behavior, as opposed to intentional or negligent violations. The Enforcement Policy allows a multiplier between 0.75 and 1.5 to be used, with a higher multiplier for intentional or negligent behavior, and a lower multiplier for accidental or non-negligent behavior.

The main cause of the SSO at the BVLS was the flooding that occurred in Buena Vista Creek. Flooding was exacerbated by downstream channel vegetation and sedimentation issues as well as storm intensity and duration.

Additionally, upstream of the SSO location, the creek has been channelized and partially hardened, resulting in dissociation of adequate flood plain which constrains flows. The City has no jurisdiction over maintenance of Buena Vista Creek, downstream of the SSO location. The City of Carlsbad is responsible for maintaining the creek channel in the vicinity of the SSO. The City of Carlsbad has initiated efforts prior to, and after the spills to dredge the debris and vegetation in Buena Vista Creek (Buena Vista Creek Concrete Channel Maintenance Project - CIP Project No. 6619), but to date has not received the permits to do so. Due to the limited ability to conduct channel maintenance activities since 2012, vegetation in the channel has perennialized and increased in density.

In response to Investigative Order No. R9-2020-0203, the City provided a technical evaluation of the Buena Vista Creek SSO (Weston, April 2021). Dozens of land-based and aerial photographs; and video footage were reviewed to roughly estimate the flooded area using the polygon draw tool in Google Earth to make estimations of inundation on April 10, 2020 (see Figure 5).

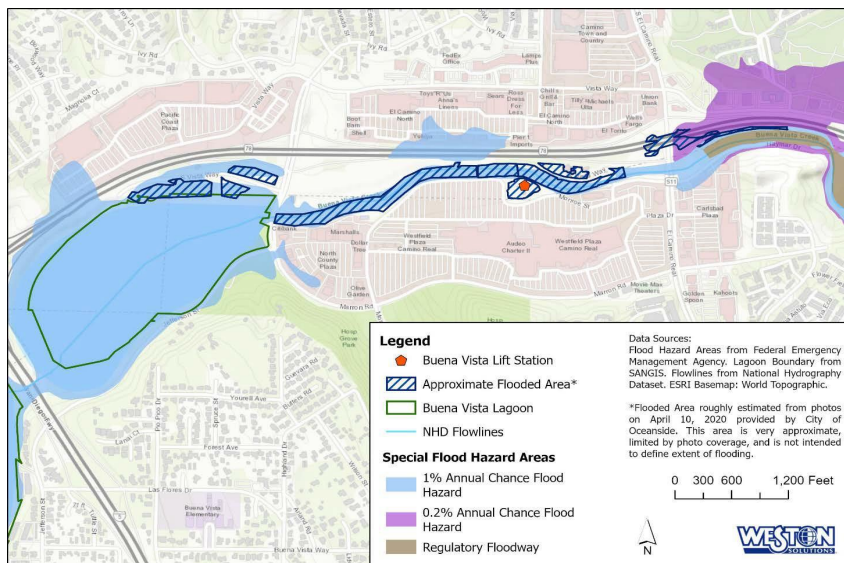


Figure 5. Buena Vista Creek lower watershed observed inundation/flooding and FEMA 100-yr flood zones overlay image

Additionally, modeling was conducted by Weston for two channel configurations. The first model used Manning’s roughness coefficients for a channel in optimal hydraulic conditions. The second model used more conservative Manning’s roughness coefficients to simulate the current conditions of the Buena Vista Creek channel. Under optimal channel conditions the modeling suggested that the creek would overflow when channel flow reached 8,500 cfs. The results from the Model 2, simulating the current highly vegetated and constricted conditions of the BVC channel, show that the surface water area reached with a flow rate of 3,000 cfs matches the estimated flood polygon generated during the storm event on April 10, 2020.

This assessment indicates that the storm event had a projected associated flow of 3,000 cfs. The modeling suggests that had the channel been adequately maintained and accumulated sediment removed, the creek would have had the capacity to accommodate the stormflows and the SSO would have been averted.

The possibility of raising the berm to protect the pump station was deemed to be infeasible by the City because it would then present a danger of flooding to private property in the nearby areas.

The City has been assigned the minimum culpability score (0.75) for this SSO because the highly vegetated and constrained condition of Buena Vista Creek was out of its jurisdiction.

History of Violations = 1.1

The Enforcement Policy states that where a discharger has prior violations within the last five years, the Water Boards should use a multiplier of 1.1. In the five years preceding the April 10, 2020 SSO, the City had a prior significant SSO. On June 15, 2015, the City became aware of a dry weather SSO from a manhole at the intersection of Mesa Drive and Garrison Street. The City reported that 540,000 gallons of raw sewage were discharged from a 24-inch gravity pipeline which had collapsed due to excessive corrosion. The City returned approximately 432,500 gallons to the sewage collection system prior to it entering receiving waters. The remaining 107,500 gallons were discharged to Loma Alta Creek and Loma Alta Slough, both waters of the United States.

This incident resulted in the San Diego Water Board issuing Order R9-2018-0159, Settlement Agreement and Stipulation for Entry of Administrative Civil Liability Order. The City agreed to pay a \$319,393 administrative civil liability. \$183,395 was payable to the State Water Cleanup and Abatement Account, and the remaining \$135,998 in administrative civil liability was suspended upon successful completion of the Garrison Creek Native Habitat Restoration Project.

Based on this information a score of 1.1 is appropriate.

Cleanup and Cooperation = 1.1

The Enforcement Policy allows a multiplier between 0.75 and 1.5 to be used to adjust the penalty to account for voluntary efforts to cleanup and/or cooperate with regulatory authorities in returning to compliance after the violation. Adjustments below or above 1.0 should be applied where the discharger's response to a violation or order is above and beyond, or falls below, the normally expected response, respectively.

The City has a compliance obligation under Investigative Order Nos. R9-2020-0203 and R9-2020-0211, as well as Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. The City's failure to provide a timely response, as required by the Investigative Orders, falls below the normally expected standard of care, so a score of 1.1 is appropriate.

Step 5. Determination of Total Base Liability Amount

The Total Base Liability Amount is determined by multiplying the initial liability by the Adjustment Factors in Step 4:

Total Base Liability Amount = \$926,600 (initial liability amount) x 0.75 (degree of culpability) x 1.1 (history of violations) x 1.1 (cleanup and cooperation)] = **\$840,890.**

Steps 6. Ability to Pay and Ability to Continue in Business

See Section G, Factors Associated With All Violations.

Step 7. Economic Benefit

See Section G, Factors Associated With All Violations

Step 8. Other Factors as Justice May Require

See Section G, Factors Associated With All Violations

Step 9. Maximum and Minimum Liability Amounts

See Section G, Factors Associated With All Violations

Step 10. Final Liability Amount

See Section G, Factors Associated With All Violations

San Luis Rey Water Reclamation Facility SSO

E. San Luis Rey Water Reclamation Facility SSO

San Luis Rey Water Reclamation Facility Site Background

The SLRWRF treats wastewater from the eastern and central portions of the City, the Rainbow MWD, and a portion of the City of Vista. Wastewater flows are allowed from the City of Vista and the Rainbow MWD through contractual relationships.

The SLRWRF consists of two plants, the East Plant (also known as Plant 1) and the West Plant (also known as Plant 2). From the headworks, flow through the SLRWRF is diverted into either Plant 1 or Plant 2. Plant 1 consists of flow equalization, primary sedimentation, biological secondary treatment by means of activated sludge, and secondary sedimentation/clarification. Plant 2 consists of primary sedimentation and biological secondary treatment by means of activated sludge and secondary sedimentation/clarification (A schematic of the SLRWRF treatment train is provided in Figure 5). The City can send the Plant 1 effluent to the effluent pump station wet well or to its tertiary treatment facility for further treatment and reuse.

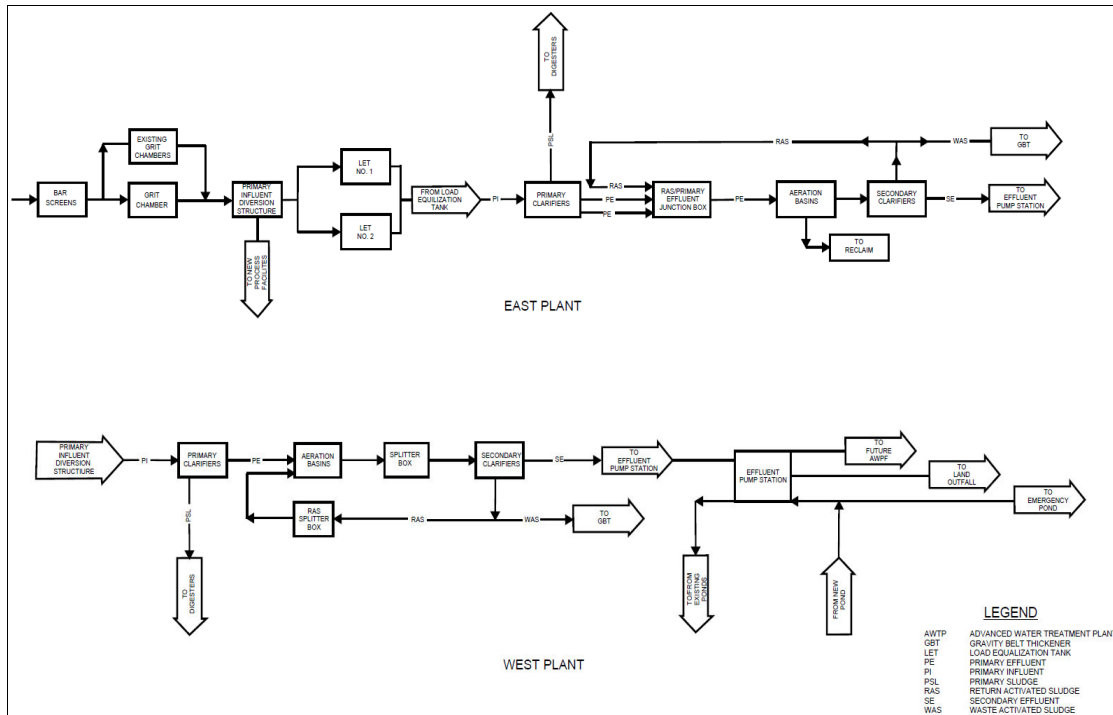


Figure 5. Flow schematic of San Luis Rey Water Reclamation Facility

The City can only send the Plant 2 effluent to the effluent pump station wet well. Plant 1 of the SLRWRF has a daily wet weather capacity of 10.7 million gallons per day (MGD), with a peak hourly capacity of 16 MGD. The SLRWRF flow limitations are due to the ability to transfer influent from the Load Equalization Tank (LET) to the Primary Influent Channel (PIC). If the peak capacity is exceeded, the LET is designed to overflow.

Pilgrim Creek and Windmill Creek (also known as Windmill Canyon) are located in the San Luis Rey River Watershed, in the Mission Hydrologic Sub Area (903.11). They are both adjacent to the SLRWRF to the east of the facility.

The Basin Plan designates the following beneficial uses for Pilgrim Creek: Contact Water Recreation (REC-1), Non-contact Water Recreation (REC-2), Agricultural Supply (AGR), Industrial Service Supply (IND), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Preservation of Biological Habitats of Special Significance (BIOL), and Rare, and Threatened, and Endangered Species (RARE).

The Basin Plan designates the following beneficial uses for Windmill Creek: Contact Water Recreation (REC-1), Non-contact Water Recreation (REC-2), Agricultural Supply (AGR), Industrial Service Supply (IND), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), and Wildlife Habitat (WILD).

San Luis Rey Water Reclamation Facility Regulatory Framework

The SLRWRF is regulated under Order No. R9-2019-0166 as amended by Order Nos. R9-2020-0190 and R9-2021-0199 NPDES No. CA0107433, *Waste Discharge Requirements for the City of Oceanside San Luis Rey Water Reclamation Facility, La Salina Wastewater Treatment Plant, and Mission Basin Groundwater Purification Facility Discharge to the Pacific Ocean through the Oceanside Ocean Outfall* (Order No. R9-2019-0166).

Discharge Prohibition III.A of Order No. R9-2019-0166 states that “The discharge of waste from the SLRWRF and/or the LSWTP not treated by a secondary treatment process and/or not in compliance with the effluent limitations specified in section IV.A of this Order, and/or to a location other than Discharge Point No. 001, unless specifically regulated by this Order or separate WDRs, is prohibited.”

Section III.D of the Order prohibits the discharge of wastewater in violation of *Water Quality Control Plan for the San Diego Basin* (Basin Plan) prohibitions listed in Attachment G of the Order.

Section VI.C.4.b-d of the Order provides operational specifications for the SLRWRF which state:

- b. The Facilities shall be protected against a 100-year storm event as defined by the San Diego County Flood Control District (FCD).
- c. The Facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the San Diego County FCD.
- d. The Facilities shall be protected against regional impacts due to climate change (e.g., sea level rise and floods).

The City’s discharge of 820,000 gallons of raw sewage on April 10, 2020, was in violation of Order R9-2019-0166, Discharge Prohibitions III.A and III.D, Clean Water Act section 301 and Water Code section 13376, which prohibit the discharge of pollutants to surface waters except in compliance with an NPDES permit. The discharge was also in violation of Basin Plan Waste Discharge Prohibition No. 1 which states “[t]he discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Codes section 13050, is prohibited” and Prohibition No. 9 which states “[t]he unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.”

San Luis Rey Water Reclamation Facility- SSO Causes and City's Response

In April 2020, Plant 2 was offline and undergoing upgrades related to the Pure Water Oceanside advanced water treatment plant project when the storm event occurred. Daily Wet Weather capacity for Plant 1 is 10.7 MGD. With both plants online, that capacity would have increased to 15.4 MGD, but Plant 2 was under construction at the time of the storm event. Peak hourly capacity has always been 16 MGD for Plant 1 due to limitations of the Load Equalization Tank (LET). Since Plant 2 was offline due to construction, 16 MGD was the peak hourly capacity of SLRWRF during the storm event. In the morning hours of April 10, hourly influent flows exceeded 24 MGD for over an hour and remained above 18 MGD for 8.5 hours.

On April 9, 2020, operations staff noticed an increase in influent flow due to the storm flows. Operations staff were concerned that the LET would not be able to handle the volume of rainwater and could become hydraulically overloaded. On April 10, 2020 staff began taking actions to prevent onsite spills. Operators turned off the sprayers to reduce hydraulic loading. Staff contacted Fallbrook Public Utility District and requested that it reduce effluent discharge through the land outfall by fifty percent to improve SLRWRF's ability to discharge secondary effluent. Effluent outfall pumps were turned on in manual to move treated water to the outfall faster.

Additionally, staff brought an additional clarifier online to increase capacity within the process. Staff shut off return activated sludge (RAS) pumps and turned on both disk filters on the tertiary system and halted solids processing. Trash pumps were also set up at the anoxic zone selector to pump into the aeration basins in case the flow from the aeration basins to the secondary clarifiers became overwhelmed.

The SLRWRF continued to see a rise in influent flow and a resulting rise in LET levels and the hydraulic profile of the plant. Staff started the Emergency Pond Storage Pump beginning at 10:40 am to pump secondary effluent to the Emergency Storage Pond (ESP). Approximately 15.85 million gallons of secondary effluent was pumped to the ESP. All of this flow was eventually recovered. Three portable pumps were installed which allowed the City to pump a total of 970,000 gallons of influent to the Plant Storage Ponds (PSP), which are normally designed to hold excess secondary effluent.

Despite the measures the City staff took, at 3:45 pm 820,000 gallons of untreated sewage overflowed from the LET to Windmill and Pilgrim Creeks, which discharge to the San Luis Rey River and Pacific Ocean. In its 45-day spill response report the City estimates that the spill would have been approximately 1.6 million gallons larger without the operational measures taken. The pumping of 15.4 million gallons of secondary effluent to the Emergency Storage Pond, protected the core process operations of SLRWRF and prevented catastrophic loss of function which would have resulted in millions of gallons of partially to untreated wastewater being discharged to the ocean.

F. Violation 2: Failure to Prohibit the Discharge of 820,000 Gallons of Untreated Sewage to Waters of the U.S from the San Luis Rey Water Reclamation Facility.

Ten Step Penalty Calculation Methodology

Step 1. Actual Harm or Potential for Harm for Discharge Violations

For discharge violations, the Enforcement Policy procedure consists of calculating a value using a three-factor scoring system to quantify: (1) the degree of toxicity of the discharge; (2) the actual harm or potential harm to beneficial uses; and (3) the discharge's susceptibility to cleanup or abatement. Application of the three-factor scoring system to is set forth below.

Factor 1: Degree of Toxicity of the Discharge = Above Moderate (3)

The Enforcement Policy requires an evaluation, using a scale from zero to four (negligible to significant risk), of the degree of toxicity of the discharged material. The evaluation considers the physical, chemical, biological, and/or thermal characteristics of the discharge and the risk of damage the discharge could cause to the receptors or beneficial uses. A score of three or "above moderate" degree of toxicity is appropriate when the discharged material poses an above-moderate risk or a direct threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material exceed known risk factors or there is substantial threat to potential receptors). "Potential receptors" are those identified considering human, environmental and ecosystem health exposure pathways.

The unauthorized discharge resulting from the SSO represented an "above moderate" risk level because untreated sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease, trash, and other pollutants known to exceed existing water quality standards. These pollutants exert varying levels of impacts to beneficial uses of the receiving waters. The high degree of toxicity in untreated sewage poses a direct threat to human and ecological receptors.

Factor 2: Potential for Harm to Beneficial Uses = Moderate (3)

The Enforcement Policy requires a determination, using a scale from zero to five (negligible to major harm), of the actual or potential harm to beneficial uses in the affected receiving waterbody. This risk may result from exposure to the pollutants or contaminants in the discharge, consistent with the statutory factors of the nature, circumstances, extent, and gravity of the violation(s). A score of three or "moderate" is typified by observed or reasonably expected potential impacts, but harm or potential harm to beneficial uses is moderate and likely to attenuate without appreciable medium or long term acute or chronic effects.

In evaluating the potential for harm, the City initially contracted Helix Environmental to conduct a biological assessment for potential impacts to Windmill Creek, and Pilgrim Creek. On April 17, 2020 Helix staff visited the spill site and took photographs of the site. No formal biological surveys were conducted at the spill site or downstream of the spill. In the April 30, 2020 report submitted to the City the only impact noted was minor erosion in the upland bank of Windmill Creek, and concluded that no other biological impacts had occurred. The report was included in the City's 45 day technical report.

Subsequently, in response to Investigative Order R9-2020-0211, the City contracted Weston Solutions to evaluate the potential short and long-term impacts to Windmill Creek and Pilgrim Creek. The report was finalized on April 2, 2021, almost a year after the SSO occurrence. The report concluded that due to the unvegetated, channelized nature of both Windmill and Pilgrim Creek, the sewage passed quickly through the creeks, reducing residence times within the creeks. The report also concluded that, although elevated levels of enterococci, fecal and total coliforms were detected the day after the spill, the severity of the storm, and associated high volume flows served to dilute the sewage, reducing bacterial concentrations, and passing through the San Luis Rey River and Lagoon to the Pacific Ocean.

However, due to the fact the environmental impact analysis was almost a year after the fact, and no post-spill biological surveys were performed within the San Luis Rey River and San Luis Rey Lagoon, the findings of the report are conjecture. The magnitude of the spill would likely have moderately impacted the RARE, WARM and WILD beneficial uses of the San Luis Rey River and Lagoon. Available water quality monitoring data following the SSO still suggests a moderate potential for harm occurred to the recreational and ecological beneficial uses of Windmill Creek and Pilgrim Creek, as well as downstream waters, as impacts were likely attenuated without appreciable medium or long term acute or chronic effects.

Factor 3: Susceptibility to Cleanup or Abatement = 1

A score of one is assigned for this factor if less than 50 percent of the discharge is susceptible to cleanup or abatement, or if the Discharger failed to cleanup 50 percent or more of the discharge within a reasonable amount of time. A score of 1 is appropriate because none of the discharged sewage was cleaned up.

The Potential for Harm score for the April 10, 2020 SSO is:

$$\text{Potential for Harm} = 3 [\text{Factor 1}] + 3 [\text{Factor 2}] + 1 [\text{Factor 3}] = 7$$

Step 2. Assessment for Discharge Violations

The Discharger's initial liability is based on the potential for harm score from Step 1 and the extent of deviation from requirement. The deviation from requirement must be characterized as either minor, moderate, or major.

The deviation from requirement is **major** because, according to the Enforcement Policy, a major deviation from requirement occurs when the requirement was rendered ineffective (e.g., the requirement was rendered ineffective in its essential functions). The discharge of 820,000 gallons of untreated sewage is a major deviation from the Discharge Prohibitions in Order No. R9-2019-0166 for the SLRWRF, as well as Discharge Prohibitions 1 and 9 of the Basin Plan, Clean Water Act section 301, and California Water Code section 13376. The discharge of untreated sewage to waters of the state clearly causes or threatens to cause a condition of pollution, contamination, or nuisance.

The per-gallon liability assessment is the per gallon factor from Table 1 of the Enforcement Policy multiplied by the maximum per gallon amount allowed under the Water Code. Using a potential for harm score of 7 and a major deviation from requirement, the per-gallon factor from Table 1 is 0.41. Using a maximum of \$2.00 per gallon for high volume discharges as allowed by the Enforcement Policy, the initial liability assessment calculated on a per gallon basis is:

$$[\$2.00 \text{ (per gallon maximum)} \times 0.41 \text{ (per gallon factor)} \times (820,000 - 1,000 \text{ gallons})] = \mathbf{\$671,580}$$

The per-day liability assessment is the per day factor from Table 2 of the Enforcement Policy multiplied by the maximum per day amount allowed under the Water Code. Using a potential for harm score of 7, and a major deviation from requirement, the per-day factor from Table 2 is 0.41. The SSO occurred on one day, April 10, 2020 from 3:45 pm to 7:30 pm. The initial liability assessment calculated on a per day basis for this violation is:

$$[\$10,000 \text{ (per day statutory maximum)} \times 0.41 \text{ (per day factor)} \times 1 \text{ (days of violation)}] = \mathbf{\$4,100}$$

The Initial Base Liability is $\$671,580 + \$4,100 = \mathbf{\$675,680}$.

Step 3. Per Day Assessment for Non-Discharge Violations

This step is not applicable.

Step 4. Adjustment Factors

The San Diego Water Board must consider three additional factors for potential modification of the administrative civil liability amount: the Discharger's degree of culpability, the Discharger's prior violation history, and the Discharger's voluntary efforts to clean up and cooperate with regulatory authorities after the violation.

Degree of Culpability = 1.1

Higher penalties should result from intentional or negligent behavior as opposed to accidental or non-negligent behavior. The Enforcement Policy allows a multiplier between 0.75 and 1.5 to be used, with a higher multiplier for intentional or negligent behavior, and a lower multiplier for accidental or non-negligence behavior.

The City bears some culpability for the SSO. As described previously, the City took reasonable steps to try to minimize the hydraulic overloading that occurred during the April 10, 2020 storm, but did not meet the facility protection requirements in Section VI.C.4.b-d of Order No. R9-2019-0166.

In the City's 45-day Technical Report submitted May 26, 2020, the City reported that The 7-Day rain total for Oceanside (5.70") was within the Average Recurrence Intervals for 25 and 50-year storms. The peak of the storm (24hrs from April 9-10 – 3.09", according to the confidence intervals from NOAA) is within range of a 50-year storm.

In response to Investigative Orders No. R9-2020-0203 and No. R9-2020-0211, the City revised its analysis of the storm event, concluding that the storm event that occurred April 6-11 can be characterized as a 100-year, 5-day storm. Additionally, the analysis concluded the peak 24-hour intensity during April 9 and 10, produced 3.65 inches of rain at the San Diego County Alert Station #27039, which compares to 24-hr rainfall NOAA precipitation frequency of a 50-year event.

Regardless of the storm event intensity, the City was required to protect the SLRWRF from a 100-year storm event and the effects of climate change, which have resulted in yearly, sporadic, intense rain events throughout the region. During the time that Plant 2 was receiving upgrades, the City had a duty to plan appropriately to protect the entire facility from a 100-year storm and regional flooding events, as required by Order No. R9-2019-0166, Sections VI.C.4.b-d.

Based on the City's failure to adequately protect the SLRWRF from the storm event, an increased Degree of Culpability factor of 1.1 is appropriate.

History of Violations = 1.1

See History of Violations for the Buena Vista Lift Station Violation No. 1.

Cleanup and Cooperation = 1.1

See Cleanup and Cooperation for the Buena Vista Lift Station Violation No. 1.

Step 5. Determination of Total Base Liability Amount

The Total Base Liability Amount is determined by multiplying the initial liability by the Adjustment Factors in Step 4:

Total Base Liability Amount = [\$675,680 (initial liability amount) x 1.1 (degree of culpability) x 1.1 (history of violations) x 1.1 (cleanup and cooperation)] = **\$899,330**.

G. Factors Associated With All Violations

Steps 6. Ability to Pay and Ability to Continue in Business

The Enforcement Policy states that the Total Base Liability Amount may be adjusted to address ability to pay or to continue in business if the San Diego Water Board has sufficient financial information necessary to assess a violator's ability to pay the Total Base Liability Amount or to assess the effect of the Total Base Liability Amount on a violator's ability to continue in business. A violator's ability to pay an administrative civil liability is determined by its revenues and assets.

The City Oceanside is a public entity with the ability to leverage fees and/or taxes. The San Diego Water Board is not aware of any evidence of inability to pay.

Step 7. Economic Benefit

The City gained an economic benefit of \$2,169 with the avoided cost of treating 1,121,000 gallons of untreated sewage to Buena Vista Creek, and an economic benefit of \$1,760 by not treating the 820,000 gallons of sewage discharged to Windmill and Pilgrim Creek. The total economic benefit is **\$3,929**.

The Prosecution Team considered several potential actions which could have prevented or minimized the SSOs including: a) reducing storm flows in the upstream watersheds through low impact development projects, b) retrofitting existing infrastructure to accommodate additional peak flows, or c) conducting channel maintenance in Buena Vista Creek. However, because these actions were not required to comply with an order of the San Diego Water Board, the economic benefit calculated was based on the avoided cost of sewage treatment.

Step 8. Other Factors as Justice May Require

The Enforcement Policy allows an adjustment to the administrative civil liability, in consideration of the costs of investigating and enforcing the matter. Here, San Diego Water Board staff expended over 570 staff hours and accrued **\$67,101** in staff costs associated with the investigation and preparation of Administrative Civil Liability Complaint No. R9-2023-0015. It is appropriate to increase the Total Base Liability Amount by \$67,101. The increase is in consideration of the costs of investigation and enforcement relative to the Total Base Liability Amount for the two violations, is warranted given the totality of the circumstances, and is intended to serve as a sufficient general and specific deterrent against future violations.

Step 9. Maximum and Minimum Liability Amounts

Maximum Liability – The violations described above subject the City to administrative civil liability pursuant to Water Code section 13385(a)(2) and (c), which authorize the San Diego Water Board to impose administrative civil liability up to \$10,000 per violation per day, plus \$10 for each gallon exceeding 1,000 gallons discharged but not cleaned up.

The Maximum Liability Amount that could be assessed for violation 1 is:

$$[1,121,000 \text{ gallons} - 1,000 \text{ gallons}] \times (\$10/\text{gal}) + [(2 \text{ days of violation}) \times (\$10,000/\text{day})] = \mathbf{\$11,220,000}$$

The Maximum Liability Amount that could be assessed for violation 2 is:

$$[820,000 \text{ gallons} - 1,000 \text{ gallons}] \times (\$10/\text{gal}) + [(1 \text{ days of violation}) \times (\$10,000/\text{day})] = \mathbf{\$8,200,000}$$

Statutory maximum liability for all violations = **\$19,420,000**

Minimum Liability – Water Code section 13385 requires recovery of economic benefit. The Enforcement Policy states that the minimum liability should be at least ten percent higher than the economic benefit amount. Because the economic benefit is associated with all violations, as discussed above, the minimum liability calculated below applies to all violations, collectively.

The minimum liability amount is $\$3,929 \times 1.1 = \mathbf{\$4,322}$

Step 10. Final Liability Amount

The Total Base Liability Amount for Violations 1, and 2 is \$840,890 and \$899,330, respectively, and staff costs were \$67,101.

Based on the foregoing analysis, and consistent with the Enforcement Policy, the Final Liability Amount proposed is **\$1,807,321** which is in between the maximum and minimum liabilities.

Attachment A

ACLC No. R9-2023-0015

Initial Documents Relied Upon and Available Upon Request

ECM Document Handle No.	Item	Date
9892797	45-Day Technical Report for April 10, 2020 Emergency Flood Event: Buena Vista Lift Station and San Luis Rey Water Reclamation Facility Sanitary Sewer Overflows (with attachments) Attachment 1: Proclamation of Local Emergency Attachment 2: April 15 Council Meeting Presentation Attachment 3: Site Map SLR Spills Attachment 3a: Spill Reporting Flow Chart Attachment 3b: Spill Report Form Attachment 4: SLR and BVLS Bacteriological Samples Attachment 5: Sample Locations and Signage Attachment 6: Bacteriological Shore Sample Results Attachment 7: SSMP Spill Response Program Attachment 8: COVID-19 Pandemic Beach Closure Notice	05/26/2020
8811457	Notice of Violation No. R9-2020-0210 and Investigative Order No. R9-2020-0211 for the Reported April 10, 2020 Unauthorized Discharge of Untreated Wastewater to Windmill Creek and Pilgrim Creek	08/05/2020
88114488	Notice of Violation No. R9-2020-0202 and Investigative Order No. R9-2020-0203 for the Reported April 10, 2020 Unauthorized Discharges of Untreated Wastewater to Buena Vista Creek	08/05/2020
9903586	Oceanside time extension request for Investigative Orders R9-2020-0203 and R9-20200211	09/09/2020
9903582	Regional Board Extension of Due Date for Technical Information Required by Investigative Order Nos. R9-2020-0203 and R9-2020-0211	09/014/2020

Attachment A**ACLC No. R9-2023-0015**

ECM Document Handle No.	Item	Date
9201430	Request for additional time extension for Investigative Orders R9-2020-0203 and R9-20200211	11/17/2020
9905586	Notice of Violation No. R9-2021-0152 for the Failure to Submit Timely Responses to Investigative Order Nos. R9-2020-0203 and R9-2020-0211	06/03/2021
9141257	City's Response to Notice of Violation No. R9-2021-0152 for the Failure to Submit Timely Responses to Investigative Order Nos. R9-2020-0203 and R9-2020-0211	06/10/2021
9108777	City Response to Investigative Order Nos. R9-2020-0203 and R9-2020-0211(with attachments) Attachment 1: Buena Vista Creek Evaluation Attachment 2: Windmill Creek and Pilgrim Creek Evaluation Attachment 3: Jeremy Kemp Email to CDFW Attachment 4: Haymar Easement Protection Project Summary Attachment 5: Emergency Permit Application Haymar Easement Protection Project Attachment 6: CDFW Streambed Alteration Agreement/Coastal Development Permit Attachment 7: Emails with Regulatory Agencies Attachment 8: BVLS Flood Plain Analysis Attachment 9: BVLS and SLRWRF Hydraulics Map	04/09/2021
9719495	Prosecution Team additional questions regarding April 2020 sanitary sewer overflows at Buena Vista Lift Station and the San Luis Rey Water Reclamation Facility	03/30/2022
9719505	City of Oceanside Response to additional questions	05/16/2022
9894643	Signed Declaration for staff costs, Christopher Means	03/22/2023