

ATTACHMENT A TO ACL ORDER R7-2022-0045

SPECIFIC FACTORS CONSIDERED FOR ADMINISTRATIVE CIVIL LIABILITY

MISSION SPRINGS WATER DISTRICT RIVERSIDE COUNTY

The State Water Resources Control Board's (State Water Board) *Water Quality Enforcement Policy* (Enforcement Policy) establishes a methodology for determining administrative civil liability (ACL) by addressing the factors that are required to be considered under Water Code section 13385(e). Each factor of the ten-step approach is discussed below, as this is the basis for assessing the corresponding score.

The 2017 Enforcement Policy can be found online at:

https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/040417_9_final%20adopted%20policy.pdf

Violation: On October 3, 2020, the Alan Horton WWTP discharged 943,738 gallons of secondary treated wastewater at a location other than the designated disposal areas in violation of WDRs Order R7-2014-0049 Discharge Prohibition B.2.

Step 1. Potential for Harm for Discharge Violations

The assessment of potential for harm is based on the following factors.

Factor 1: Degree of Toxicity of the Discharge:

This factor evaluates the degree of toxicity of the discharge by evaluating the physical, chemical, biological, and/or thermal nature of the discharged material prior to discharge. Toxicity can refer to the effect on a whole organism, such as an animal, bacterium, or plant, as well as the effect on a substructure of the organism, such as a cell or an organ. A score between 0 (negligible risk) and 4 (significant risk) is assigned based on a determination of the risk or threat of the discharged material on potential receptors. Potential receptors are those identified considering human, environmental, and ecosystem health exposure pathways.

Here, the discharge was of secondary treated wastewater from the Alan Horton Wastewater Treatment Plant (WWTP). Treated sewage contains elevated levels of suspended solids, pathogenic organisms, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants that have the potential to adversely impact human and environmental receptors. The toxicity of treated sewage is less than untreated sewage. However, pathogens levels are still high even in secondary treated wastewater which pose a threat to human health and environmental receptors.

Order R7-2014-0049 requires the Discharger to treat its wastewater to levels consistent with maximum contaminant levels (MCLs). The October 2020 monthly monitoring report submitted by MSWD for Alan Horton WWTP indicated the following average effluent wastewater characteristics:

- Average Biochemical Oxygen Demand: 21 mg/L
- Average Total Suspended Solids: 9 mg/L
- Average Total Dissolved Solids: 586 mg/L

- Average Total Nitrogen: 23 mg/L

In this case, a score of 2 is assigned because the chemical and/or physical characteristics of the discharged material, secondary treated wastewater, poses a moderate risk or threat to potential receptors.

Factor 2: Actual Harm or Potential Harm to Beneficial Uses:

This factor “considers the harm to beneficial uses in the affected receiving water body.” (Enforcement Policy, Page 12.) The Enforcement Policy requires a scoring of 0 to 5 be assigned in consideration of the nature, circumstances, extent, and gravity of the alleged violation.

The Prosecution Team has determined that the discharge of 943,738 gallons of treated secondary wastewater posed a below moderate threat to beneficial uses within the Coachella Hydrologic Unit and the Whitewater River. Wastewater flowed south and east through the community stormwater retention basin, onto the city streets and into a drainage channel that is a tributary to the Whitewater River, a Water of the United States. The drainage channel bed is composed of gravely sand, an extremely porous soil. It is likely that a portion of the spill infiltrated into soil overlying the Mission Creek Subbasin. The alleged discharge could also result in adverse impacts to groundwater quality in the area.

The discharge occurred within the Coachella Hydrologic Unit and to the Whitewater River which have the following beneficial uses:

1. Municipal Supply (MUN),
2. Industrial Supply (IND),
3. Agricultural Supply (AGR)
4. Recreation (REC I/REC II).¹

Within the receiving water, the discharge of treated sewage has the potential to harm these beneficial uses because it results in the potential for introduction and exposure of pollutants, including pathogens, into habitats and recreational areas. Here, the discharge flowed through the gutter and in front of people’s homes which may present a risk to human health due to the presence of pathogens in the treated wastewater. The discharge also had the potential to adversely impact recreational uses in the Whitewater River. However, due to seasonal low flow in the Whitewater River, and the relatively quick percolation of the discharge to groundwater, the risk of actual exposure to the discharged treated sewage was limited.

While the majority of the constituents in the wastewater were treated to levels consistent with MCLs, thus, posing a minimal threat to the beneficial uses, total Nitrogen numbers in the discharge were elevated which adversely impacts MUN and AGR uses.

A minor potential for harm exists when there is no actual harm and low threat of harm to beneficial uses. Based on these unique circumstances, and as a settlement consideration, a factor of 1 is assigned.

¹ https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/

Factor 3: Susceptibility to Cleanup or Abatement:

The Enforcement Policy assigns a score of 0 if the discharger cleans up more than 50 percent of the discharge, and assigns a score of 1 if less than 50 percent of the discharge is susceptible to cleanup or abatement, or if 50 percent or more of the discharge is susceptible to cleanup or abatement, but the discharger failed to clean up 50 percent or more of the discharge within a reasonable time period.

Because the Discharger did not recover 50 percent or more of the spill from the sanitary sewer overflow (SSO), the Prosecution Team has assessed a score of 1 for Susceptibility to Cleanup and Abatement.

Final Score:

The scores for the factors are then added to provide a Potential for Harm score for each violation or group of violations. In this case the final score is **4** (2 + 1 + 1) for potential harm and discharge violations.

Step 2. Assessment for Discharge Violations

The Enforcement Policy provides that the initial liability amount shall be determined on a per day and a per gallon basis pursuant to Water Code section 13385, using the score from Step 1 in conjunction with the Extent of Deviation from the Requirement of the violation (see Enforcement Policy, Tables 1 and 2 at Pages 14 and 15).

Water Code section 13385(c) provides that the civil liability “may be imposed...in an amount not to exceed the sum of both of the following: (1) \$10,000 per day for each day in which the violation occurs. (2) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed \$10 multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.”

Deviation from Requirement

The Discharger is regulated by Regional Board Order R7-2014-0049 (available online at https://www.waterboards.ca.gov/coloradoriver/board_decisions/adopted_orders/orders/2014/0049mswd_ahorton.pdf). The Discharger is not enrolled in any other permit or program which authorizes it to discharge pollutants to Waters of the United States.

Regional Board Order R7-2014-0049 prohibits the following:

- Discharge Prohibitions, Section B.2: “Discharge of treated wastewater at a location other than the designated disposal areas”; and,
- Discharge Prohibitions, Section B.3: “The WWTP shall be maintained to prohibit sewage or treated effluent from surfacing or overflowing”; and,
- Discharge Prohibitions, Section B.5: “Discharge of waste to land not owned or authorized for such use by the Discharger is prohibited.”

The Discharger discharged 943,738 gallons of treated secondary wastewater on October 3, 2020, in violation of these provisions.

The Enforcement Policy defines a **major** deviation as follows: "The requirement has been rendered ineffective (e.g., discharger disregards the requirement and/or the requirement is rendered ineffective in its essential functions)." (Enforcement Policy, Page 14.)

In this case, the discharge of treated sewage was a major deviation from requirements because it rendered the prohibitions on discharging treated wastewater at a location other than the designated disposal areas and the prohibitions of Order R7-2014-0049 ineffective in their essential functions. Therefore, a score of major is appropriate.

Per Gallon Assessments for Discharge Violations

Table 1 of the Enforcement Policy (Page14) is used to determine a "Per Gallon Factor" based on Potential for Harm and the Deviation from Requirement scores. Here, the Per Gallon Factor is **0.08**. This Per Gallon Factor value is then multiplied by the volume of discharge and the per gallon assessment of liability, as described below.

The total gallons discharged in this incidence is 925,538 gallons. The Discharger initially reported a spill volume of 943,738. However, in the course of settlement, the Discharger produced additional information documenting the cleanup of 18,200 gallons of the spill. Therefore, the total volume is reduced to 925,538 to reflect the portion of the discharge event that did not reach the receiving water.

High Volume Discharges

The Enforcement Policy allows the Regional Water Board the discretion to select a value from \$2.00 per gallon to \$10.00 per gallon, for high volume discharges that are between 100,000 gallons to 2,000,000 gallons. The discharge here of 925,538 gallons merits a reduction from the maximum per gallon liability allowed by the Water Code. In this case, the Prosecution Team has determined \$2.00 per gallon is appropriate.

The per gallon assessment is calculated as (factor from Table 1) x (spill volume – 1,000 gallons) x (\$2.00 per gallon).

Per Day Assessments for Discharge Violations

Table 1 of the Enforcement Policy (Page15) is used to determine a "Per Day Factor" based on Step 1 (Potential for Harm) and the Deviation from Requirement scores. Here, the Per Day Factor is **0.08**. This Per Day Factor value is then multiplied by maximum per day amounts (\$10,000).

Approximately 925,538 gallons of treated secondary wastewater was discharged from 12:30 p.m. to 1:21 p.m. on October 3, 2020. As set forth in the calculation below, the spill event from 12:30 p.m. to 1:21 p.m. on October 3, 2020 occurred in one calendar day. The per day assessment is calculated as (factor from Table 2) x (days of Discharge) x (\$10,000 per day).

Initial Liability

The Initial Liability amount for the discharge violation is as follows:

Per Gallon Liability: $0.08 \times (925,538 \text{ gallons discharged} - 1,000 \text{ gallons}) \times \$2.00 \text{ per gallon} =$
\$ 147,926

Per Day Liability: $0.08 \times (1 \text{ days}) \times \$10,000 \text{ per day} =$ **\$ 800**

Initial Liability = Per Gallon Liability + Per Day Liability = $\$147,926 + \$ 800 =$
\$148,726

Step 3. Per-Day Assessment for Non-Discharge Violations

This factor is not applicable in this case, wherein the violation involves a discharge.

Step 4. Adjustment Factors

There are three additional factors to be considered in modifying the amount of initial liability: the Discharger's culpability, efforts to clean up or cooperate with regulatory authorities, and history of violations. When considering these additional factors for the violations involved "the applicable factor should be multiplied by the initial ACL amount proposed for each violation to determine the revised amount for that violation" (Enforcement Policy, Page 17.)

Culpability

Higher liabilities should result from intentional or negligent violations as opposed to accidental violations. A multiplier between 0.75 and 1.5 is to be used, with a higher multiplier for intentional or negligent behavior. The Discharger is given the score of **1.2** for the culpability factor in this matter.

The discharge occurred in the midst of the COVID-19 Pandemic, when the WWTP experienced an increase in influent that caused the treatment effectiveness of the plant to decline. The result was elevated total suspended solids (TSS) levels in the discharge of secondary treated wastewater. The increased use and disposal of disposable wipes may have impacted the plant's performance. These conditions caused a significant decline in the infiltration capacity of the disposal basins.

The Discharger explains that the spill occurred due to poor compaction of the pond's berm, where the "side wall failed allowing the effluent to escape and flood downstream through desert and side streets" (Discharger's Spill Incident Report.) The Discharger failed to properly engineer the temporary holding basin including constructing it without conducting the necessary evaluations and tests. The discharge could have been avoided had the berms of the pond been compacted to the necessary standards.

As reported by the Discharger, the cause of this SSO was due to a mechanical failure of the holding basin. The exercise of regular due care and oversight would have prevented the discharge from occurring. If the Discharger had properly reported the construction of additional ponds to the Regional Water Board, Regional Water Board staff could have provided feedback about the adequacy of the ponds.

Although the temporary pond was constructed due to emergency capacity needs, the Discharger also failed to provide a report to the Regional Water Board when it determined that they were at 80% capacity (Order R7-2014-0049, Standard Provisions 19). This report would detail the steps the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity. This lack of oversight by the Discharger on its operations as well as on maintenance of the temporary pond caused the discharge that otherwise may have been prevented.

Therefore, the Discharger's conduct falls below what is reasonably expected of a regulated entity, and a score of 1.2 is assigned.

Cleanup and Cooperation

This factor reflects the extent to which a discharger voluntarily cooperates in returning to compliance and correcting environmental damage. A multiplier between 0.75 and 1.5 is to be used, with a higher multiplier when there is a lack of cooperation on the part of the discharger. In this case, the Discharger was given the score of 1.1.

On October 3, 2020, at approximately 12:30 p.m., the Discharger did a walk around of the pond where the breach occurred to ensure levels in the pond and equipment were operating properly. At 1:21 p.m., Water Distribution stand-by personnel contacted Discharger wastewater staff and notified them that water was leaving the Alan Horton WWTP and was heading down Avenida Manzana. The Discharger's staff immediately shut down the six-inch pump that was transferring water into the temporary pond and did an inspection of the pond. During the inspection it was found that a breach in one of the berms was the cause of the secondary effluent leaving the plant. Phone calls to all available staff were made to assist with cleanup and reconstruction of the breach in the pond's berm. Staff worked until approximately 7:30 p.m. on October 3rd, 2020, and resumed cleanup the next morning at 6:30 a.m. until everything was completed. The Discharger reported additional cleanup efforts, including the recovery of 18,200 gallons of secondary treated wastewater, during settlement negotiations with the Prosecution Team.

Although cleanup efforts were taken, the Discharger did not follow the protocol prescribed in the Alan Horton WWTP WDRs Order R7-2014-0049. Incident information should have been provided to the Regional Water Board as soon as possible and within 24 hours from the time the Discharger became aware of the event; however, the Regional Water Board was notified eighteen (18) days after the incident occurred. The incident report, which was to be provided within five (5) business days of the time the Discharger became aware of the incident (due on October 9, 2020) was submitted on March 17, 2021.

In addition, the Discharger installed "a temporary holding pond ... to assist staff with addressing percolation issues" (Discharger's Spill Incident Report). The construction of a temporary holding basin is a material change to the Discharger's operation and should have been reported to the Regional Water Board per Order R7-2014-0049, Standard Provisions F.20.

The Discharger was made aware of the above-referenced violation in a Notice of Violation, to which they responded, “that the temporary holding pond was constructed by MSWD staff...following a similar design as the existing percolation ponds...[and] did not prepare a formal design...or conduct soils testing during construction” (Discharger’s Response to NOV, July 8, 2021). The Discharger states that the ponds were later “reconstructed under the supervision of a geotechnical engineer to evaluate soil compaction; specifically ensuring that a minimum of 90% relative compaction was achieved” (Discharger’s Response to NOV, July 8, 2021).

The Discharger also submitted a request to the Regional Board to update its WDRs to allow for continued use of the ponds. While the explanation was adequate, it should have occurred prior to construction and therefore an elevated score is appropriate. Failure to adequately respond to the spill event, including failure to comply with required reporting to the Regional Water Board, warrants a score of **1.1**.

History of Violations

When there is no history of violations, the Enforcement Policy assigns a neutral multiplier of 1.0. This Discharger does not have a history of violations with the Regional Water Board. Therefore, a score of **1.0** is assigned.

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

Total Base Liability = Initial Liability **\$148,726** x Adjustments (1.2) (1.1) (1.0) =
\$196,318

Step 6. Ability to Pay and Continue in Business

The Discharger has the ability to pay the administrative civil liability amount, and there are no factors under this category that warrant an adjustment.

Step 7. Economic Benefit

The economic benefit is calculated for the alleged violation. Information on the violation and corrective actions provided by the Regional Water Board helped identify delayed expenses that have benefited the Discharger. The following list provides the corrective actions that if implemented at appropriate dates, could have helped prevent or mitigate the spill:

- Installation of additional ponds
- Purchase of a Kubota Pond ripping skip loader (tractor)
- Upgrades to the pumps at the headworks
- Replacement of the aeration paddle brushes
- Replacement of the sludge pump

For the purpose of this analysis, general assumptions are made and are as followed:

- Penalty payment date: December 8, 2022
- The Discharger operates as a municipality

The Discharger installed three additional ponds on April 24, 2019, for a total cost of \$350,213.58², however, Regional Board staff determined that had the additional ponds been installed when the Discharger observed that the existing ponds reached 80% capacity, it could have helped prevent or mitigate the spill. Based on monthly reports previously submitted by the Discharger, the existing ponds reached 80% capacity in November 2017, resulting in a delayed cost from when the additional ponds should have been installed to when they were actually installed.

On June 30, 2020, the Discharger purchased a Kubota tractor for \$83,389.34¹, which allows for effective breakup of solids at the bottom of the ponds to allow better percolation. It is assumed that the Discharger should have obtained the Kubota tractor when the additional ponds should have been installed, November 2017, to allow for effective breakup in those additional ponds. The purchase of the Kubota tractor is considered a delayed compliance action.

During the course of the COVID-19 Pandemic, the WWTP began seeing a large volume of flushable wipes coming to the WWTP in May 2020¹. The Discharger purchased Vaughan chopper pumps on May 5, 2022, for \$221,197.88¹, to help eliminate clogging issues caused by the flushable wipes. It is assumed that had the Discharger upgraded the pumps at the headworks when they first noticed the clogging issues, it could have helped prevent or mitigate the spill, resulting in a delayed cost.

Aeration paddle brushes provide oxygen transfer and mix the contents in the process tanks at the WWTP. This allows for improved effluent quality discharged to the ponds. The Discharger replaced their aeration paddle brushes on December 29, 2020, for \$112,912.40³. It is assumed that replacement of the paddle brushes should have occurred in November 2017, when the additional ponds should have been implemented, in order to improve effluent quality being discharged to those additional ponds. By replacing the paddle brushes on December 29, 2020, the Discharger benefited from a delayed cost.

The Discharger observed a decrease in the belt press sludge pump in early 2019, allowing the sludge blanket to rise in the clarifiers². Replacement of the sludge pump with a Seepex belt press sludge pump occurred on October 28, 2020, for a total cost of \$20,380.37². It is assumed that had the sludge pump been replaced when a decrease in performance was observed, in early 2019, it could have helped prevent or mitigate the spill, resulting in a delayed cost.

For this economic benefit analysis, the installation of the additional ponds and the purchase of the Kubota tractor are considered one-time expenditures and use construction cost index (CCI) as the cost basis. The headworks pump, aeration paddle brushes, and sludge pump replacements are considered capital investments with an assumed lifespan of 25 years, and use plant cost index (PCI) as the cost basis.

² Information provided by the Discharger

³ Information provided by the Discharger

The total economic benefit of non-compliance was calculated using the BEN financial model, Version 2021.0.0, developed and maintained by USEPA, which performs the analysis by determining the time value of money and tax deductibility of compliance costs. For computational purposes, the penalty payment date was established as December 8, 2022. Changes to this date will affect the total economic benefit. Based on specific assumptions within the model, the total economic benefit of non-compliance was determined to be approximately **\$59,709**.

Step 8. Other Factors as Justice May Require

No adjustments are made under this factor.

Step 9. Maximum and Minimum Liability Amounts

Minimum Liability Amount: \$65,680

Maximum Liability Amount: \$9,245,380

The Enforcement Policy provides that the “Economic Benefit Amount should be compared to the adjusted Total Base Liability Amount [and that the latter] should be at least 10 percent higher than the [former] so that liabilities are not construed as the cost of doing business and that the assessed liability provides a meaningful deterrent to future violations.” (Enforcement Policy at Page 21.)

The minimum liability here is \$65,680. This number is derived from the Economic Benefit Amount, which is calculated to be \$59,709. The final liability amount is more than the Economic Benefit Amount plus 10 percent. Therefore, the Enforcement Policy’s requirements are satisfied in this matter.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount for the unauthorized discharge is **\$175,000**.