

ATTACHMENT A TO ACLC R7-2020-0023  
ADMINISTRATIVE CIVIL LIABILITY PENALTY METHODOLOGY  
PARADISE WELLNESS CENTER  
SAN BERNARDINO COUNTY

Administrative civil liability may be imposed pursuant to the procedures described in California Water Code section 13323. The Complaint alleges the acts or failures to act that constitutes a violation of law, the provision of the law authorizing civil liability to be imposed, and the proposed civil liability.

Pursuant to Water Code section 13327, in determining the amount of any civil liability, the Water Board is required to take into account the nature, circumstances, extent, and gravity of the violation or violations, whether the discharges are susceptible to cleanup or abatement, the degree of toxicity of the discharges, and, with respect to the violator, the ability to pay, the effect on ability to continue business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violations, and other matters that justice may require.

The State Water Resources Control Board (State Water Board) Water Quality Enforcement Policy (Enforcement Policy) provides a calculation methodology for determining administrative civil liability. The calculation methodology includes an analysis of the factors in Water Code section 13327, and it enables fair and consistent implementation of the Water Code's liability provisions.

The Colorado River Basin Regional Water Quality Control Board (Regional Water Board) Prosecution Team prepared this methodology to the Complaint consistent with the Enforcement Policy's administrative civil liability calculation methodology.

**Step 1. Potential for Harm for Discharge Violations**

Actual harm or potential harm to the water body's beneficial uses caused by the violation are determined 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 for each violation or group of violations. A numeric score is determined for each of the three factors. These scores are then added together to determine a final Potential for Harm score. Based on the scores for toxicity, harm to beneficial uses, and cleanup susceptibility, and as further detailed below, a score of **6 (six)** is assigned to Step 1 of the calculation methodology.

**A. Factor 1: The Degree of Toxicity of The Discharge**

The evaluation of the degree of toxicity considers the physical, chemical, biological, and/or thermal characteristics of the discharge, waste, fill, or material involved in the violation or violations and the risk of damage the discharge could cause to the receptors or beneficial uses. 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. Evaluation of the discharged material's toxicity should account for all the characteristics of the material prior to discharge, including, but not limited to, whether it is partially treated, diluted, concentrated, and/or a mixture of different constituents.

The source water at the facility comes from the City of Needles water distribution system. Water quality test results from the City of Needles 2018 Consumer Confidence Report (CCR) were used to estimate wastewater concentrations. The average values reported in the CCR were used as source water concentrations. The source water is treated by reverse osmosis (RO). The reverse osmosis process creates two outflows: one stream containing reduced constituent concentrations and a second stream containing increased constituent concentrations, including salts, minerals and other dissolved solids. The stream containing increased constituent concentrations acts as a mineralized wastewater.

The filtered water to wastewater ratio at the facility was reported by the discharger's representative as 2:1. The RO units used at the site are manufactured by HyperLogic. Contaminant removal efficiencies reported by HyperLogic for their system are used to estimate contaminant concentrations in the wastewater, identified in **Table 1**.

**Table 1. Estimated Contaminant Concentrations in RO Wastewater**

<b>Chemical Constituent</b>	<b>Average Concentration in City of Needles water supply (mg/L)</b>	<b>Percent Removal Efficiency</b>	<b>Wastewater Concentration (mg/L)</b>	<b>Maximum Contaminant Level-MCL (mg/L)</b>
Total Dissolved Solids	1050	95-98	3020-3120	500 <sup>1</sup> -1500 <sup>1</sup>
Sulfate	372.5	96-98	1080-1100	250 <sup>1</sup> -600 <sup>1</sup>
Arsenic	0.0033	94-96	0.0094-0.0096	0.01 (0.004 µg/L <sup>2</sup> )
Manganese	0.0405	96-98	0.11-0.12	0.05 <sup>1</sup>
Chloride	200	92-95	557-575	250 <sup>1</sup> -600 <sup>1</sup>
Fluoride	1.26	92-95	3.51-3.62	2.0

Total dissolved solids (TDS) is the term used to describe the inorganic salts and small amounts of organic matter present in solution in water. TDS is a general indicator of water quality and potential concerns. Higher TDS levels can affect corrosion and encrustation in water distribution systems and impact the taste of water. Drinking water with TDS levels above 1200 mg/L are considered unacceptable. While TDS alone cannot indicate health concerns, individual constituents that comprise TDS, can present health concerns. TDS levels in the RO

<sup>1</sup> Secondary Maximum Contaminant Level (United States Environmental Protection Agency and California Code of Regulations)

<sup>2</sup> Public health goal (Office of Environmental Health Hazard Assessment)

wastewater are estimated at 3020-3120 mg/L, significantly exceeding the secondary MCL of 500 mg/L and concentrating potentially harmful constituents. (World Health Organization 2003)

Sulfate in drinking water can produce a laxative effect at 1000-1200 mg/L, impact the taste of drinking water, and contribute to corrosion of a water distribution system. (World Health Organization 2004)

Soluble inorganic arsenic is acutely toxic. Arsenic is a confirmed carcinogen and ingestion of arsenic can pose a risk of cancer of the skin and internal organs. Arsenic can also result in several non-cancer effects including heart attacks, strokes, high blood pressure, liver and nerve damage, developmental defects, and skin abnormalities. The Office of Environmental Health Hazard Assessment (OEHHA) an agency under the California Environmental Protection Agency, establishes public health goals (PHG) for contaminants in drinking water. The PHG is the level of a chemical contaminant in drinking water that does not pose a significant risk to health from a lifetime of exposure. PHGs are not regulatory standards, they are levels public water systems should strive to achieve if feasible. The PHG for arsenic is 0.004 µg/L (micrograms per liter). The concentrated RO wastewater estimate of arsenic was over 2,300 times the PHG at 0.0094-0.0096 milligrams per liter or 9.4-9.6 micrograms per liter. Although the estimate did not exceed the MCL of 10 µg /L (micrograms per liter), USEPA standard for drinking water quality, it came very close. (OEHHA 2004)

Manganese can produce undesirable taste in drinking water and form a coating on water distribution pipes. (World Health Organization 2011)

Chloride in excess of 250 mg/L can alter taste and increases corrosivity. Chloride reacts with metal ions in metal pipes therefore increasing metals in drinking water. (World Health Organization 2003)

Fluoride exceeding levels of 1.5 mg/L can lead to dental fluorosis, a cosmetic condition which discolors the teeth. At higher concentrations, 3-6 mg/L it can lead to skeletal fluorosis with adverse changes in bone structure. (World Health Organization 2004) Fluoride levels exceeded the primary MCL.

A septic tank acted as the primary treatment component of the onsite wastewater treatment system (OWTS) used during the duration of the discharge. During that time, both reverse osmosis wastewater and domestic wastewater were collected in the septic tank. Therefore, diluting of constituents in the reverse osmosis wastewater may have occurred. However, industrial reverse osmosis wastewater is not expected to undergo meaningful treatment in a septic tank and, thus, the entire total pollutant load (i.e., constituent mass) entering the septic tank would not have been meaningfully reduced. Additionally, domestic wastewater treatment, typically driven by microbes in the septic tank, could have been disrupted, thus concentrating and increasing toxicity of constituents in the domestic wastewater. Without exact information on the diluting and concentrating effects of the comingled wastewaters, the most conservative approach is to focus on the total pollutant load (i.e., constituent mass) from the reverse osmosis wastewater that was assumed to have both entered and exited the septic tank to the disposal system.

The groundwater basin underlying the site is the source of municipal water for the City of

Needles. There are four municipal wells within 3 miles of the site. The site is also located less than 1 mile from the Colorado River. The characteristics of the discharged RO wastewater therefore posed an **above-moderate** risk or threat to potential receptors. Secondary MCLs were significantly exceeded for 4 of 4 constituents (total dissolved solids, sulfate, manganese, and chloride). Arsenic, which is considered acutely toxic, was 2,300 times the PHG and was very close to exceeding the primary MCL. Fluoride exceeded the primary MCL.

The Enforcement Policy defines above-moderate as:

*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).*

Accordingly, a score of **3** (three) is assigned to Factor 1.

## **B. Factor 2: Actual Harm or Potential Harm to Beneficial Uses**

The evaluation of the actual harm or the potential harm to beneficial uses factor considers the harm to beneficial uses in the affected receiving water body that 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). The Water Boards may consider actual harm or potential harm to human health, in addition to harm to beneficial uses. The score evaluates direct or indirect actual harm or potential for harm from the violation. A score between 0 (negligible) and 5 (major) is assigned in accordance with the statutory factors of the nature, circumstances, extent and gravity of the violation.

The Site is located in the Homer Hydrologic Unit. The Colorado River Basin Regional Water Board's Water Quality Control Plan (Basin Plan), last amended in 2019, designates beneficial uses for groundwater in the Homer Hydrologic Unit as Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), and Agricultural Supply (AGR).

Information from a nearby boring log was used to estimate depth to groundwater at the site at 67 feet below ground surface. The Needles Valley groundwater basin is the source of municipal water for the City of Needles, and there are four municipal supply wells within three miles of the site. The characteristics of the discharged RO wastewater and the total volume discharged, 8400 gallons or 400 gallons per day, would likely attenuate and therefore pose **below moderate** harm or potential harm to beneficial uses of the groundwater.

The Enforcement Policy defines Below moderate as:

*Less than moderate harm or potential harm to beneficial uses. A score of below moderate is typified by observed or reasonably expected potential impacts but based on the characteristics of the discharge and applicable beneficial uses, harm or potential harm to beneficial uses is measurable in the short term, but not appreciable.*

Accordingly, a score of **2** (two) is assigned to Factor 2.

### **C. Factor 3: Susceptibility to Cleanup or Abatement**

A score of 0 is assigned for this factor if the discharger cleans up 50 percent or more of the discharge within a reasonable amount of time. A score of 1 is assigned for this factor 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. Natural attenuation of discharged pollutants in the environment is not considered cleanup or abatement for purposes of evaluating this factor.

Accordingly, score of **1** (one) is assigned to Factor 3. The 8400 gallons of wastewater discharged to the septic tank were not susceptible to clean up.

### **Step 2. Assessment for Discharge Violations**

The Enforcement Policy provides that the initial liability amount shall be determined on a per day or a per gallon basis using the Potential for Harm score from Step 1 in conjunction with the Extent of Deviation from the Requirement of the violation. (See Enforcement Policy, Tables 1 and 2.)

Pursuant to Water Code section 13350, subdivision (e), civil liability may be imposed administratively in an amount not to exceed five thousand dollars (\$5,000) for each day in which the violation occurs, or an amount not to exceed ten dollars (\$10) per gallon discharged, but not both. The Prosecution Team has elected to calculate the initial liability amount on a per day basis.

### **A. Extent of Deviation from The Requirement**

Dischargers covered under the Conditional Waiver must comply with the conditions contained in the General Order. The General Order, Section A, requires the Discharger to comply with all requirements described in Attachment A of the Cannabis Policy (also included as Attachment A of the General Order).

Attachment A, Section 1, General Requirements and Prohibitions, Nos. 26 and 27, prohibit the discharge of cannabis cultivation wastewater (including designated wastewater from RO systems) to an onsite wastewater treatment system (OWTS).

Attachment A, Section 1, General Requirements and Prohibitions, No. 12, requires compliance with applicable Basin Plans. The Basin Plan Chapter 3, Section IV. D states that discharge of brines to disposal facilities (e.g. septic tank) is prohibited.

The Discharger's representative, Wes Brodbeck, stated the reverse osmosis system wastewater was deliberately rerouted to the facility's septic tank. Because Attachment A, Section 1 specifically prohibits the discharge of cannabis cultivation wastewater into an onsite wastewater treatment system, the Discharger rendered the requirement ineffective in its essential function by discharging such waste into its septic tank. Thus, the discharge is a **major deviation** from prescribed requirements. The calculation methodology defines a major deviation as

*Major- The requirement has been rendered ineffective (e.g., the requirement was rendered*

*ineffective in its essential functions).*

Accordingly, based on the Potential for Harm score of 6 and major deviation from the requirements, the per-gallon and per-day factors for the discharge are both **0.28**. (See Enforcement Policy, Tables 1 and 2.)

### **B. Initial Amount of ACL**

The initial liability amount for the discharge is calculated as follows:

(per day factor) x (days of violation) x (maximum per day liability) = Initial Liability Amount

#### **Days of Violation**

The Prosecution Team alleges the Discharger was discharging waste into its onsite wastewater treatment system in violation of the Basin Plan and Conditional Waiver requirements over 21 days between June 5 and June 25, 2019. From the onsite wastewater treatment system, the waste was able to reach groundwater. In order to calculate the days of discharge to groundwater, the Prosecution Team estimated the travel time from the septic tank to groundwater based on the depth to local groundwater.

Information from a nearby boring log was used to estimate the depth to groundwater near the Site at roughly 67 feet below land surface. The Site is underlain by alluvial sediments and located near the Colorado River channel. Wastewater in a domestic setting has been found to infiltrate highly permeable, unsaturated desert alluvium at a rate of 0.7 to 1.0 foot per day (1995 US Geological Survey). Assuming an infiltration rate of 1 foot per day and depth to groundwater at the site of roughly 67 feet, it would take approximately 67 days for discharges from the septic tank to reach the groundwater.

For purposes of this penalty calculation, the number of days of discharge to groundwater is estimated to correspond to the number of days that wastewater was discharged to the septic tank. This is likely a conservative estimate because the natural variability in sediments below the site will cause dispersal and horizontal migration of the wastewater which could lead to more days of discharge to groundwater than the number of days of discharge to the septic tank. The continued supply of domestic wastewater to the septic tank from the onsite restrooms and janitor sink provides continuous head that will cause the slug of cannabis industrial wastewater to eventually reach groundwater. This was demonstrated in a Yucca Valley study in the Western Mojave Desert that found that discharges of wastewater in arid regions will ultimately reach groundwater (Izbicki, et al. 2015). In the Colorado River Basin, river channel and alluvial deposits allow for rapid infiltration and recharge of the underlying groundwater basin which makes these areas more vulnerable and susceptible to contamination from surface or shallow subsurface discharges of wastes (2018 Staff Report CRRWQCB).

Accordingly, the initial liability amount was calculated as:

$(0.28) \times (21 \text{ days}) \times (\$5,000/\text{day}) = \mathbf{\$29,400.00}$

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

This step is not applicable.

### **Step 4. Adjustment Factors**

The Enforcement Policy describes three additional factors related to the violator's conduct that must be considered for modifying the amount of initial liability: the violator's culpability, efforts to clean up or cooperate with regulatory authority, and the violator's history of violations. After each of these factors is considered for the violation involved, the applicable factor should be multiplied by the amount for each violation to determine the revised amount for that violation.

#### **A. 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 test for whether a discharger is negligent in what a reasonable and prudent person would have done or not done under similar circumstances. In this case a culpability multiplier of **1.5** has been selected.

Curtis Devine and Water Board staff had a phone discussion on April 26, 2018, during the application approval process. Water Board staff explained that the discharge of cannabis cultivation wastewater to an onsite wastewater treatment system (septic tank) is prohibited unless additional permits are acquired to specifically address this waste discharge. Curtis Devine confirmed knowledge of this prohibition and ensured that all wastewater was recaptured and reused onsite through the reclaim tank. Although the Discharger was fully aware of the discharge prohibition, the Discharger intentionally and deliberately rerouted the wastewater to the septic tank when the reclaim tank started filling up too fast.

In email correspondence between Curtis Devine and Water Board staff on May 7, 2018, Water Board staff requested information on where the collected wastewater (in the 5000-gallon tank) would be hauled for disposal. Curtis Devine responded that Daniell's Septic is the local septic tank hauling company and assumed they would use them if they ever needed wastewater pumped and hauled. Although the Discharger had a plan for properly disposing of its industrial wastewater, the Discharger nevertheless discharged its industrial wastewater to the onsite septic tank instead of properly maintaining its wastewater collection tank. This is a blatant disregard of the Discharger's permit requirements.

#### **B. History of Violations**

When there is no history of violations, the Enforcement Policy assigns a neutral multiplier of 1.0. There are no adjudicated cases of this nature against the Discharger. Therefore, a neutral multiplier of **1.0** has been selected.

### **C. Cleanup and Cooperation**

This factor reflects the extent to which a discharger voluntarily cooperated 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. A reasonable and prudent response to a discharge violation or timely response to a Water Board order should receive a neutral adjustment as it is assumed a reasonable amount of cooperation is the warranted baseline. In this case, a neutral Cleanup and Cooperation multiplier of **1.0** has been selected. The Discharger's representative, Wes Brodbeck, promptly responded to the email request to cease discharge and provide documentation. Photo documentation was provided the following morning showing steps taken to correct the noncompliance. This was a reasonable and prudent response to a discharge violation and a timely response to a Water Board order.

### **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 (\$29,400) x Adjustments (1.5) (1.0) (1.0) = **\$44,100.00**

### **Step 6. Ability to Pay and Continue in Business**

If the Water Boards have sufficient financial information necessary to assess the violator's ability to pay the Total Base Liability Amount or to assess the effect of the Total Base Liability Amount on the violator's ability to continue in business, the Total Base Liability Amount may be adjusted to address the ability to pay or to continue in business. The ability of a discharger to pay an ACL is determined by its income (revenues minus expenses) and net worth (assets minus liabilities). The Water Boards are under no obligation to ensure that a violator has the ability to pay or continue in business, but, rather, they are obligated to consider these factors when imposing a civil liability.

Here, the Discharger operates an ongoing business,<sup>3</sup> and Mr. Devine owns the property upon which the business is located. Regional Water Board staff have no information that would indicate the Discharger has an inability to pay the administrative civil liability amount. Therefore, no adjustment has been made under this step.

### **Step 7. Economic Benefit**

The Enforcement Policy provides that the economic benefit of noncompliance shall be estimated for every violation. Economic benefit is any savings or monetary gain derived from the act or omission that constitutes the violation. The Enforcement Policy provides that the economic benefit should be calculated using the United States Environmental Protection Agency's (US EPA) Economic Benefit Model (BEN) penalty and financial modeling program unless the Water Board determines, or the discharger demonstrates to the satisfaction of the Water Board, that based on case-specific factors, an alternate method is more appropriate for a particular situation.

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<sup>3</sup> State-licensed cannabis businesses, including cannabis cultivators, were deemed an essential business and were allowed to operate during the shelter-in-place directive related to COVID-19 issued under Executive Order N-33-20.



In this case the Discharger discharged 8,400 gallons of wastewater to a septic tank. The Discharger has provided documentation that wastewater hauling would be \$0.35 per gallon, with a flat fee of \$150 per truck, and that 8,400 gallons would require two or three trucks. Regional Water Board and Office of Enforcement staff conducted the BEN analysis based on the following assumptions: (1) Days in violation = three weeks or 21 days, ending June 25, 2019; (2) Volume discharged = 400 gallons per day for 21 days = 8,400 gallons; (3) Avoided cost = 8,400 gallons at \$0.35 per gallon plus two trucks at \$150 each = \$3,240; (4) Payment date = date of hearing, September 3, 2020; (5) Taxes = State income tax only estimate the cost of disposal for 8,400 gallons of wastewater at \$0.35 per gallon, with \$150.00 flat fee per truck. The BEN analysis of economic benefit is: \$3,005.

#### **Step 8. Other Factors as Justice May Require**

Regional Water Board staff members spent 96 hours investigating the facility and preparing the Complaint, amounting to \$6,285.44 in staff costs.

#### **Step 9. Maximum and Minimum Liability Amounts**

Minimum Liability Amount: \$ \$3,305.50

Maximum Liability Amount: \$105,000.00

The Enforcement Policy states that the total liability shall 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." The minimum liability here is \$3,305.50. This number is derived from the economic benefit which is calculated to be \$3,005, plus ten percent. The total base liability amount is more than the economic benefit plus 10 percent; therefore, the Enforcement Policy's requirement is met in this matter.

The maximum liability under Water Code section 13350 is \$5,000 per day of violation. The Discharger was discharging to the septic tank for a few weeks, resulting in 21 days of violation, a total maximum liability of \$105,000.00.

#### **Step 10. Final Liability Amount**

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount for discharge of brine wastewater to the septic tank is **\$50,385.44**.