

NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

In the matter of:)	
)	Order R1-2012-0093
TABLE BLUFF LANDFILL)	
COUNTY OF HUMBOLDT)	SETTLEMENT AGREEMENT AND
DEPARTMENT OF PUBLIC)	STIPULATION FOR ENTRY OF
WORKS)	ADMINISTRATIVE CIVIL LIABILITY
)	ORDER

This Settlement Agreement and Stipulation for Entry of Administrative Civil Liability Order (hereafter "Stipulated Order" or "Order") is entered into by and between the Executive Officer of the North Coast Regional Water Quality Control Board ("Regional Water Board" or "North Coast Water Board"), on behalf of the North Coast Water Board Prosecution Staff ("Prosecution Staff") and the County of Humboldt (collectively "Parties") and is presented to the Regional Water Board, or its delegee, for adoption as an Order by settlement, pursuant to Government Code section 11415.60.

1. **RECITALS**

WHEREAS, at all times relevant to this matter, the County of Humboldt ("County") is the owner and operator of the Table Bluff Landfill ("Landfill"), located at Section 36, Township 4 North, Range 2 West ("Site"), and is responsible for the operation thereof in accordance with the requirements set forth in Waste Discharge Requirements Order No. 79-101 (WDR Order);

WHEREAS, on or about March 29, 2010 through April 5, 2010, approximately 65,805 gallons of leachate wastewater discharged from the Landfill to Cleaner Creek, a tributary to Humboldt Bay, both of which are waters of the State of California and waters of the United States ("the Discharge Event"). The County failed to notify the Regional Water Board of the discharge incident as soon as it had knowledge of the discharge, in violation of the WDR Order;

WHEREAS, the County contacted a local machine shop on April 1, 2010 and later secured services on April 5, 2010 when the failed pump was removed and replaced and the discharge abated;

WHEREAS, the Assistant Executive Officer of the North Coast Water Board, by and through the Prosecution Staff, investigated the circumstances of the Discharge Event;

WHEREAS, the Prosecution Staff alleges that the Discharge Event occurred in violation of the following WDR Order provisions:

Discharge Specification No. A.2., which states, “[n]o waste material shall be in a position where it is or can be in contact with surface waters or can be carried from the site and be deposited in surface waters.”

Discharge Specification No. A.3., which states, “[t]he discharge of leachate shall be prohibited to the maximum practicable extent to Humboldt Bay or its tributaries”

Provision 5, which states, “[i]n the event the discharger is unable to comply with any of the conditions of this order due to a. breakdown of waste treatment equipment; b. accidents caused by human error or negligence; or c. other causes such as acts of nature; the discharger shall notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident.”

WHEREAS, the Prosecution Staff alleges that leachate wastewater discharged to Cleaner Creek, a tributary to a Water of the United States, without a report of discharge, in violation of Section 301 of the Clean Water Act (33 U.S.C. § 1311) and Water Code section 13376. The Discharger’s failure to report the leachate spill as soon as it had knowledge constitutes a violation for which liability may be imposed under Water Code section 13268. The alleged violations are described in Exhibit A, attached;

WHEREAS, the Prosecution Staff agrees that the County has fully cooperated with its investigation and voluntarily provided records and information requested by the Prosecution Staff. The Prosecution Staff recognizes that, upon discovery and subsequent to the Discharge Event, the County has increased maintenance and inspection efforts, including timely notification to relevant authorities including the Regional Board and the State Office of Emergency Services;

WHEREAS, the Prosecution Staff recognizes the Discharge Event was not intentional and that the County has been working to identify feasible and effective upgrades of the system;

WHEREAS, the Parties have engaged in settlement negotiations and agree to fully settle the matter without administrative or civil litigation and by presenting this Stipulated Order to the North Coast Water Board, or its delegee, for adoption as an Order by settlement, pursuant to Government Code section 11415.60. The Prosecution Staff believes that the resolution of the alleged violations is fair and reasonable and fulfills its enforcement objectives, that no

further action is warranted concerning the specific violations alleged in Exhibit A, except as provided in this Stipulated Order, and that this Stipulated Order is in the best interest of the public.

2. **JURISDICTION**

The Parties agree that the North Coast Water Board has subject matter jurisdiction over the matters alleged in this action and personal jurisdiction over the Parties to this Stipulated Order.

3. **ADMINISTRATIVE CIVIL LIABILITY**

Upon issuance of this Stipulated Order, the County shall be liable for a total of FIFTY-SEVEN THOUSAND, EIGHT HUNDRED AND TWO DOLLARS (\$57,802), as set forth in Paragraphs 3.1 and 3.2, below.

3.1 Paid Liability

Within 30 days of issuance of this Stipulated Order, the County shall remit, by check, THIRTY THREE THOUSAND AND FOUR HUNDRED AND ONE DOLLARS (\$33,401), payable to the *State Water Resources Control Board Cleanup and Abatement Account (CAA)*, and shall indicate on the check the number of this Stipulated Order. The County shall send the original signed check to Diana Henriouille, North Coast Regional Water Quality Control Board, 5550 North Skylane Blvd., Suite A, Santa Rosa California, 95403 with a copy sent to: Vanessa Young, State Water Resources Control Board, Office of Enforcement, P.O. Box 100, Sacramento, CA 95812.

3.2 Enhanced Compliance Action

3.2.1. Against the County of Humboldt's total liability of \$57,802, the County shall be credited TWENTY FOUR THOUSAND, FOUR HUNDRED AND ONE DOLLARS (\$24,401) for the costs incurred for the enhanced compliance action (ECA). The ECA consists of the following four (4) tasks:

- a) Installation of new back-up holding tank with dual set of submersible pumps with quick-connect coupling to facilitate connection to portable pump in the event of a major system failure.
- b) Installation of new electrical supply and control components.
- c) Installation of back-up propane powered electrical generator and propane supply tank.

- d) Installation of remote monitoring system to deliver real-time alarm information through wireless communication technology.

The ECA qualifies as a capital improvement project beyond those required by law. The County is not required by the WDR Order or by statute or regulation to implement these projects. For a landfill of this size and age in the North Coast Region, such upgrades are an enhancement above and beyond current operations to aid the County in achieving a better rate of compliance. Meanwhile, because the site is adversely affected by bacteria growth affecting the performance of the pumps, to reach compliance and prevent leachate discharges, the County must continue its regular maintenance activities to prevent wastewater discharges. Below is a table provided by the County reflecting the costs, milestones and completion dates of the ECA.

Table 1 Costs, Milestones, and Completion Dates ECA Project – Table Bluff Closed Landfill			
Task	Approximate Cost	Milestone	Completion Date
1) Installation of a new back-up holding tank with dual set of submersible pumps. Construction of concrete pad foundations.	\$20,649 ¹	25%	1-2 months following approval of ECA
2) Installation of new electrical supply and control components.	\$9,436 ²	50%	1-2 months following approval of ECA
3) Installation of a propane-powered back-up generator and propane supply tank.	\$12,074	75%	2-3 months following approval of ECA
4) Installation of remote monitoring system	\$2,510	100%	2-3 months following approval of ECA
Approximate Total Cost		\$44,649	
The following materials and/or labor costs are included above in the approximate cost for each task but have already been invoiced by the contractor and paid by Public Works. 1. Material costs of \$2,450 for 2-submersible pumps. 2. Material and labor costs of \$1,650 for replacement of the electrical meter main. Material costs of \$3,562 for electrical system components consisting of 2-control boxes, 2-fiberglass enclosures, and an alternator panel.			

3.2.2. The County shall provide evidence acceptable to the Director of the State Water Board’s Office of Enforcement that it has expended monies in the amount set forth above, including, without limitation, a certified report by the County describing the expenditures made. Such evidence shall be submitted to the Director of the Office of Enforcement within thirty (30) days after the completion date of each task of the ECA project.

3.2.3. The ECA must be completed no later than December 31, 2012. If any of the ECA tasks are not completed to the satisfaction of the Regional Water Board, the total amount suspended becomes due and payable to the CAA. Payment of the suspended amount does not relieve the Discharger of its independent obligation to take necessary actions to achieve compliance.

4. **MATTERS COVERED BY THIS STIPULATED ORDER**

Upon adoption by the North Coast Water Board, or its delegee, this Stipulated Order represents a final and binding resolution and settlement of all claims, violations or causes of action alleged in this Order or which could have been asserted based on the specific facts alleged in Exhibit A of this Stipulated Order. The provisions of this Paragraph are expressly conditioned on the County's full payment of administrative civil liability by the deadline specified in Paragraph 3.

5. **COVENANT NOT TO SUE**

Upon the effective date of this Stipulated Order, the County shall and does release, discharge and covenant not to sue or pursue any civil or administrative claims against the North Coast Water Board, including its officers, agents, directors, employees, contractors, subcontractors, attorneys, representatives, predecessors-in-interest, and successors and assigns for any and all claims or causes of action, of every kind and nature whatsoever, in law and equity, whether known or unknown, suspected or unsuspected, foreseen or unforeseen, which arise out of or are related to this action.

6. **PUBLIC NOTICE**

The Parties agree that the proposed Stipulated Order, as signed by the Parties, will be noticed for a 30-day public comment period prior to being presented to the North Coast Water Board for adoption. If the North Coast Water Board's Assistant Executive Officer receives significant new information that reasonably affects the propriety of presenting this Stipulated Order to the North Coast Water Board for adoption, the Assistant Executive Officer may unilaterally declare this Stipulated Order void and decide not to present the Order to the North Coast Water Board. The County agrees that it may not rescind or otherwise withdraw its approval of this proposed Stipulated Order.

7. **PROCEDURE**

The Parties agree that the procedure that has been adopted for the approval of the settlement by the Parties and review by the public, as reflected in this Order, will be adequate. In the event procedural objections are raised prior to this Stipulated Order becoming effective, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the procedure as necessary or advisable under the circumstances.

8. **WAIVERS**

In the event that this Stipulated Order does not take effect because it is not approved by the North Coast Water Board, or is vacated in whole or in part by the State Water Resources Control Board or a court, the Parties acknowledge that the Prosecution Staff may proceed to a contested evidentiary hearing before the North Coast Water Board to determine whether to assess administrative civil liability for the underlying alleged violations, or may continue to pursue settlement. The Parties agree that all oral and written statements and agreements made during the course of settlement discussions will not be admissible as evidence in any subsequent administrative or judicial proceeding or hearing. The Parties also agree to waive the following objections related to their efforts to settle this matter:

- a. Objections related to prejudice or bias of any of the North Coast Water Board members or their advisors and any other objections that are premised in whole or in part on the fact that the North Coast Water Board members or their advisors were exposed to some of the material facts and the Parties' settlement positions, and therefore may have formed impressions or conclusions, prior to conducting any contested evidentiary hearing in this matter; or
- b. Laches or delay or other equitable defenses based on the time period that the order or decision by settlement may be subject to administrative or judicial review.

9. **APPEALS**

Once adopted by the North Coast Water Board, the County hereby waives its right to appeal this Stipulated Order to the State Water Resources Control Board or a California Superior Court and/or any California appellate level court.

10. **EFFECT OF STIPULATED ORDER**

Except as expressly provided in this Stipulated Order, nothing in this Stipulated Order is intended nor shall it be construed to preclude the Prosecution Staff or any state agency, department, board or entity or any local agency from exercising its authority under any law, statute, or regulation.

11. **WATER BOARDS NOT LIABLE**

Neither the North Coast Water Board members, staff, attorneys, or representatives shall be liable for any injury or damage to persons or property resulting from acts or omissions by the County, its employees, representative agents, attorneys, or contractors in carrying out activities pursuant to this

Stipulated Order, nor shall the North Coast Water Board members, staff, attorneys or representatives be held as parties to or guarantor of any contract entered into by County, its employees, representative agents, attorneys, or contractors in carrying out activities required pursuant to this Stipulated Order.

12. **NO WAIVER OF RIGHT TO ENFORCE**

The failure of the Prosecution Staff or North Coast Water Board to enforce any provision of this Stipulated Order shall in no way be deemed a waiver of such provision, or in any way affect the validity of this Stipulated Order. The failure of the Prosecution Staff or North Coast Water Board to enforce any such provision shall not preclude it from later enforcing the same or any other provision of this Stipulated Order. No oral advice, guidance, suggestions or comments by employees or officials of any Party regarding matters covered under this Stipulated Order shall be construed to relieve any Party regarding matters covered in this Stipulated Order.

13. **REGULATORY CHANGES**

Nothing in this Stipulated Order shall excuse the County from meeting any more stringent requirements which may be imposed hereafter by changes in applicable and legally binding legislation or regulations.

14. **AUTHORITY TO ENTER STIPULATED ORDER**

Each person executing this Stipulated Order in a representative capacity represents and warrants that he or she is authorized to execute this Order on behalf of and to bind the entity on whose behalf he or she executes the Order.

15. **INTEGRATION**

This Stipulated Order constitutes the entire agreement between the Parties and may not be amended or supplemented except as provided for in this Stipulated Order.

16. **MODIFICATION OF STIPULATED ORDER**

This Order shall not be modified by any of the Parties by oral representation made before or after the execution of this Order. All modifications must be made in writing and approved by the North Coast Water Board.

17. **INTERPRETATION**

This Stipulated Order shall not be construed against the party preparing it, but shall be construed as if the Parties jointly prepared it and any uncertainty and ambiguity shall not be interpreted against any one party.

18. **COUNTERPART SIGNATURES**

This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one document.

19. **INCORPORATION OF EXHIBITS**

Exhibit "A" is incorporated by reference.

IT IS SO STIPULATED:

North Coast Water Board Prosecution Staff

Original Signed By	October 29, 2012
By: _____	_____
Luis Rivera	Date
Assistant Executive Officer	
North Coast Regional Water Quality Control Board	

County of Humboldt

Original Signed By	October 31, 2012
By: _____	_____
Thomas Mattson	Date
Director	
County of Humboldt	

HAVING CONSIDERED THE ALLEGATIONS AND THE PARTIES' STIPULATIONS, THE NORTH COAST WATER BOARD, OR ITS DELEGEE, FINDS THAT:

20. Issuance of this Stipulated Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000 et seq.), in

accordance with sections 15061(b)(3) and 15321(a)(2), of Title 14 of the California Code of Regulations.

21. In adopting this Stipulated Order, the North Coast Water Board, or its delegee, has considered all the factors prescribed in Water Code sections 13327 and 13385, subdivision (e), in accordance with the State Water Resources Control Board's Water Quality Enforcement Policy. The consideration of these factors is based upon information and comments provided by the Parties and by members of the public.
22. The terms of the foregoing Stipulation are fully incorporated herein and made part of this Order of the North Coast Water Board.

IT IS HEREBY ORDERED, PURSUANT TO WATER CODE SECTION 13323 AND GOVERNMENT CODE SECTION 11415.60, ON BEHALF OF THE NORTH COAST WATER BOARD.

Original Signed By Luis Rivera For Matthias St. John

November 9, 2012

Executive Officer

Date

**EXHIBIT A – NORTH COAST WATER BOARD PROSECUTION STAFF’S ALLEGATIONS
AND WATER QUALITY ENFORCEMENT POLICY METHODOLOGY**

1. The County of Humboldt (“County”) is the owner and operator of Table Bluff Landfill (“Landfill”), located at 2101 East Pacific Coast Highway, P.O. Box 817, Wilmington, CA 90744, and is responsible for the operation thereof in accordance with provisions in the Water Code;
2. On or about March 29, 2010 through April 5, 2010, approximately 65,805 gallons of leachate wastewater discharged from the Landfill to Cleaner Creek, a tributary to Humboldt Bay, both of which are waters of the State of California and waters of the United States (“Discharge Event”). The County failed to notify the Regional Water Board of the discharge incident as soon as it had knowledge of the discharge, in violation of Waste Discharge Requirements (WDR Order) Order No. 79-101;
3. The Discharge Event resulted in an alleged violation of Water Code section 13376;
4. The Discharge Event subjects the County to potential liability pursuant to Water Code section 13385, subdivision (c); and
5. The discharge described above in Paragraph 2 is not susceptible to cleanup and was not cleaned up.

POTENTIAL MAXIMUM CIVIL LIABILITY

6. Water Code section 13385, subdivision (a) provides that civil liability may be administratively imposed by the Regional Water Board against any person that violates 13376 or a requirement of Section 301 of the Clean Water Act. The Discharger violated WDR Order No. 79-101, Section 301 of the Clean Water Act, and Water Code section 13376 by discharging approximately 65,805 gallons of leachate wastewater to Cleaner Creek, a tributary of Humboldt Bay, without authorization under an NPDES permit.
7. Water Code section 13385, subdivision (c) provides that a civil liability may be imposed by the Regional Water Board in an amount not to exceed the sum of both of the following:
 - a. Ten thousand dollars (\$10,000) for each day in which the violation occurs.
 - b. 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 ten dollars

(\$10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

8. The County is exposed to liability pursuant to section 13385, subdivision (c) when it discharged approximately 65,805 gallons of leachate wastewater to Cleaner Creek, a tributary to Humboldt Bay, both of which are waters of the State of California and waters of the United States.
9. Water Code section 13268, subdivision (b), provides that civil liability may be administratively imposed for failing to furnish technical or monitoring reports in an amount not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs.
10. The County is exposed to liability pursuant to 13268, subdivision (b), for failing to notify the Regional Water Board of the discharge incident, in violation of the reporting requirement of the WDR Order.
11. The maximum liability for the violations described above, pursuant to section 13385, subdivision (c) and section 13268, subdivision (b) of the Water Code is: \$736,050.

CONSIDERATION OF FACTORS

12. Pursuant to Water Code sections 13327 and 13385, subdivision (e), the North Coast Water Board is required to consider the following factors in determining the amount of civil liability, including the nature, circumstances, extent, and gravity of the 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 the ability to continue in business; voluntary cleanup efforts; prior history of violations; the degree of culpability; economic benefit or savings, if any, resulting from the violation; and other matters as justice may require. At a minimum, liability shall be assessed at a level that recovers the economic benefits, if any, derived from the acts that constitute the violation.
13. On November 17, 2009, the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy was approved by the Office of Administrative Law and became effective on May 20, 2010. The Enforcement Policy establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors in Water Code sections 13327 and 13385, subdivision (e).

14. The Prosecution Staff has conducted an analysis of the methodology for assessing liability in the Enforcement Policy, as shown below:

CALCULATION OF PENALTY FOR THE DISCHARGE EVENT

Per Gallon Assessment for Discharge Violation

Step 1. Potential for Harm

The Potential for Harm is **6**. This is determined by the sum of the factors for a) the potential for harm to beneficial uses (moderate, 3); b) the physical, chemical, biological or thermal characteristics of the discharge (moderate, 2); and the susceptibility for cleanup or abatement (<50% susceptible to cleanup and abatement, 1).

- a. Specific Factor: Potential harm to Beneficial Uses

Category: Moderate (3)

The Regional Board adopted the Water Quality Control Plan for the North Coastal Basin on March 20, 1975, and amended the Plan on March 25, 1976. The Plan contains water quality objectives for Humboldt Bay and its tributaries. According to WDR Order No. 79-101, the beneficial uses of Humboldt Bay include Municipal & Domestic Supply, Agricultural Supply, Industrial Service Supply, Industrial Process Supply, Freshwater Replenishment, Navigation, Hydropower Generation, Water Contact Recreation, Non-Contact Recreation, Commercial & Sport Fishing, Cold Freshwater Habitat, Wildlife Habitat, Rare, Threatened or Endangered Species, Marine Habitat, Migration of Aquatic Organisms, Spawning, Reproduction and/or Early Development, Shellfish Harvesting, Estuarine Habitat, Aquaculture, Native American Culture. Regardless of whether Cleaner Creek has been identified or is likely to be fish-bearing, this section looks at the potential harm to the beneficial uses of the water-body as designated for in the Basin Plan.

Humboldt Bay, similar to most bays and estuaries, relies on freshwater replenishment to help support its beneficial uses. Cleaner Creek is a freshwater tributary to Humboldt Bay. The leachate that is discharged into Cleaner Creek poses a moderate threat to the beneficial uses of Humboldt Bay. The leachate wastewater contains concentrations of salts and metals that can cause harm to aquatic life and its habitat, thereby reasonably expecting to impact the beneficial uses of Humboldt Bay including, but not limited to, freshwater replenishment, cold freshwater habitat, shell fish harvesting, marine habitat, spawning, migration and the preservation of rare and endangered species. The leachate also contains high TDS that may affect some types of spawning fish that are more sensitive to high TDS levels. Also, many water quality characteristics such as pH and hardness can affect the toxicity of a metal like copper, thereby exacerbating the toxicity of the leachate.

Additionally, Cleaner Creek is a freshwater replenishment source and supports cold freshwater habitat, two beneficial uses of Humboldt Bay. Natural inland waters usually contain in solution relatively small quantities of mineral salts, but in waters polluted by brines and various chemical wastes, which may be found in the landfill leachate, the salt concentration may rise to levels harmful to living organisms.

A score of Minor may be assessed where there were no observed impacts but potential impacts to beneficial uses with no appreciable harm. The Discharger has not provided documentation confirming that there were no observed impacts to beneficial uses or that the discharge posed no appreciable harm. Therefore, the Regional Board has chosen not to reduce this factor to Minor.

b. Physical, chemical, biological or thermal characteristics of the discharge

Category: **Moderate (2)**

Leachate is produced when water filters down through the landfill. The leachate may be relatively harmless or extremely toxic as it picks up dissolved solids and other constituents, such as dissolved metals, from the decomposing waste material at the landfill. The analytical data for the leachate material at the Table Bluff facility is limited.

The leachate at this site contains iron-eating bacteria that create substantial amounts of orange-rust colored sludge that builds up and clogs the lines in the leachate system. Below is a breakdown of the conductivity, total dissolved solids and metal constituent makeup of the leachate.

Conductivity & Total Dissolved Solids:

The leachate samples periodically taken from the sump indicate high levels conductivity and total dissolved solids.

The California State Water Resources Control Board (State Board) has established Water Quality Criteria (Publication 3-A, reprinted June 1, 1974) for Specific Electrical Conductance (pp 273-274) which states the following:

“studies of inland fresh water indicated that the specific conductance of streams and rivers supporting a good mixed fish fauna lay, in general, between 150 and 500 mhos X 10⁻⁶ at 25° C...good mixed fish fauna were usually not found in waters with a specific conductance greater than 2000 mhos X10⁻⁶ at 25° C.”

Leachate samples taken from the sump or vault following the spill incidents show high levels of conductivity ranging from 1200 to 2100 micromhos for conductance, and historical (1998 to 2008) leachate samples show an average

conductance of 2002 micromhos. Leachate conductance levels exceed the water quality criteria recommended by the State Board to prevent impacts to fish and other aquatic life.

Conductivity is assessed here to show that the levels in the leachate exceed the water quality criteria recommended by the State Board to prevent impacts to fish and other aquatic life. Because conductivity is related to Total Dissolved Solids (TDS) and the leachate contains high levels of TDS, a narrative assessment of TDS follows:

Total Dissolved Solids (TDS)

Solids can be found in nature in a dissolved form. Salts that dissolve in water break into positively and negatively charged ions. Conductivity is the ability of water to conduct an electrical current, and the dissolved ions are the conductors. The major positively charged ions are sodium, (Na⁺) calcium (Ca⁺²), potassium (K⁺) and magnesium (Mg⁺²). The major negatively charged ions are chloride (Cl⁻), sulfate (SO₄⁻²), carbonate (CO₃⁻²), and bicarbonate (HCO₃⁻). Nitrates (NO₃⁻²) and phosphates (PO₄⁻³) are minor contributors to conductivity, although they are very important biologically.

Salinity is a measure of the amount of salts in the water. Because dissolved ions increase salinity as well as conductivity, the two measures are related. Salinity can also be measured gravimetrically (i.e., as the weight of the total dissolved solids per a given volume of water). In freshwater, the term “total dissolved solids” (TDS) is often used, rather than “salinity,” to refer to this property.

Salts and other substances affect the quality of water used for irrigation, drinking and other uses. They also have a critical influence on aquatic biota, and every kind of organism has a typical salinity range that it can tolerate. Moreover, the ionic composition of the water can be critical. For example, cladocerans (water fleas) are far more sensitive to potassium chloride than to sodium chloride at the same concentration.¹

Leachate from the landfill contains high concentrations of salts, usually referenced as TDS. The discharge of leachate into Cleaner Creek increases the concentration of salts changing the freshwater composition and impacting freshwater aquatic life and habitat.

¹ “Clean Water Team (CWT) 2004. Electrical conductivity/salinity Fact Sheet, FS-3.1.3.0(EC). in: The Clean Water Team Guidance Compendium for Watershed Monitoring and Assessment, Version 2.0. Division of Water Quality, California State Water Resources Control Board (SWRCB), Sacramento, CA.”

Metals:

The discharges of leachate contain a distinct pattern of metal constituents including, Barium, Chromium, Copper, and Nickel. This same pattern of metal constituents also appears in the samples taken from Cleaner Creek.

Copper:

The toxicity of metal constituents is often dependent on the standard hardness of the receiving waters. Because no hardness was measured at the time the samples were collected, the Regional Water Board Staff rely on the hardness data from an April 24, 2009 spill incident. According to the April 24, 2009 results, the hardness of Cleaner Creek was 120 mgCaCO₃/L. With this information, the USEPA Water Quality criteria for copper is 16 ug/L for a Maximum Concentration (1-hr Avg.) and 10 ug/L for a Continuous Concentration (4-day Avg.) for protecting freshwater aquatic life.

The California Ocean Plan contains copper objectives of 3 ug/L for 6-month Median, 12 ug/L for Daily Maximum and 30 ug/L for Instantaneous Maximum for the protection of marine aquatic life. Although the specific discharge incident addressed in this order did not occur over a 6-month period, staff believe the 6-month Median objective is still applicable for comparison purposes because, based on historic information, approximately 3 leachate spills occur each year and the quantity of leachate discharged was large and continued over an unknown period of time. Records indicate that Humboldt Bay and Cleaner Creek receive large and lengthy doses of leachate from the landfill leachate system spills each year.

Leachate samples taken following the spill incidents generally show non-detectable levels or <5 mg/l of copper. However, samples taken from the sump and creek on April 6, 2010 show copper levels of 9.2 and 11 mg/l respectively which exceed the USEPA Water Quality Criteria for copper for a Continuous Concentration (4-day Avg.) for protecting freshwater aquatic life as determined above, and the California Ocean Plan objective for 6-month Median for the protection of marine aquatic life (See Table A1 below).

Nickel:

The Enclosed Bays & Estuaries criteria for nickel is 8.2 ug/L for Continuous Concentration (4-day Avg.) and 74 ug/L for Maximum Concentration (1-hr Avg.) for the protection of saltwater aquatic life.²

² A Compilation of Water Quality Goals, July 2008, Report prepared by Jon B. Marshack, D.Env., staff Environmental Scientist, Program Support Unit, California Regional Water Quality Control Board, Central Valley Region, CalEPA.

The Water Quality Objectives for nickel contained in the California Ocean Plan are 5 ug/L for 6-Month Median, 20 ug/L for Daily Maximum and 50 ug/L for Instantaneous Maximum for the protection of marine aquatic life.

Nickel concentrations in leachate samples range from 8.1 to 11 ug/L and the average historical concentration for Nickel is 8.5 ug/L. The leachate contains nickel concentrations at levels that exceed the Continuous Concentration (4-day Avg.) criteria contained in the Enclosed Bays & Estuaries and the 6-Month Median objective contained in the California Ocean Plan for protecting saltwater aquatic life (see Table A1 below).

Table A1
Water Quality Analysis Leachate (Sump)

Parameter	Units	Sump Leachate (4/6/10)	USEPA WQ Criteria Contin. Conc. (4-day Avg.)	Enclosed Bays & Estuaries Contin. Conc. (4-day Avg.)	CA Ocean Plan 6-Month Median	CA Ocean Plan Daily Max.
Alkalinity	mg/L	570				
Chloride	mg/L	73				
Conductivity	mg/L	1,400				
Sulfate	mg/L	20				
Total Dissolved Solids	mg/L	680				
pH	pH units	7.0				
Chemical Oxygen Demand	mg/L	57				
Barium	ug/L	340				
Chromium	ug/L	ND				
Copper	ug/L	13	10		3	12
Nickel	ug/L	11		8.2	5	20
Zinc	ug/L	59				
Chlorobenzene	ug/L	<1.0				
1,4-Dichlorobenzene	ug/L	1.5				

The County is not required to conduct toxicity testing as a part of its MRP; consequently, toxicity testing data for leachate from the Site is not available.

- c. Susceptibility to cleanup or abatement:

Category: 1

A score of 1 is assigned for this factor if less than 50% of the discharge is susceptible to cleanup and abatement. This factor is evaluated regardless of whether the discharge was actually cleaned up or abated.

Spilled leachate at the Site flows across the ground and, typically, enters a ditch, adjacent wetlands and/or nearby Cleaner Creek tributary to Humboldt Bay. Due to the Discharger's delay in responding to the leachate spill and discovering the spill, the quantity of leachate released was large and a majority of the leachate had already entered Cleaner Creek and Humboldt Bay, rendering it not susceptible to cleanup or abatement. Once such a spill enters such a large body of water, there is no practical way to clean up or abate the discharge. Therefore, because less than 50% of the discharge was susceptible to cleanup or abatement, the Discharger was assessed a score of one (1).

Step 2. Assessments for Discharge Violations

As estimated by the Discharger, the total volume of leachate discharged during the spill incident is 65,805 gallons over 8 days. This step addressed penalties for the spills based on both a per-gallon and a per-day basis.

Per Day Assessments for Discharge Violations

When there is a discharge, the Regional Water Board is to determine an initial liability amount on a per day basis using the Potential for Harm score and the Extent of Deviation from Requirement of the violation. The Potential for Harm Score was determined in Step 1, and is 6. The Extent of Deviation from Requirements is considered "moderate".

The WDR Order requires the Discharger to prevent the discharge of leachate to the maximum practicable extent to Humboldt Bay or its tributaries. The intended effectiveness of this requirement, to prevent the discharge of leachate from the Site, has been partially compromised where the Discharger failed to take reasonable steps under the circumstances. The prevention of discharge to the maximum practicable extent required the Discharger to implement more frequent inspections and routine maintenance measures. According to the 2010 Monitoring Records, the Discharger monitored only once a month during January, February, and March, some of the wettest months of the year. Additionally, the Discharger did not have a sensor system in place, forcing the Discharger to estimate the start date and time of the discharge.

Table 2 of the Enforcement Policy is used to determine a "per day factor" based on the Potential for Harm and Extent of Deviation. For this particular case, the factor is 0.15.

High Volume Discharge

The discharge violations resulted in a discharge of 65,805 gallons of leachate wastewater combined with storm water runoff. Although this amount is not considered a high volume discharge as defined by the Enforcement Policy, a reduction of the total initial liability based the nature of the facility and the Discharge Event is explained further in other factors as justice may require in Step 7.

Per Gallon Assessment for Discharge Violations

When there is a discharge, the Regional Water Board is to determine an initial liability amount on a per gallon basis using the same Potential for Harm score and the Extent of Deviation that were used in the per-day analysis. As described above, this factor is 0.15.

Initial Liability Amount

The initial liability amount for the discharge violation calculated on a per-gallon and per-day basis is as follows:

Per Day Liability:

$$\$10,000 \times 0.15 \times 8 = \$12,000$$

Per Gallon Liability:

$$64,805 [65,805 - 1,000] \times 0.15 \times \$10 = \$97,208$$

Total Initial Liability = \$109,208

Step 3. Assessment for Non-Discharge Violations

The Regional Water Board shall calculate an initial liability for each non-discharge violation. In this case, this factor does not apply because the violations are related to the discharge of leachate, and the liability was determined in Step 2.

Step 4. Adjustment Factors

There are three additional factors to be considered for modification of the amount of initial liability: the violator's culpability, efforts to cleanup or cooperate with regulatory authority, and the violator's compliance history.

d. Culpability

Higher liabilities should result from intentional and negligent violations as opposed to accidental violations. A multiplier between 0.5 and 1.5 is to be used,

with a higher multiplier for negligent behavior. The Discharger was given a multiplier value of 1.1.

Since closure of the site in 1979, the facility has performed a number of upgrades to the collection and distribution system (2011 Management Plan). The County of Humboldt, Division of Environmental Health, Solid Waste Local Enforcement Agency's (LEA) records since at least 2002 indicate the Discharger has been aware of the re-occurring pump failures and has previously contracted with a mechanical servicing company, Rogers Machinery, to repair and clean the pumps. Sometime after 2003 the Discharger replaced the single pump system with a new two-pump system which appeared to provide more consistent compliance until 2009. As indicated in the 2011 Management Plan, the sump is vulnerable to failure from the leachate containing "iron-eating bacteria [in the leachate] that create substantial amounts of orange-rust colored sludge," which builds up and clogs the lines in the leachate system, thereby inhibiting flow and causing leachate spills.

The Discharger did not anticipate what a reasonable person would do under the circumstances. Given the sump's susceptibility to clogging, a reasonable person in the Discharger's circumstance would have performed regular maintenance, including pump replacement or rebuilding, sump and vault sludge removal, and Roto-rooter line cleaning, to remove the bio-solids, particularly before the start of the rainy season³. The Discharger failed to exercise ordinary care where it did not perform the necessary maintenance prior to the discharge violation.

In the case of this alleged violation, the leachate spill continued undetected until the monthly site inspection was conducted. Consequently, leachate spills potentially went unnoticed for several days or weeks at a time. The Discharger did not initiate more frequent routine inspections, prior to the discharge violation, as a means to prevent spills from going undetected for prolonged periods. The 2010 Monitoring record indicates the Discharger performed only two inspections prior to the March spill incident. Considering January is at the beginning of the wet season, more frequent inspections other than monthly inspections were warranted. A reasonable person in the Discharger's position would have increased the frequency of monitoring to daily, when necessary, to detect possible spills, particularly during the winter and spring rainy seasons. The Discharger could have prevented this discharge violation by exercising ordinary care such as increasing its regular monitoring of the sump and vault. Its failure to do so further adds to the Discharger's culpability under this factor.

Additionally, as indicated in the California Department of Fish and Game April 26, 2010 Inspection Report, the Discharger did not make an immediate request for servicing. Aware of the composition of the leachate and the susceptibility of the sump and vault to clogging, a reasonable facility operator, who is notified of

³ The Humboldt County website notes that "[i]n most years, rainfall is experienced each month of the year, although amounts are negligible from June through August." (see <http://co.humboldt.ca.us/portal/about.asp>)

an overflowing sump, would have communicated the urgency of the situation to the repair servicing company. Failure to take such reasonable steps further adds to the Discharger's culpability under this factor.

e. 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 .75 and 1.5 is to be used, with a higher multiplier when there is a lack of cooperation. In this case, the Discharger was given a value of 1.30 for the discharge violation.

Spilled leachate at the Site flows across the ground and, typically, enters a ditch, adjacent wetlands and/or nearby Cleaner Creek, a tributary to Humboldt Bay. The spilled material could be contained and cleaned up prior to entering waters of the U.S. However, the Discharger was unable to immediately contain and clean up the spilled leachate.

Regional Water Board Staff find that the Discharger failed to act reasonably under similar circumstances. The Discharger permitted the discharge to continue for 5 days after it was discovered before finally abating the discharge.

f. History of Violations

This factor is to be used when there is a history of repeat violations. A minimum multiplier of 1.1 is to be used, and is to be increased as necessary. Because there have been no formally adjudicated actions against the Discharger, the Discharger was assessed a neutral multiplier of 1.0. Accordingly, no additional liability is being recommended.

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjusted factors (Step 4) to the Initial Liability Amount (Step 2).

Initial Liability x Culpability Multiplier x Cleanup and Cooperation Multiplier x
History of Violations Multiplier = Total Base Liability

Total Base Liability

\$109,208 x 1.1 x 1.3 x 1.0 = \$156,167

CALCULATION OF PENALTY FOR FAILURE TO REPORT

Per Day Assessment for Non-Discharge Violation

Step 1 and 2. Potential for Harm and Assessments for Discharge Violation

Violation No. 2 is a non-discharge violation. Accordingly, Steps 1 and 2 are not applicable.

Step 3. Per Day Assessment for Non-Discharge Violation

Liability is assessed on a per day basis as shown below.

Step 3A. The per day factor is **0.4**. This factor is determined by a matrix analysis using the potential for harm (moderate) and the deviation from requirements (major).

- a. The Potential for Harm is **moderate** and determined as follows:

The WDR Order requires the Discharger to notify the Regional Water Board of any leachate spill incident as soon as it has knowledge of the discharge. The Discharger failed to report the alleged spill violation to the Regional Water Board.

The failure to follow the notification requirements in the WDR Order prolonged the discharge of leachate into Cleaner Creek, delaying immediate cleanup and containment efforts and creating a substantial potential for harm to the beneficial uses of Humboldt Bay.

- b. Deviation from Requirement is **major** and evaluated as follows:

The WDR Order requires the Discharger to notify the Regional Water Board of any leachate spill incident as soon as it has knowledge of the discharge. The Discharger had knowledge of the first spill incident on March 30, 2010 when a Humboldt County Public Works staff person performed an inspection and observed flow coming from the overflow on the sump. The Discharger never notified Regional Water Board staff⁴ of the spill incident. The notification requirement was rendered ineffective where the discharger disregarded the requirement to notify Regional Water Board staff as soon as it had knowledge of the discharge.

Step 3B. There are 8 days of violation. The maximum statutory per day liability is \$1,000 per day. Applying a per day factor of 0.4 to the number of days of violation and the maximum liability yields an initial liability of \$3,200 (no. of days of violation x per day factor x statutory maximum liability).

Step 4. Adjustment Factors

There are three additional factors to be considered for modification of the amount of initial liability: the violator's culpability, efforts to cleanup or cooperate with regulatory authority, and the violator's compliance history.

⁴ Regional Water Board staff was notified of the spill incident by LEA on April 5, 2010.

Step 4A. Culpability is **1.2** and is determined as follows:

Higher liabilities should result from intentional or negligent violations as opposed to accidental violations. A multiplier between 0.5 and 1.5 is used, with a higher multiplier for intentional or negligent behavior. The Discharger was given a multiplier value of 1.2 because the required reporting requirement is described in WDR Order No. 79-101. The Discharger has been formally and informally notified of its obligations under its Permit, and is fully culpable for the failure to report the spill to the Regional Water Board in a timely manner.

Step 4B. The discharger's cleanup and cooperation factor is **1**.

This factor reflects the extent to which the 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. The Discharger was given a neutral multiplier of 1 because this is a non-discharge violation.

Step 4C. The discharger's history of violations factor is **1**.

This factor is to be used when there is a history of repeat violations. A minimum multiplier of 1.1 is to be used, and is to be increased as necessary. The Discharger has had no fully adjudicated violations and therefore a factor of 1 is appropriate.

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 Amount: **\$3,840** (Initial Liability (\$3,200) x Adjustments (1.2)(1)(1)).

COMBINED TOTAL BASE LIABILITY AND FACTORS APPLIED TO ALL DISCRETIONARY VIOLATIONS

The Combined Total Base Liability Amount for the violations is **\$160,007**.

The following factors apply to the combined Total Base Liability Amounts for all of the discretionary violations discussed above.

Step 6. Ability to Pay and Continue in Business:

The Table Bluff landfill is operated by a public agency, the County. The Regional Board has determined that county governments have the ability to pay the proposed penalty amount. County governments, such as the County of Humboldt, have the power to levee fees and raise revenue from a number of sources including property taxes and sales taxes.

Step 7. Other Factors as Justice May Require:

The Table Bluff landfill is a unique facility that warrants a reduction in the total base liability of an amount equivalent to the reduction of a high volume discharge. While most land disposal sites in Mendocino and Sonoma County have some form of leachate collection where tank farms collect leachate to haul off-site, the leachate at the Table Bluff landfill is designed to discharge to a leach field. The Table Bluff leachate collection system is a French drain-style system built to collect landfill leachate as well as groundwater and rainfall runoff. The leachate collected has low levels of VOCs (in the parts per billion) owing to the age of the waste (over 30 years post-closure) and the way in which the leachate collection system is designed. Like many of the North Coast Region landfill coastal sites, the Site endures high levels of winter rainfall, usually in excess of 40 inches per year. Additionally, the pump malfunction related to the Discharge Event occurred during several storm events from March 28 through March 31 and also from April 2 through April 5. For these reasons, the Prosecution Team recommends a reduction in total base liability in an amount equivalent to the reduction of a high volume discharge.

A maximum liability of \$2 per gallon was selected. Using this maximum, the revised initial liability amount for the discharge event is \$19,442.

$$64,805 [65,805 - 1,000] \times 0.15 \times \$2 = \$19,442$$

The revised total base liability is \$44,962 (\$31,442 x 1.1 x 1.3 x 1.0). The revised combined total base liability is **\$48,802** (\$44,962 + \$3,840).

Costs of Investigation and Enforcement Adjustment

The costs of investigation and enforcement are “other factors as justice may require,” and should also be added to the liability amount. The State Water Board Office of Enforcement has directed that all regions are to use a value of \$150 per hour for staff costs.

- a) Adjusted Combined Total Base Liability Amount: **\$48,802 + \$9,000** (Staff Costs) = **\$57,802**.
- b) Discussion: Regional Water Board and State Water Board staff cost associated with this enforcement action is estimated to be a minimum of

\$9,000. This amount is calculated based on an average hourly wage of \$150 multiplied by 60 hours of staff time, which includes time to review and tally violations, and prepare this Stipulated Order and the accompanying public notices.

Step 8. Economic Benefit

Pursuant to Water Code section 13385, subdivision (e), civil liability, at a minimum, must be assessed at a level that recovers the economic benefit, if any, derived from the acts that constitute the violation.

- a. Estimated Economic Benefit: **\$5,705.**
- b. Discussion: Regional Water Board Staff believe the Discharger may have realized economic benefit associated with the violations which occurred due to the leachate spills. The Discharger was required to take immediate actions to prevent the discharge of leachate to surface waters. The primary economic benefit to the Discharger for the violation is avoided: (1) maintenance costs, (2) costs associated with increasing the inspection frequency (particularly during winter months), and (3) containment and cleanup costs.

On September 16, 2008 and again on April 9, 2010, the Discharger received quotes from a machine shop for semi-annual inspections of the leachate system pumps and expected pump servicing; the costs for these services were \$704 (2008) and \$744 (2010). Although the Discharger received the service quotes, it chose not to obtain these services until November 2010. The economic benefit to the Discharger is at least **\$134⁵** for avoiding these pump service/maintenance inspection costs from 2008 through 2010. The Discharger reported on November 5, 2010 that a semi-annual routine pump maintenance program has been arranged with the machinery shop. The first inspection was scheduled for the week of November 8, 2010, and would include an inspection and on-site pump maintenance. If necessary, the pumps would be removed, cleaned, and replaced. Replacement of a faulty float switch was also scheduled during the inspection.

Based on the 2011-2012 General Fund Budget for Humboldt County, Department of Public Works, Solid Waste, staffing for Solid Waste has not changed since 2007-2008. An increase in staffing directed towards the Table Bluff Landfill site would allow increased inspection frequency subsequently helping to prevent spills from occurring and going undetected for long periods. Increasing the inspection frequency to once a week would likely take no more than 4 hours per week or 16 hours per month.

⁵ Economic Benefits of Noncompliance, Analysis by Gerald Horner, Economist, State Water Resources Control Board, Office of Research, Planning, and Performance

The Discharger currently employs an Environmental Analyst who conducts the inspections. The current monthly salary for this position starts at \$3,568⁶. Assuming that salary is based on a workweek of 40 hours, the costs associated with increasing inspection frequency to once a week would be approximately \$347 per month or \$4,164 per year. The economic benefit of not increasing the inspection frequency over the period of the violations (approximately March 30, 2010 through April 5, 2010) is estimated at **\$376³**.

Containment and cleanup costs for the Discharge Event would be significant given the large volumes of leachate discharged. Had the spill been detected early and the volume for each spill less than 3,000 gallons, containment utilizing a berm structure⁷ would cost about \$3,900. Most current market berm structures are quick and easy to assemble and reusable. Cleanup costs associated with using one septic tank truck to pump, haul and dispose of the discharged material would be approximately \$800-\$900⁸. Depending on spill response time, it may be possible to pump and recycle the contained material back into the system rather than hauling it away for disposal. The total cost for containment and cleanup for a spill volume less than 3,000 gallons would be no more than about \$4,800. The cost for the spill, assuming the containment berm was reused, is about \$7500. The economic benefit to the Discharger for failing to contain and cleanup the spill is estimated at **\$5195³**.

The total economic benefit to the Discharger for violations is estimated at **\$5705³**.

Step 9. Maximum and Minimum Liability Amounts

The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. The maximum administrative liability amount is the maximum allowed by Water Code section 13385: (1) \$10,000 for each day of violation, and (2) on a per gallon basis in an amount not to exceed \$10 per gallon of waste discharged but not cleaned up in excess of 1,000 gallons. The proposed liability falls within the maximum and minimum amounts.

a) Maximum Liability Amount: **\$736,050**

b) Minimum Liability Amount: **\$6,276**

⁶ Humboldt County, Personnel Department, Online Job Application System

⁷ Emedco, SnapUp Berms, www.emedco.com

⁸ Steve's Septic Service, Fortuna, CA, stevesseptic.com

Step 10. Final Liability Amount

The total recommended liability amount proposed for the discharge violation and one reporting violation is **\$57,802**.

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