ATTACHMENT A

WATER QUALITY ENFORCEMENT POLICY METHODOLOGY

Each factor of the State Water Resources Control Board Enforcement Policy and its corresponding score for the alleged violation is presented below:

Calculation of Penalty

Step 1. Potential for Harm for Discharge Violations

The potential for harm to the environment associated with the violation.

Factor 1, Potential for Harm to Beneficial Uses: Impacts to beneficial uses of Humboldt Bay and its tributaries were observed or likely substantial. Existing and potential beneficial uses of Humboldt Bay include:

Municipal and Domestic Supply
Agricultural Supply
Industrial Service Supply
Industrial Process Supply
Freshwater Replenishment
Navigation
Hydropower Generation
Water Contact Recreation
Non-Contact Water Recreation
Commercial and Sport Fishing
Cold Freshwater Habitat
Wildlife Habitat
Rare, Threatened, or Endangered Species
Migration of Aquatic Organisms
Marine Habitat
Spawning, Reproduction, and /or Early Development
Shellfish Harvesting
Estuarine Habitat
Aquaculture
Native American Culture

Raw sewage contains high levels of suspended solids, pathogenic organisms, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants that have the potential to adversely impact aquatic organisms and public health. Increased nutrients cause increased algal and macrophyte growth, increased turbidity, larger dissolved oxygen swings, and potential for increased sediment oxygen demand, all of which reduce the cold water fish and aquatic survival rates, and therefore impact many of the fisheries aquatic habitat beneficial uses. Nutrient and pathogen discharges specifically impact the Humboldt Bay shellfish areas and can cause closure of

the areas. Shellfish harvest is permitted only in "Conditionally Approved" areas where water bacteriological quality meets the prescribed numerical standards described in section 3 of the Basin Plan, except during certain predictable periods. The exception occurs whenever there is a storm event producing one-half inch within 24 hours recognizing that the bacterial quality of runoff into the Bay from all tributary watersheds causes the Bay waters to exceed the harvest-allowance standard. Managing sewage spills which cause high-level bacteria discharges may provide fewer days of shellfish harvest closure after each storm. A score of three (3) (moderate) is assigned to this factor.

Factor 2, Physical, Chemical, Biological or Thermal Characteristics of the Discharge: Raw, undiluted sewage, as compared to treated and/or diluted wastewater, typically has about ten times the concentrations of biochemical oxygen demand, trash, total suspended solids, oil and grease, ammonia, and thousands of times the levels of viruses and bacteria. These pollutants exert varying levels of impact on water quality and, as such, will adversely affect beneficial uses of receiving waters to different extents. The toxicity of the discharged sewage is not specifically known; however, raw sewage is generally toxic to aquatic organisms unless highly diluted. Some possible adverse effects on water quality and beneficial uses as a result of a sanitary sewer overflow include:

- Adverse impact to fish and other aquatic biota caused by bio-solid deposition, oil and grease, and toxic pollutants common in sewage (such as heavy metals, pesticides, personal care products, and pharmaceuticals);

- Creation of localized toxic environment in the water column as a result of the discharge of oxygen-demanding pollutants that lower dissolved oxygen, and elevated ammonia concentration which is a demonstrated fish toxicant; and

- Impairment to water contact recreation and non-contact water recreation and harm to fish and wildlife as a result of elevated bacteria levels including pathogens.

A score of three (3) (above moderate risk) is assigned to this factor.

Factor 3, Susceptibility to Cleanup or Abatement: Less than 50 percent of the discharge was susceptible to cleanup or abatement. The sanitary sewer overflows discharged directly to Humboldt Bay or tributaries to Humboldt Bay and could not be recovered. A score of one (1) (less than 50% susceptible to cleanup) is assigned to this factor.

Final Score – Potential for Harm: The total score for step one is **7**.

Step 2. Assessment for Discharge Violations

Because this violation resulted in a large total volume of sewage spilled within a short duration, liability is proposed both on a per gallon and a per day basis, (pursuant to California Water Code section 13385) as shown below.

Per Gallon Assessment
The deviation from requirements is major. Discharge Prohibition E of Regional Water Board Order No. R1-2009-0033 and NPDES Permit No. CA0024449 prohibits the discharge of untreated waste from anywhere within the Discharger's collection system. Prohibition C.1 of State Water Resources

Control Board Order No. 2006-003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, prohibits any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States. The violation resulted in a discharge of untreated wastewater to Humboldt Bay or its tributaries, rendering these prohibitions ineffective.

In addition, section 301 of the Clean Water Act (33 U.S.C. § 1311) and Water Code section 13376 prohibit the discharge of pollutants to surface waters except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The discharge of untreated wastewater to Humboldt Bay or its tributaries was not in compliance with an NPDES permit, rendering the requirements of section 301 of the Clean Water Act (33 U.S.C. § 1311) and CWC section 13376 ineffective.

Therefore, in accordance with Table 1 - Per Gallon Factor for Discharges on Page 14 of the Enforcement Policy, a multiplier of 0.31 is assigned where the potential for harm score is 7 and the deviation from requirements is major.

Per Day Assessment
The deviation from requirements is major, for the reasons stated above.

Therefore, in accordance with Table 2-Per Day Factor for Discharges on Page 15 of the Enforcement Policy, a multiplier of 0.31 is assigned where the potential for harm score is 7 and the deviation from requirements is major.

High Volume Discharge
The "O" Street Lift Station discharge involved a large volume sewage spill resulting from a storm event and subsequent rainfall runoff causing excessive infiltration/inflow into the Discharger's collection system. Consistent with the direction in the Enforcement Policy regarding "high volume discharges," a maximum per gallon assessment of $2.00 is appropriate.

INITIAL LIABILITY AMOUNT

The Initial Liability Amounts for the violation calculated on a per gallon and a per day basis, (pursuant to CWC Section 13385) are as follows:

Per Gallon Liability
(90,000) X (.31) X ($2.00) = $55,800

Per Day Liability
(10,000) X (.31) = $3,100

Total Initial Liability = **$58,900**

Step 3. Per Day Assessments For Non-Discharge Violations
This step in the penalty calculator is not applicable to this discharge violation.

Step 4. Adjustment Factors

Culpability:
The spill was caused by a heavy storm event and subsequent excessive infiltration/inflow (I/I) entering the collection system. The excessive I/I overwhelmed the capacity of the "O" Street Lift Station resulting in a SSO. The Discharger is aware that the "O" Street Lift Station, along with 15 other lift stations in the Martin Slough drainage area, needs upgrading and/or improvements. The Discharger completed a cost analysis determining it is more cost effective to implement an area-wide collection system project called the Martin Slough Interceptor Project (MSIP) rather than upgrade the existing collection system. The MSIP is currently 40% completed. Although the MSIP is underway, the Discharger is still responsible to maintain its collection system to help prevent SSOs and to comply with its WDRs. The degree of culpability here should be a multiplier of **1.1**.

Cleanup and Cooperation: The Discharger responded to the spill, but was unable to contain it or clean it up. Therefore, a multiplier of **1.1** is appropriate.

History of Violations: The Discharger has a history of SSOs from its collection system, and has begun the MSIP designed to improve the reliability of a portion of its collection system. The following summarizes the Discharger's relevant SSO history:

Period	Enforcement	Number of SSOs/Number from the "O" Street Lift Station	SSOs resulting in discharges to surface waters	Volume Spilled from the "O" Street Lift Station (gallons)
10/2004 – 3/2006	ACLC R1-2006-0091	29/7	15	322,900
3/2006 – 6/2007	ACLC R1-2007-0066	4/1	3	68,400
2/2008 – 7/2009	ACLC R1-2009-0113	8/0	1	0
1/2012 – 12/2012	Current Review Period	6/2	6	106,800

Therefore, a multiplier of **1.2** is appropriate.

Step 5. Determination of Total Base Liability Amount

The Total Base Liability amount is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 2.

(Initial Liability) X (Culpability Multiplier) X (Cleanup and Cooperation Multiplier) X (History of Violations Multiplier) = Total Base Liability

($58,900) X (1.1) X (1.1) X (1.2) = $85,522

Total Base Liability = **$85,522**

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

The Enforcement Policy provides that if the Regional Water Board has sufficient financial information to assess the violator's ability to pay the Total Base Liability, or to assess the effect of the Total Base Liability on the violator's ability to continue in business, then the Total Base Liability amount may be adjusted downward. Similarly, if a violator's ability to pay is greater than similarly-situated dischargers, it may justify an increase in the amount to provide a sufficient deterrent effect.

The Regional Water Board Prosecution Team has enough information to suggest that the Discharger has the ability to pay the proposed liability, so that the burden of rebutting this presumption shifts to the Discharger. The Discharger's most recent financial statement shows that, for fiscal year ending June 30, 2011, the Discharger's wastewater enterprise fund had unrestricted net assets of $17,265,799 (http://www.ci.eureka.ca.gov/depts/finance/report_pages/cafr_063011.asp). Additionally, the Discharger is a municipality located in a rural county with financial hardship. However, it is not a small community and serves a population of approximately 44,128 providing a revenue basis. The Discharger has the ability to pay the proposed liability and continue in business. Accordingly, the Total Base Liability is not adjusted.

Step 7. Other Factors as Justice May Require

As of the date of the issuance of this Complaint, the Regional Water Board Prosecution Team has incurred costs of investigation and enforcement in the amount of $3,600, based on 24 hours of time at an average staff cost of $150 per hour. In accordance with the Enforcement Policy, this amount is added to the Total Base Liability Amount.

$85,522 + $3,600 = **$89,122**

Step 8. Economic Benefit

The Discharger conducted a cost analysis and determined it was more cost effective to implement the Martin Slough Interceptor Project (MSIP) than upgrading its lift stations within the Martin Slough drainage area. The MSIP includes installing an interceptor line and ultimately decommissioning 15 lift stations, and modifying the "O" Street Lift Station. The MSIP is currently 40% complete. During the MSIP construction, the Discharger is responsible for maintaining its collection system and implementing improvements which may help reduce or prevent SSO incidents. The "O" Street Lift Station was scheduled to have a new alarm system installed in 2009. The Discharger may have incurred an economic savings for delaying and/or failing to implement improvements to the "O" Street Lift Station. The economic benefit to the Discharger for delaying the new alarm system improvement is as follows:

Cost for alarm system = $2,121 to $3,906 (includes 3 years wireless service)[1]
Cost for installation = $50/hour X 16 hours = $800
Total initial cost = $2,121 + $800 = $2,921
Delay of 3 years

[1] 2012 OmniSite, Cellular Monitoring Solutions (www.omnisite,com)

1st year = $2,921
2nd year = $2,921 X 6% = $175.26
3rd year = ($2,921 + $175.26) X 6% = $185.77

Economic benefit to the Discharger = $2,921 + $175.26 + $185.77 = **$3,282.04**

Step 9. Maximum and Minimum Liability Amounts

As discussed in the Complaint, the maximum liability that may be imposed for the violations alleged herein is $900,000. The minimum liability is the estimated economic benefit to the Discharger which is $3,282.04.

The proposed liability falls within the maximum and minimum liability amounts.

Step 10. Final Liability Amount

The final liability amount proposed is **$89,122** which includes $3,600 for staff costs.