North Coast Regional Water Quality Control Board

Response to Comments for the Proposed Waste Discharge Requirements and NPDES Permit No. R1-2012-0046

May 25, 2012

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

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Introduction

This document presents comments and/or summarizations of comments provided by stakeholders during the public comment period for Proposed Waste Discharge Requirements and NPDES Permit No. R1-2012-0046 along with Regional Water Board [staff] responses to comments. The public comment period for this amendment began upon public release of the draft Order on March 12, 2012, and ended 46 days later on April 27, 2012.

1. Comments Received by US EPA

Major Concern 1.1: Chronic Toxicity Narrative Reporting Requirement

Commenter: US EPA, Amelia Whitson, Staff

Source: Email, received March 13, 2012

Concern: US EPA requested that the Order include a reporting requirement for Chronic Toxicity regarding compliance with the narrative toxicity objective in Receiving Water Limitation V.A.10.

Response to Concern 1.1:

Staff concur with this comment and have included the following reporting requirement in the Monitoring and Reporting Program:

Table E-3. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chronic Toxicity	TUc	Grab	Annually	See Section V.B below
Chonic Toxicity (narrative)	Passed/Triggered[1]			--

[1] The Discharger shall include reporting regarding compliance with the narrative toxicity objective in Receiving Water Limitation V.A.10 by reporting whether the chronic toxicity test passed or failed in relation to the chronic toxicity trigger of 1.0 TUc. For narrative chronic toxicity reporting, "Passed" shall be reported when chronic toxicity effluent results do not trigger accelerated testing (e.g., a result of ≤1.0 TUc = 100/NOEC). "Triggered" shall be reported when chronic toxicity effluent results trigger accelerated testing by exceeding the chronic toxicity trigger of 1.0 TUc = 100/NOEC.

2. Comments Received by SPI

Commenter: SPI, Jerry Kelley, General Manager

Source: Letter, received April 17, 2012

SPI (the Permittee) submitted one hundred eighty (180) comments in an underline-strikeout version of a Microsoft Word document. Rather than address each comment individually, staff have identified the Permittee's major concerns and addressed them below. A discussion of all other minor concerns is included in the last response in this document.

Major Concern 2.1: Beneficial Use Selection

Concern: SPI argues that the freshwater wetland receiving water body should have beneficial uses determined on a site-specific basis and that the Wetland Habitat (WET) existing beneficial use is the only applicable beneficial use.

Response to Concern 2.1:

The beneficial uses listed in the draft Order are the same as in the existing permit. The Report of Waste Discharge (ROWD) included neither a request for a site-specific determination of beneficial uses nor the necessary information to identify the site-specific beneficial uses of this wetland. The list of beneficial uses in the existing permit and draft Order represents those listed for Freshwater Wetlands in Table 2-1 of the Water Quality Control Plan for the North Coast Region (the Basin Plan).

In response to this comment, staff has used its best professional judgment to analyze all potential beneficial uses and available information to identify which beneficial uses actually apply to this wetland. Identification has only been performed where staff believes sufficient information is available. If sufficient information was not available to make a site-specific identification for a particular beneficial use, then no change was made to the draft Order with respect to that beneficial use. Staff found sufficient information available to identify that the Navigation (NAV) is not applicable to this freshwater wetland, but also found that the Municipal and Domestic Water Supply (MUN) beneficial use is identified as potential for this wetland. All other beneficial uses are retained from the previous permit consistent with the classification of freshwater wetlands in table 2-1 of the Basin Plan.

Upon receipt of sufficient information to identify other beneficial uses on a site-specific basis for this wetland, staff may reopen the adopted order to make appropriate changes to the Order. According to the latter discussion, the draft Order has been amended in response to this comment by inserting a reopener provision for the site specific identification of beneficial uses in section VI.C.1.g, as follows:

Beneficial Use Identification. If the Permittee collects sufficient information to support a site specific identification of beneficial uses of the freshwater wetland receiving water, then this Order may be reopened to incorporate such analysis.

The following insertion was made in Section III.C.1 of the Fact Sheet:

A. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plan, at page 2-18.00, establishes beneficial uses for groundwater as municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater supply.

   The Basin Plan, at page 2-17 and 2-18, describes that "the beneficial uses of wetlands may continue to be determined on a site-specific basis," and that "When field reconnaissance is conducted…the specific beneficial uses of wetlands will be identified as existing or potential on an individual basis." Staff has reviewed the available evidence[2] from the record and has determined that it is sufficient to identify that the Navigation beneficial use (NAV) does not apply and that Municipal and Domestic Supply (MUN) beneficial use is potential to this freshwater wetland.

   Municipal and Domestic Water Supply (MUN)

   MUN applies to the freshwater wetland receiving waterbody as a potential beneficial use for the following three independent reasons:

   a. MUN is identified as a potential beneficial use (P) for the category of waterbodies classified as Freshwater Wetlands, which characterizes the subject receiving water body.

[2] Botanical Survey of Proposed Development Sites at the SPI Arcata Mill Facility (Green, 2002); Biological Assessment Report (Environet, 2003); Staff Report (Coastal Commission, 2003); Hydrologic Study of Vegetated Pond (Geomatrix, 2004)

b. MUN is identified as an existing beneficial use (E) for all groundwaters in the North Coast Region. According to the *Hydrologic Study of Vegetated Pond* (the subject receiving water body) by Geomatrix Consultants Inc. (2004) the water level in the subject receiving water body is "strongly influenced by surrounding groundwater levels." This study goes on to state that "groundwater levels in the Vegetated Pond area remain very shallow and are similar to the surface water level in the pond." Freshwater Wetlands are further identified as having the potential beneficial use (P) of Groundwater Recharge (GWR), which further supports the application of the existing MUN status of groundwaters for this freshwater wetland. Furthermore, the *Sources of Drinking Water* Policy, Resolution No. 88-63, resolves that "All surface and ground waters of the State are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Boards…" with some exceptions, which are currently unsupported by evidence in the record. The conclusions of this hydrologic study and the resolution of the *Sources of Drinking Water* Policy indicate that the subject receiving water body would also have the existing beneficial use (E) of MUN. The Basin Plan states that "Existing uses cannot be removed or modified…," which eliminates the possibility of performing a UAA on this receiving water body for MUN.

c. MUN is identified as E for Humboldt Bay to which the subject receiving water is tributary. The Basin Plan identifies that "The beneficial uses of any specifically identified water body generally apply to all its tributaries." This general application, also referred to as the *Tributary Rule*, further supports the application of MUN as an existing beneficial use for the subject receiving water body.

Navigation (NAV)

The NAV beneficial use is described in the Basin Plan as "Uses of water for shipping, travel, or other transportation by private, military or commercial vessels." The structural ecological components of this fen, including a peat layer and floating mats of vegetation, as described in the botanical survey (Green, 2002) would inherently impede navigation and is, therefore, sufficient information to determine there is no potential for this fen to have the NAV beneficial use.

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Freshwater Wetland	Existing: • Wetland Habitat (WET) Potential: • Municipal and Domestic Water Supply (MUN) • Agricultural Supply (AGR) • Industrial Service Supply (IND) • Ground Water Recharge (GWR) • Freshwater Replenishment (FRSH) • Water Contact Recreation (REC-1) • Non-Contact Water Recreation (REC-2) • Commercial and Sport Fishing (COMM) • Warm Freshwater Habitat (WARM) • Cold Freshwater Habitat (COLD) • Wildlife Habitat (WILD) • Preservation of Rare, Threatened, or Endangered Species (RARE) • Migration of Aquatic Organisms (MIGR) • Spawning, Reproduction, and/or Early Development (SPWN) • Shellfish Harvesting (SHELL) • Estuarine Habitat (EST) • Aquaculture (AQUA) • Native American Culture (CUL) • Flood Peak Attenuation/Flood Water Storage (FLD) • Water Quality Enhancement (WQE)
--	Groundwater	Existing • Municipal and Domestic Supply (MUN) • Industrial Service Supply (IND) • Industrial Process Supply (PRO) • Agricultural Supply (AGR) • Freshwater Replenishment (FRSH)

Major Concern 2.2: Permitted and Design Flows

Concern: The Permittee identifies (Comment A3) that the treatment system is designed to pass up to 7.9 cubic feet per sec (cfs) for log deck sprinkle flow (2 cfs) and 10-year 24-hour storm (5.9 cfs). Overflow weirs are designed to handle 10-year time of concentration storm flow (17.6 cfs). The Permittee further requests (Comment A7) the ability to sprinkle up to the designed sprinkle flow of 2 cfs, which corresponds to approximately 1.3 mgd. The Permittee also stated in Comment A75 that continuous flow measurement at the outlet is onerous and not practical. In further discussions, the

Permittee suggested the use of a rain gauge to calculate the volume of storm water runoff.

Response to Concern 2.2:

An increase in permitted flow would require an Antidegradation Analysis to ensure compliance with the Antidegradation Policy and a certified document demonstrating compliance with the California Environmental Quality Act (CEQA). No such analysis or certification has been completed to support increasing the permitted flow and, therefore, this request cannot be granted at this time. Nonetheless, staff recognize that the Order should accurately reflect the designed treatment capacity of the system. Staff concurs with the Permittee's proposal to calculate the volume of storm water runoff from the log deck. Staff have included the appropriate permitted and design flows in the proposed Order and have modified the monitoring requirement as follows:

Table 4. Facility Information

Facility Permitted Log Deck Sprinkle Flow	0.6 million gallons per day (MGD)
Facility Design Treatment Capacity	5.1 million gallons per day (MGD)

Table F-1. Facility Information

Facility Permitted Flow	0.6 million gallons per day (mgd)
Facility Design Treatment Capacity	5.1 mgd

Table E-3. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gallons	Calculation	Daily	Rain gauge

Major Concern 2.3: Effluent Limits for pH

Concern: The Permittee claims that it is not necessary to include a more stringent requirement to obtain compliance with the receiving water quality objective of 8.5 as shown by existing data (Comment A10).

Response to Concern 2.3:

Staff have further evaluated the Facility effluent pH data and concur that there is no reasonable potential for the effluent to exceed the Basin Plan upper-end pH water quality objective of 8.5. As a result, staff have amended the draft Order to include the technology based effluent limitation of 9.0 pH standard units, which was previously included in the existing permit, as follows:

Table 5. Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.0	9.0

Table F-4. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Debris	--	--	--	--	[3]
pH	standard units	--	--	6.0	9.0

Section C.3.a.i of the Fact Sheet Determining the Need for WQBELs for Non-Priority Pollutants has been deleted as follows:

Table F-6. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Minimum Median of Three Consecutive Bioassays

Table F-8. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	standard units	--	--	6.0	9.0	ELG,BPJ

[3] There shall be no debris (as defined in Attachment A) discharged.

Major Concern 2.4: Receiving Water Limitations and Monitoring Requirements

Concern: The Permittee requested to delete the dissolved oxygen receiving water limitation based on another request to remove the WARM, COLD, and SPWN beneficial uses. The Permittee also requested a minor addition to the pH receiving water limitation and deletion of temperature receiving water limitation. On May 14, 2012, the Permittee further requested a minor modification to the temperature receiving water limitation to be consistent with the Basin Plan.

Response to Concern 2.4: Some receiving water objectives, including dissolved oxygen, pH, and temperature depend on the beneficial uses being protected. In this case, the fen is in the freshwater wetland category with the potential beneficial uses of WARM, COLD, and SPWN. The Basin Plan allows for a site-specific identification of beneficial uses for wetlands. Since an adequate site-specific investigation has not yet been performed for these beneficial uses, staff has determined that this Order may be reopened to include more stringent receiving water limitations if these beneficial uses are identified during a future site specific investigation. Staff will issue a separate order to the Discharger requiring such an investigation to be performed. Staff has also included, as requested by the Permittee, an allowance to demonstrate that a temperature change does not adversely affect beneficial uses. The following changes have been made in response to comments regarding receiving water limitations:

Section V.A of the proposed Order:

V. Receiving Water Limitations

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). Discharges from the Facility shall not cause the following:

1. The discharge shall neither cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5.[4]

10. The discharge shall not cause a measurable temperature change in the receiving water at any time unless it can be demonstrated to the satisfaction

[4] If natural background pH levels are below 6.5, the discharge shall not cause the receiving water pH to be depressed any further, and if natural background pH levels are above 8.5, the discharge shall not cause the receiving water pH to be increased any further.

of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.

Section V.A of the Fact Sheet -

V. Rationale for Receiving Water Limitations

A. Surface Water

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]*he numerical and narrative water quality objectives define the least stringent standards that the Regional* [Water] *Board will apply to regional waters in order to protect the beneficial uses*." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, chemical constituents, color, floating material, oil and grease, pH, pesticides, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity. The numeric receiving water limitation for pH is based on the general water quality objectives for inland surface waters, enclosed bays, and estuaries of the Basin Plan. This receiving water has the potential beneficial uses of COLD, WARM, and SPWN, which have more stringent requirements for pH and dissolved oxygen than those contained in this Order. Instead, staff is requiring the Permittee to perform a study outside of this permit to facilitate the site-specific identification of beneficial uses for this wetland. Upon completion of that beneficial use identification, staff may reopen the permit to include appropriate receiving water limitations.

The previous permit incompletely implemented the Basin Plan water quality objective for pH by only limiting the upper end of the receiving water pH to 8.5; instead, this permit implements the entire Basin Plan water quality objective for pH by also limiting the lower end of the pH to 6.5 and limiting any further decrease or increase to pH if natural background levels are outside of the range 6.5 to 8.5, respectively. This permit also includes a new receiving water limitation for temperature based on the water quality objective in the Basin Plan.

Major Concern 2.5: Toxicity Reduction Evaluation (TRE) Workplan

Concern: The Permittee asserts that it has already demonstrated what needs to be done to eliminate toxicity in the effluent and that there is no need to require the development of another report (Comment A21). The Permittee requests that the Order include a provision stating the actions to be taken and the requisite accelerated sampling (Comment A22).

Response to Concern 2.5: This requirement to develop a formal TRE Workplan in accordance with EPA guidance is a standard requirement that is included in all NPDES permits within the North Coast Region. Although the Permittee asserts that it has developed its own procedures to prevent or eliminate toxicity in the effluent, they have neither been submitted to the Regional Water Board nor is there any indication that such procedures follow EPA guidance for performing TREs or Toxicity Identification Evaluations (TIEs). In Comment A21 and through discussions with the Permittee, it has become clear that any existing toxicity reduction procedures developed by the Permittee are focused on enhanced cleanout of fines and efforts to reduce tannin and lignin toxicity. A full TRE Workplan in accordance with EPA guidance is necessary to be developed and ready to use in advance of future toxicity events to ensure that the most rapid and appropriate steps are taken to identify and reduce toxicity, which may be the result of constituents other than fines, tannins or lignins. The Permittee states in Comment A22 that consideration should be given to the work that has been done in developing procedures to reduce or eliminate toxicity. Staff have taken this information into consideration, although no formal procedures have been submitted, and recognize that the existing development of such procedures will facilitate the Permittee's ability to develop a TRE Workplan as described in section VI.C.2.g of the proposed Order.

In responding to this comment, staff identified a standard reference in this provision to US EPA guidance for development of TREs for municipal wastewater treatment plants. Although much of this guidance is not exclusive to wastewater treatment plants, staff have inserted the following clause to allow for the use of other applicable US EPA guidance when developing the TRE:

Special Provision VI.C.2.a.iii.(c)

> (c) The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B 99/002 or other applicable USEPA guidance.

Major Concern 2.6: Freshwater Wetland Study

Concern: The Permittee commented that the wetland was studied when the treatment system was permitted and that the requirement to do a receiving water study is not justified.

Response to Concern 2.6: The requirement for this study was originally intended to be a surrogate for receiving water monitoring and to provide the Permittee with flexibility in developing an appropriate monitoring program. During discussions in response to this comment, the Permittee has expressed its preference for direct receiving water monitoring requirements rather than the requirement to perform a study. The Permittee has also provided staff with citations in the record to previous studies that have been performed on the freshwater wetland receiving water. Staff have determined that the

information provided justifies the use of direct receiving water monitoring to satisfy the original intent of this requirement. Staff also intends to require further analysis of wetland beneficial uses outside of this Order. The following changes have been made to the draft Order in response to this concern:

Special Provision VI.C.2.c

Major Concern 2.7: Groundwater Study

Concern: In this comment, the Permittee questions the need for another report and study of the groundwater and asserts that the data presented in the Supplemental ROWD is sufficient.

Response to Concern 2.7: In subsequent discussions with the Permittee in response to this comment staff has clarified the need for further study of the groundwater to determine all potential impacts and the extent of any such impacts. Staff have determined that issuance of a separate Order to the Permittee pursuant to Water Code section 13267(b) would be a better mechanism to require such monitoring. Accordingly, the following changes to the draft Order have been made:

Special Provision VI.C.2.b

Major Concern 2.8: Reusable Woody Material is Not a Waste

Concern: The Permittee states that the woody material removed from the ditches and basins is a byproduct and not a solid waste. It is not subject to Title 27.

Response to Concern 2.8: Staff concur with this comment and have made the following changes to the draft Order in response to this comment:

Other Special Provisions VI.C.6.a

Solids Disposal and Handling Requirements.

i. The storage of basin sediments shall be done in a manner to prevent nuisance, pollution or impairment of beneficial uses of waters of the United States.

ii. Any proposed change in basin sediment or sludge disposal or storage practices shall be reported to the Executive Officer at least 90 days in advance of the change.

Major Concern 2.9: Minor Changes

Concern: The Permittee submitted 180 comments in an underline-strikeout version of the draft Order. All comments not yet addressed in this document have been grouped here as minor changes.

Response to Concern 2.9: It is not feasible to respond to each of these comments and changes individually. Staff's responses to each of the comments and requested changes not yet addressed in the above responses can be found in final draft Order presented to the Board.