Response to Written Comments
and
Staff Initiated Changes

Draft Waste Discharge Requirements Order No. R1-2019-0005
National Pollutant Discharge Elimination System (NPDES)
for the California Redwood Company and Trinity River Timber Company DBA North Fork Lumber Company
Korbel Sawmill

Regional Water Quality Control Board, North Coast Region
April 17, 2019

Comment Letter Received

The deadline for submission of public comments regarding draft Waste Discharge Requirements for Order No. R1-2019-0005, National Pollutant Discharge Elimination System Permit (Draft Permit) for the California Redwood Company (owner) and the Trinity River Timber Company DBA North Fork Lumber Company(operator) (hereinafter both are considered the Permittee), Korbel Sawmill (Facility) was February 5, 2019. The Permittee provided timely comments via email which are shown in italics and are followed by the Regional Water Board staff (Staff) response. Text to be added is identified by underline and text to be deleted is identified by ~~strike-through~~ in this document. The term "Draft Permit" refers to the draft that was sent out for public comment. The term "Proposed Permit" refers to the version of the permit that has been modified in response to comments and is being presented to the Regional Water Board for consideration.

Comment 1: *Page 1, Table 1. Permittee Information*
Modify the name of the discharger as follows: TRINITY RIVER TIMBER COMPANY DBA NORTH FORK LUMBER COMPANY ~~AND CALIFORNIA COMPANY.~~

The name of the discharger is confusing as written, indicating that Trinity River Timber Company is doing business as North Fork Lumber Company and California Redwood Company. Furthermore, CRC is requesting that they be removed as co-permittees from this NPDES Permit.

Response 1: It is appropriate to name the owner of the property (California Redwood Company) and the operator of the Facility (North Fork Lumber Company), in part because the owner is allowing the activity to occur on its land and has control over the conditions of its property, including whether to allow discharges to occur. The State Water Board has explicitly recognized the Regional Water Board authority to name both owners and operators in waste discharge requirements (See State Water Board Order WQ-No. 90-03). Thus, the Proposed Permit names both the owner, California Redwood Company and the operator, Trinity River Timber Company dba North Fork Lumber Company, as co-permittees.

We also understand that it is appropriate to recognize the operator's responsibilities and obligations. While it is appropriate to name California Redwood Company as a co-permittee, the Regional Water Board has the discretion to specify that the operator is primarily responsible for monitoring and reporting obligations and day-to-day operations under the Permit. The Regional Water Board staff finds that as the operator of the Facility, it is appropriate to name Trinity River Timber Company dba North Fork Lumber Company as the party primarily responsible for day-to-day operations, including fulfilling the monitoring and reporting requirements under the Permit. California Redwood Company remains secondarily responsible for these requirements.

As a result, the following distinction is recognized in Section VI.A. of the Proposed Permit:

VI. **PROVISIONS**

A. Standard Provisions. Regional Water Board staff finds that as the operator of the Facility, Trinity River Company DBA North Fork Lumber Company is the party primarily responsible for day-to-day operations, including fulfilling the monitoring and reporting requirements under the Order. California Redwood Company remains secondarily responsible for these requirements.

Section I.A. of the Fact Sheet for the Proposed Permit has been amended as follows:

California Redwood Company (Permittee) is the owner and Trinity River Timber Company doing business as North Fork Lumber Company (Permittee) is the operator ~~and California Redwood Company (hereinafter Permittee) are the owner and operator, respectively,~~ of the Korbel Sawmill (hereinafter Facility). The Regional Water Board staff finds that as the operator of the Facility, it is appropriate to name Trinity River Timber Company dba North Fork Lumber Company as the party primarily responsible for day-to-day operations, including fulfilling the monitoring and reporting requirements under the Order. California Redwood Company remains secondarily also responsible for these requirements.

Additionally, Table 1 of the Proposed Permit has been amended as follows, "California Redwood Company (owner) and Trinity River Timber Company dba North Fork Lumber Company (operator) ~~and California Redwood Company~~"

Comment 2: *Page 1, Table 1. Permittee Information*
Modify the facility design flow to reference 5 million gallons per day (mgd).

The Facility design flow is listed at 13.6 million gallons per day (mgd) in Table 1. This value should be corrected to reference a maximum flow rate of 5 mgd for the facility. Pressure transducers were installed at the facility in November 2014, and since then, they have been used to continuously record the discharge from EFF-001 at the outlet from the constructed wetland.

On December 13, 2015, the EFF-001 discharge was the highest recorded (4.26 mgd) since November 2014. Since November 2015, the discharger has been paying fees based upon a maximum flow rate of 5 mgd.

Response 2: The recorded data for actual flow recorded by the Permittee will be included as part of the Fact Sheet. However, design flow rate will remain as it is reflective of the facility design.

Comment 3: *Page 4, Section I. Facility Information.*

Modify the name of the discharger used in this paragraph as follows: Trinity River Company dba North Fork Lumber Company ~~and California Redwood~~ Company (Permittee)

The name of the discharger is confusing, see comment 1 above.

Response 3: California Redwood Company and North Fork Lumber Company will continue to be co-permittees in the Proposed Permit. See Response 1 above.

Comment 4: *Page 6, Table 4. Effluent Limitations – Discharge Point 001.*
Remove effluent limitations for nickel and zinc from Table 4. See Attachment 1 for further explanation.

Response 4: In Attachment 1 of the Permittee's comment letter, the Permittee provides a Receiving Water Hardness Data Review. This review provided a statistical analysis of the receiving water hardness values and included a request to consider the lowest hardness value of 7 mg/L as an outlier. To determine the metals criteria, we use the lowest hardness value in the receiving water. Then we compare that criteria with the maximum effluent concentration to determine if there is reasonable potential for the effluent to exceed the criteria.

The Permittee requests that the next lowest hardness value (17 mg/L) be used to perform the reasonable potential analysis (RPA) for zinc and nickel final effluent limitation, noting that using a value of 17 mg/L as the lowest hardness value for the RPA would result in the discharge no longer having reasonable potential to exceed water quality objectives for nickel and zinc. Should the Regional Water Board not accept this request, the Permittee requests the use of impact ratios for setting zinc and nickel effluent limitations as an alternative to establishing effluent limitations for zinc and nickel using the methodology set forth in the Policy for Implementation of Toxics Standards for Inland Surface Water, Enclosed Bays, and Estuaries of California (SIP).

Regional Water Board staff has considered the Permittee's request to eliminate the 7 mg/L hardness value from the RPA, but has determined that the Permittee has not established to the satisfaction of the Regional Water Board that the sample result is erroneously reported or not representative of the effluent or ambient receiving water quality, which are among

the instances set forth in section 1.2 of the SIP where the Regional Water Board may exercise its discretion in removing sample data from the RPA.

Regional Water Board staff agrees with a calculation-based zinc and nickel effluent limitations based on the receiving water hardness taken concurrently with the zinc and nickel effluent sample are appropriate given the variability of receiving water hardness. U.S. EPA supports establishing Zinc Impact Ratio (ZIR) and a Nickel Impact Ratio (NIR) as an effluent limitation to track and allow for these "floating" hardness dependent metal effluent limitations while not losing the ability to analyze NPDES effluent data and easily determine compliance. This method requires the Permittee to compare the effluent zinc and nickel concentrations with a calculated standard based on concurrent data for hardness.

The ZIR and NIR, or final WQBELs, are determined by dividing the zinc and nickel sample by the appropriate zinc and ammonia standard (AMEL and MDEL). The ZIR and NIR always has a limit of 1.0. If the ZIR and/or the NIR is greater than 1.0 then the Permittee is not in compliance with the ZIR and/or NIR effluent limitation. The Permittee will be provided with a ZIR and NIR calculator (in excel format with embedded formulas) to determine the compliance with the AMEL and MDEL metal effluent limitations. Attachment G of the Proposed Permit provides a PDF copy of the calculator. Please refer to the Fact Sheet of the Proposed Permit for further discussion of ZIR and NIR methodology.

The Proposed Permit has been revised to include the ZIR and NIR as the final effluent limitations for zinc and nickel.

Comment 5: *Page 13, Section VI.3.c. Pollution Prevention Plan*
Remove requirement for PPP by September 1, 2019 for nickel and zinc. A pollution prevention plan (PPP) should not be required for nickel and zinc until the need for, and final determination of, effluent limitations for these constituents has been firmly established, see comment 4 above.

Response 5: Per Response 4 above, the Proposed Permit contains floating effluent limitations for zinc and nickel that take into account the real time hardness values in the receiving water. The Proposed Permit has been modified to remove the requirement for a PPP for nickel and zinc. However, if discharge exceeds the new ZIR and NIR limitations permittees may be required to develop and implement a PPP to address zinc and nickel sources

Comment 6: *Page 17, Section H, Chronic Toxicity.*
Modify the first sentence to reference the narrative chronic toxicity requirement specified as effluent limitation Section IV.A.~~2~~1.c. The cross reference to the chronic toxicity effluent limitation section is incorrect in this section.

Response 6: The recommended change has been made to the Proposed Permit.

Comment 7: *Page E-3, Section II, Monitoring Locations and Section III. Influent Monitoring Requirements.*
Remove the influent flow monitoring requirements from the monitoring program. Section II and Section III establish influent flow monitoring requirements that include monitoring the amount of flow pumped from the log deck sprinkler pump to the log decks at monitoring location INF-001. The rationale for this influent flow monitoring requirement that is included in the draft permit fact sheet (page F-34) indicates that this information is necessary to evaluate the amount of water recirculated to the log deck sprinkler system.

It is unclear why the RWQCB considers this influent flow information necessary for the reporting program in relation to the permitted effluent compliance conditions. All log deck water is continuously recycled from the collection basin back to the log decks, and the recording and reporting of this log deck sprinkler flow data only generates an extra cost expense for the discharger. The influent flow monitoring requirements should be removed from the permit or the RWQCB should provide further clarification on why this information is necessary for determining compliance with the NPDES discharge permit conditions.

Response 7: The Permittee requested the removal of INF-001 when they submitted their Report of Waste Discharge (ROWD). Their request in the ROWD states, "Additionally, we are requesting removal of the monitoring requirements for water supply to the log deck sprinklers (INF-001) from the new permit. The estimated volume of water being pumped from the large concrete settling/stilling basin and recycled back to the log deck sprinkler systems, does not appear to be useful (but costly to collect and report). SHN records the data for water going over the weir of the large concrete basin into the constructed wetland, and records the flow data for water discharging from the constructed wetland (EFF-001). This data should be sufficient to evaluate the water balance for the constructed wetland and the volume of water discharging to the North Fork Mad River."

Regional Water Board staff has considered the Permittee's request and determined that it is reasonable to replace Monitoring Location INF-001 with a new influent monitoring location, Monitoring Location INF-002, which measures flow from the settling basin to the constructed wetlands, because 1) measuring and reporting discharges at this location will provide information that can be used to determine the groundwater impact of waste discharges to the constructed wetlands and 2) the Permittee already records flow at the proposed monitoring location, INF-002, so continuing monitoring and reporting flow at this location should not place an additional burden on the Permittee. Monitoring Location INF-001 will be kept in the record for the purpose of continuity and historical review.

Comment 8: *Page E-4, Table E-3, Effluent Monitoring Requirements*
8.a. *Change the sample type listed in Table -E-3 from composite to grab samples for TSS, Copper, Lead, Nickel, Zinc, COD, and acute and Chronic Toxicity analyses. Table E-3 in the draft MRP shows that composite samples are being required for total suspended solids (TSS), copper, lead, nickel, zinc, chemical oxygen demand (COD), and acute and chronic toxicity*

analyses; whereas the previous permit specified grab samples to be collected for these constituents. During discharge conditions, all process water and stormwater is completely mixed in the treatment wetland, so composite samples of the effluent are unnecessary. Grab samples should be sufficient to monitor the effluent discharge quality at this location.

8.b. *Change the sample frequency listed in Table E-3 from quarterly to semi-annually for the Chronic Toxicity analyses. Table E-3 in the draft MRP shows that quarterly samples are being required for the chronic toxicity analyses; however, the facility does not consistently discharge year-round and is prohibited from discharging during the period of May 15 through September 30. During the remainder of the year, discharges from the facility are driven by storm events, and effluent flows are intermittent during low flow periods. Although samples have routinely been collected in the first quarter of the year (January through March) and the last quarter of the year (October through December), it is difficult for the discharger to routinely and effectively conduct chronic toxicity monitoring during the beginning of the second quarter (April through June) if there is not sufficient rainfall to generate a discharge. The permit should specify semi-annual sampling for this parameter to better correlate the required monitoring frequency with the actual timing of discharges from the facility.*

Response 8: No changes were made to the Proposed Permit in response to comment 8a. Due to the variability in the samples for COD, TSS, copper and lead and the need to accurately represent concentrations for zinc and nickel (impact ratio determination) composite sampling has been retained in the Proposed Permit. Additionally, composite sampling for chronic and acute toxicity have been retained in the Proposed Permit to ensure that toxicity is accurately analyzed.

No changes were made to the Proposed Permit in response to comment 8b. The Regional Water Board recognizes that the Facility discharges intermittently and likely will only need to require toxicity sampling during the wet weather season. However, even with the summertime discharge prohibition season (May 15 through September 30), the Permittee could still discharge during this time of the year and toxicity testing should be required during and unexpected discharge such as this.

Comment 9: *Page E-5, Table E-3 and Page E-13, Table E-4.*
Change note 7 in Table E-3 and Note 4 in Table E-4 to indicate the CTR priority pollutant scans need to be completed prior to April 1, 2023. Tables E-3 and E-4 in the draft MRP indicate that the CTR priority pollutant scans need to be completed prior to April 1, 2022; however, the report of waste discharge for the facility is not due until June 2023. The CTR testing should be scheduled for the last year of the monitoring program, to be completed no later than April 1, 2023.

Response 9: The recommended changes to Tables E-3 and E-4 have been made to the Proposed Permit to indicate a CTR testing completion date of April 1, 2023.

Comment 10: *Page E-13, Table E-4 and Page E-14, Table E-5.*
Change the monitoring frequency to monthly sampling for dissolved oxygen in Table E-4 and E-5. Weekly monitoring for dissolved oxygen (DO) is excessive, given the absence of any historical data that indicates that the DO concentration in the effluent discharge will have any impact on the receiving water DO concentration at the 1% flow rate limitation. Monthly DO monitoring should be sufficient to show compliance with the Basin Plan objective unless the subsequent sampling data indicates that more frequent monitoring is needed.

Response 10: No changes were made to the Proposed Permit in response to Comment 10. An analysis of dissolved oxygen concentrations, from April 2014 to January 2017, upstream and downstream of the point of discharge shows receiving water dissolved oxygen concentrations downstream of the discharge point, at RSW-002, are only slightly below the dissolved oxygen concentrations measured at the upstream location, at RSW-001. The percent decrease in dissolved oxygen concentrations between these two locations, RSW-001 and RSW-002, was always less than ten percent. Based on this analysis, it can be determined that the discharge from the Facility is having a negligible impact on dissolved oxygen concentrations in the receiving water.

Section 3.3.5. of the Basin Plan states that, for waters with the spawning, reproduction and/or early development beneficial use (SPWN), that dissolved oxygen concentrations shall conform to aquatic life requirements. These aquatic life requirements contain a daily minimum objective of 9.0 mg/L and a seven-day moving average of 11.0 mg/L. Regional Water Board staff recommends daily or continuous monitoring to determine compliance with the seven-day moving average for dissolved oxygen. However, since the Permittee has shown a negligible impact on dissolved oxygen and to reduce the cost of compliance, the Permittee may monitor receiving water weekly for dissolved oxygen to determine compliance with the 7-day moving average dissolved oxygen limit of 11 mg/L. Daily or continuous monitoring for dissolved oxygen in the receiving water is not required at this time. However, should the receiving water data show that dissolved oxygen concentrations in the receiving water are being significantly impacted by the discharge, the monitoring and reporting program (MRP) may be revised to require daily or continuous monitoring for dissolved oxygen in the receiving water.

Comment 11: *Page E-14, Section IX. Other Monitoring Requirements.*
Remove the requirement to conduct visual monitoring on the first day of intermittent discharge. The draft MRP requires that the discharger conduct visual observations of the discharge and the receiving water on a monthly basis and on the first day of each intermittent discharge. Because discharge conditions in the wetland are driven primarily by rain events, it is very difficult to plan for, and effectively conduct, visual observations on the first day of each discharge event. Monthly observations at these locations should be sufficient to show compliance with the Basin Plan objectives for those parameters that can be assessed visually.

Response 11: No changes were made to the Proposed Permit in response to Comment 11. Visual observations are necessary during each intermittent discharge to verify that the discharge is not causing floating materials, coloration, objectionable aquatic growths, oil and grease films, and odors in the receiving water.

Comment 12: *Page F-3, Section I, Permit Information.*
Update facility permittee name, facility permitted flow, and facility design flow shown in table F-1. See comments 1 and 2 above.

Response 12: No changes were made to the Proposed Permit in response to Comment 12. See Responses 1 and 2 above.

Comment 13: *Page F-5, Section II.A. Description of Wastewater and biosolids Treatment Controls.*
Remove the reference to wastewater and biosolids in the title of this section and use the term "process water" instead. The facility currently discharges process water rather than wastewater and does not generate biosolids, so the title used for this section is misleading. See corrections in Attachment 2.

Response 13: Section II.A of the Fact Sheet in the Proposed Permit has been amended as follows:
Description of ~~Wastewater and Biosolids~~ Process Water Treatment and Controls.

Comment 14: *Page F-5 and F-6, Section II.A. and II.B. Description of Wastewater Treatment Controls and Discharge Points and Receiving Waters.*
Modify Description of Wetland Treatment Controls and Discharge Point. See Attachment 2 for updated description of treatment controls and discharge point.

Response 14: Section II.A. of the Fact Sheet in the Proposed Permit has been modified as follows to reflect updated description of the treatment provided in Attachment 2 of the Permittee comment letter:

"Storm water runoff from the dry decked lower log yard is collected and conveyed to a settling basin and pump station, referred to as Station 9. This storm water runoff water empties into the second chamber of Station 9, which has concrete baffle walls and absorbent booms. Water flows into the third and fourth chambers, then to the pump station where it ~~gets~~ can be transferred to the large concrete settling/stilling basin, the constructed wetland, or allowed to overflow to the North Fork of the Mad River. There is no process water discharged to Station 9. Appy Creek flows underground beneath the site and through the first chamber of Station 9, which overflows to the North Fork of the Mad River. ~~Appy Creek flows do not commingle with storm water runoff that enters the second chamber."~~

"Log deck sprinkler runoff and sometimes storm water runoff from Station 9 is combined in the concrete settling/stilling basin. The concrete settling/stilling basin is 200 feet long by 40 feet wide, with the depth varying from 5-feet at the western end to 6-feet at the eastern/outlet end. A concrete ramp allows for removal of the settled material after draining. The large concrete settling/stilling basin has three K-rails with silt curtains attached that are installed at set intervals within the basin, which promotes settling and minimizes the amount of suspended sediment being discharged to the constructed wetland. ~~A water curtain screen located approximately 100 feet from the outlet prevents lighter floating material from being discharged and a series of K-rails on the bottom assist with settling.~~ Water from the settling/stilling basin ~~can be~~ is either recirculated to the log deck sprinklers or ~~conveyed to a constructed wetland via a 12-inch diameter perforated riser pipe and control valve~~ allowed to flow over the outlet weir of the basin into the constructed wetland. The Permittee maintains a floating oil absorbent boom across the overflow weir from the settling/stilling basin to the constructed wetland to minimize the release of oily water. During dry weather, water can be pumped from onsite wells or Station 9 if ~~the outlet from the settling/stilling basin is closed to prevent discharges to the wetland unless~~ water is needed for wetland vegetation. Settled material is removed from the settling/stilling basin annually during dry weather."

"Associated with the site parcel sawmill is the ~~Korbel~~ CRC Woodwaste Disposal Site (WDS) located on the hillside about 0.25 miles northwest of the Korbel sawmill."

Section II.B. of the Fact Sheet in the Proposed Permit has also been modified as follows:

Treated ~~wastewater~~ process water from the constructed wetland discharges to a large vegetated low-lying area adjacent to the North Fork Mad River via a 3-foot diameter perforated outlet tee. The constructed wetland outflow is ~~designed to be~~ regulated by flows going over the 5-foot 4-inch diameter concrete outlet weir. ~~The smaller pipe, a 6-inch pipe with a modulating valve, was designed to pass flows up to 5 cubic feet per second (cfs) (3.2 mgd). Greater flow will raise the elevation about a foot until a second, larger orifice is encountered. This larger orifice is sized to pass 20 cfs (12.9 mgd).~~

Comment 15: *Page F-7, Section II.D. Compliance Summary.*
Modify the date references for the current effluent violations listed in the last paragraph of this section. The reported lower pH readings at EFF-001 occurred on April 3, 2017, not April 3, 2018, and on January 5, 2015, not January 5, 2018. Also, the minimum level (ML) for lead was changed after January 6, 2016, and the discharger has been using a new lab with lower detection limits since that time. Lastly, the reference to the failure to report monthly temperature results applies for the months of December 2015, and January and February 2016, not November 30, 2018.

Response 15: The recommended changes have been made to the Proposed Permit.

Comment 16: *Page F-19, Section IV.C.3.b., Hardness.*
Use hardness value 17 mg/L for evaluating hardness-dependent metal criteria. The 7 mg/L $CaCO_3$ hardness value used is an outlier data value, and the next lowest hardness value recorded was 17 mg/L as $CaCO_3$. See comment 4 above.

Response 16: No changes were made to the Proposed Permit in response to Comment 15. The Proposed Permit uses a hardness value of 7 mg/L to establish reasonable potential for zinc and nickel and establishes Impact Ratios for each metal. See Response 4 above.

Comment 17: *Page F-24, Section IV.C.5.a., Acute Aquatic Toxicity.*
Modify the last sentence to reference EPA-821-R-02-012. The EPA method manual citation is incorrect. It should reference EPA-821-R-02-012 for the 5th edition of the manual.

Response 17: The recommended change has been made in the Proposed Permit.

Comment 18: *Page F-25, Table F-7, Summary of Chronic Toxicity Results.*
Add additional footnotes to Table F-7 clarifying compliance conditions. Table F-7 should indicate which results exceeded 1 TUc but passed the TST, given that the TST will be the future test statistic. The chronic WET test exceedances for Ceriodaphnia dubia on March 28. 2016, and April 11, 2016, both passed the TST, despite the results indicating a TUc > 1.

Table F-7 should also include a footnote to indicate that the previous permit had a chronic toxicity trigger of 1.6 TUc as a single sample result or 1.0 TUc as a monthly median result, given that the majority of the data presented exhibited < 1.6 TUc.

Response 18: The Proposed Permit has been modified to include a table note 4 for the chronic toxicity samples collected on March 28, 2016 and on April 11, 2016. The footnote states, "While these chronic toxicity samples exceeded 1 TUc using the NOEC statistical analysis method, both samples passed the TST statistical analysis method."

Comment 19: *Page F-34, Section VII.A.1. Influent Monitoring*
Provide more justification why flow monitoring is considered necessary at INF-001 or remove the requirements to monitor flow at this location. See comment 7 above.

Response 19: See Response 7 above.

Comment 20: *Page F-35, Section VII.B.1. Monitoring Locations. Change section B.1.f to note the CTR priority pollutant scans need to be completed prior to April 1, 2023. See comment 9 above.*

Response 20: See Response 9 above. The recommended changes have been made to the Proposed Permit.

Comment 21: *Page F-35, Section VII.C. Whole Effluent Toxicity Testing Requirements*
Update the lead WER value referenced to indicate ">" 49. In the second paragraph, the fact sheet references a lead WER of 42. This section should be updated to reference a lead WER of >49. Furthermore, references to the lead WER throughout the permit should be changed from 49 to >49, to show that the lead WER is in fact greater than 49, not 49 exactly.

Response 21: The recommended changes have been made to the Proposed Permit. The Water Effect Ratio for lead is shown as >49.

Comment 22: *Page F-36, Section V.II.D.1.a.ii.*
Change to note the CTR priority pollutant scans need to be completed prior to April 1, 2023. See comment 9 above.

Response 22: See Response 9 above. The recommended change has been made to the Proposed Permit.

Comment 23: *Page F-36, Section VII.D.1.a.iv.*
Change the reference to the monitoring frequency to monthly sampling for dissolved oxygen. See comment 10 above.

Response 23: See Response 10 above. No changes were made to the Proposed Permit.