812 W. Wabash Avenue, Eureka, CA 95501-2138 707-441-8855
Civil Engineering, Environmental Services, Geosciences, Planning & Permitting, Surveying

Reference: 016243.200

February 1, 2019

Mr. Imtiaz-Ali Kalyan
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Subject: Comments on the Draft NPDES Permit for the Korbel Sawmill, NPDES Permit No. CA0005932; WDR Order No. R1-2019-0005; WDID No. 1B80020OHUM, Place ID 235227

Dear Mr. Kalyan:

On behalf of North Fork Lumber Company (NFLC) and California Redwood Company (CRC); SHN is submitting the following comments to the North Coast Regional Water Quality Control Board (Regional Board) regarding the January 4, 2019, draft National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005932; WDR Order No. R1-2019-0005; WDID No. 1B80020OHUM, Place ID 235227. Moonstone Associates, Inc. and Pacific EcoRisk (PER) also conducted a review of the draft permit and provided input on the comments presented below. The following comments address specific paragraphs and tables in the NPDES permit in the order they appear in the draft permit and associated permit attachments. **(Strikeout indicates deletion, underline indicates added text.)**

Draft NPDES Permit

Page 1, Title and Table 1. Permittee Information

Comment 1. Modify the name of the discharger as follows:
TRINITY RIVER TIMBER COMPANY DBA NORTH FORTH LUMBER COMPANY ~~**AND CALIFORNIA REDWOOD 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.

Page 1, Table 1. Permittee Information

Comment 2. 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.

Page 4, Section I. FACILITY INFORMATION

Comment 3. Modify the name of the discharger used in this paragraph as follows:
Trinity River Timber Company dba North Fork Lumber Company ~~and California Redwood Company~~ (Permittee)

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

Page 6, Table 4. Effluent Limitations – Discharge Point 001

Comment 4. Remove effluent limitations for nickel and zinc from Table 4.
See Attachment 1 for further explanation.

Page 13, Section VI.3.c. Pollution Prevention Plan

Comment 5. 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.

Page 17, Section H. Chronic Toxicity

Comment 6. 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.

Draft Monitoring and Reporting Program (Attachment E)

Page E-3, Section II. Monitoring Locations and Section III. Influent Monitoring Requirements

Comment 7. 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.

Page E-4, Table E-3. Effluent Monitoring Requirements

Comment 8a. 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.

Comment 8b. 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.

Page E-5, Table E-3 and Page E-13, Table E-4

Comment 9. 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.

Page E-13, Table E-4 and Page E-14, Table E-5

Comment 10. 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.

Page E-14, Section IX. Other Monitoring Requirements

Comment 11. 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.

Draft Fact Sheet (Attachment F)

Page F-3, Section I. Permit Information

Comment 12. Update facility permittee name, facility permitted flow, and facility design flow shown in Table F-1.

See comments 1 and 2, above.

Page F-5, Section II.A. Description of Wastewater and Biosolids Treatment Controls

Comment 13. 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 any biosolids, so the title used for this section is misleading. See corrections in Attachment 2.

Page F-5 and F-6, Section II.A. and B. Description of Wastewater Treatment Controls and Discharge Points and Receiving Waters

Comment 14. Modify Description of Wetland Treatment Controls and Discharge Point.

See Attachment 2 for updated description of treatment controls and discharge point.

Page F-7, Section II.D. Compliance Summary

Comment 15. 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.

Page F-19, Section IV.C.3.b., Hardness

Comment 16. Use hardness value of 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.

Page F-24, Section IV.C.5.a., Acute Aquatic Toxicity

Comment 17. 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.

Page F-25, Table F-7, Summary of Chronic Toxicity Results

Comment 18. Add additional footnotes to Table F-7 clarifying compliance conditions.

Table F-7 should include a footnote to 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 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 monthly median result, given that the majority of the data presented exhibited < 1.6 TUc.

Page F-34, Section VII.A.1. Influent Monitoring

Comment 19. 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.

Page F-35, Section VII.B.1. Monitoring Locations

Comment 20. 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.

Page F-35, Section VII.C. Whole Effluent Toxicity Testing Requirements

Comment 21. 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.

Page F-36, Section VII.D.1.a.ii.

Comment 22. Change to note the CTR priority pollutant scans need to be completed prior to April 1, 2023.

See comment 9 above.

Page F-36, Section VII.D.1.a.iv.

Comment 23. Change the reference to the monitoring frequency to monthly sampling for dissolved oxygen.

See comment 10 above.

Thank you for the opportunity to provide comments on the draft NPDES permit for the Korbel facility. If you have any questions or need any further clarification on the comments provided, please call me or Erilynn Helliwell at 707-441-8855.

Sincerely,

SHN

Patrick Barsanti
Project Manager

PNB/EAH:lms

Attachment: 1. Receiving Water Hardness Data Review
2. Updated Facility Description

c. w/Attach.: Brant Jorgenson, Vice President; Pacific Eco-Risk
Lisa K. Stromme, PE; Moonstone Associates, Inc

References

Environmental Protection Agency. (2002). National Recommended Aquatic Life Criteria for Priority Pollutants, including Metals (EPA 822-R-02-047). Washington, D.C.:EPA.

---. (December 2016). Clean Water Act Analytical Methods, Acute Toxicity WET Methods, Freshwater and Marine Organisms, Whole Effluent Toxicity Methods Errata Sheet 821-R-02-012-ES. Washington, D.C.:EPA.

State Water Resources Control Board. (2005). Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Sacramento, CA:SWRCB.

Receiving Water Hardness Data Review

1

Receiving Water Hardness Data Review

1-1. Determination of Outlier Data Values

The effluent limitations listed in Table 4, page 6 of the draft NPDES, for nickel and zinc are based on a hardness value of 7 milligrams per liter (mg/L) as $CaCO_3$ that was recorded in the receiving water at RSW-001 on November 21, 2017, and the nickel and zinc concentrations that were detected in the effluent during the California Toxics Rule (CTR) screening that was conducted on February 6, 2017. During the last permit term, data collected in the receiving water at the upstream receiving water monitoring location RSW-001 showed a range in hardness values from 7 to 46 mg/L as $CaCO_3$, with a median hardness value of 28 mg/L as $CaCO_3$ and an average hardness value of 28 mg/L as $CaCO_3$. Table 1 provides an overview of the hardness data collected during the last permit term, and Table 2 provides additional statistical information based on the hardness data presented in Table 1. Figure 1 provides a graph of all the data collected during the previous permit term at RSW-001.

Table 1. RSW-001 Receiving Water Historical Hardness Data

Year	Date	Hardness (mg/L)[1]
2014	2/10	30
	3/4	26
	4/3	26
	5/2	35
	10/21	46
2015	1/5	38
	2/2	32
	3/2	35
	4/1	30
	12/9	37
2016	1/6	25
	2/5	22
	3/10	32
	4/8	28
	5/3	35
	10/17	40
	11/1	27
	12/20	22
2017	1/16	20
	2/8	17
	3/2	22
	4/3	28
	5/1	28
	11/21	7.0
	12/3	31
2018	1/14	26
	2/18	22
	3/19	26
	4/12	21
	11/29	26
	12/19	32

1. mg/L: milligrams per liter

Table 2. RSW-001 Receiving Water Statistics–Hardness

Variable	Hardness Value[1] (mg/L as $CaCO_3$)[2,3]	Variable	Hardness Value[1] (mg/L as $CaCO_3$)
Average	28	1st Quartile (25%)	24
Median	28	3rd Quartile (75%)	32
Mode	26	Inner Quartile Range (IQR)	8.5
Minimum	7	1st Quartile - 1.5*IQR	11
Maximum	46	3rd Quartile + 1.5*IQR	45
1st Percentile	10	95th Percentile	39
5th Percentile	19	99th Percentile	44

1. Based on statistical analysis of monthly receiving water hardness data collected at RSW-001 from 2/10/14 through 12/19/18
2. mg/L: milligrams per liter
3. $CaCO_3$: calcium carbonate

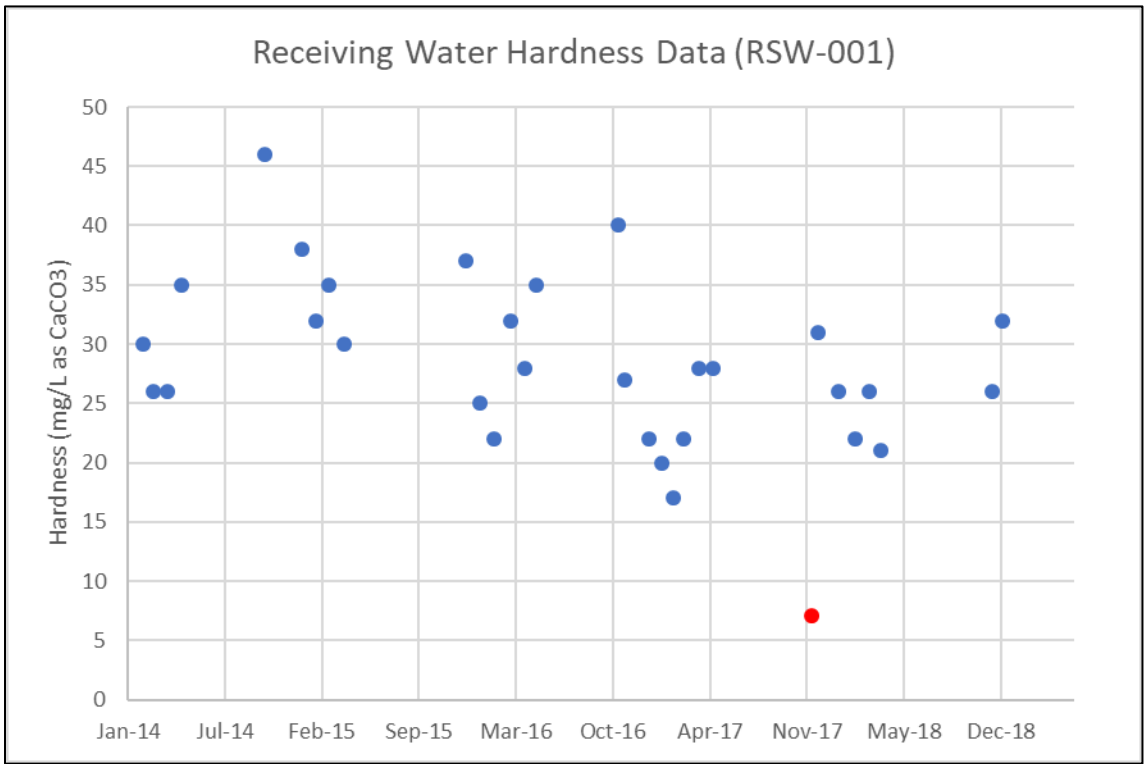

Figure 1. RSW-001 Receiving Water Hardness, February 2014 through December 2018

Based on the review of the hardness data collected over the last 5 years of the permit term, it appears the 7 mg/L as $CaCO_3$ hardness data value is an outlier data value. The 7 mg/L as $CaCO_3$ hardness data value is both an inconsistent and questionable data point that is unrepresentative of the general hardness trends in the North Fork Mad River, as exhibited by the statistical analyses and graph presented above. The next lowest receiving water hardness value recorded at RSW-001 is 17 mg/L as $CaCO_3$. If the 17 mg/L as $CaCO_3$ hardness value is used in place of the 7 mg/L as $CaCO_3$ value to determine the water quality objectives for the hardness-dependent metals, nickel and zinc, the data would exhibit no reasonable potential to cause or contribute to an exceedance of water quality objectives for either constituent.

In 2002, EPA published an updated compilation of its National Recommended Aquatic Life Criteria for priority pollutants, including metals (EPA 822-R-02-047). In this update, they clarify guidance on use of hardness data for the hardness-based metals. In the EPA manual, they discuss that the data used to develop the hardness relationship included few tests with a hardness below 25 mg/L as $CaCO_3$ and very few to no tests with a hardness below 20 mg/L as $CaCO_3$, depending on the metal (nickel and lead have no tests below 20 mg/L as $CaCO_3$). EPA admits this casts doubt on the accuracy of the metals criteria at lower hardness, but states they do not recommend capping criteria at a lower hardness, such as 25 mg/L as $CaCO_3$, as that might lead to insufficient protective criteria. Instead, they recommend that a WER be developed: "…if there are any situation-specific questions about the applicability of the hardness-toxicity relationship, a Water Effect Ratio (WER) procedure should be used to provide the level of protection intended by the Guidelines."

Given this stated doubt by EPA in the validity of the hardness-dependent metals relationship for hardness values below 20-25 mg/L as $CaCO_3$, it seems inappropriate to issue an effluent limit on the basis of a hardness value as low as 7 mg/L as $CaCO_3$. Furthermore, there was a very large water-effect recently

demonstrated for copper and lead in the effluent, which indicates that a similarly large water-effect would be expected for all other cationic metals in the effluent, such as nickel and zinc.
It appears at this time that there is insufficient data to conclusively determine the need for water quality based effluent limitations for nickel and zinc based on a hardness value of 7 mg/L as $CaCO_3$. The State Water Board's State Implementation Policy (SIP) states, "The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy" (Section 1.2). Furthermore, the SIP states in Step 8 of Section 1.3 (Determination of Need for Effluent Limits), "If data are unavailable or insufficient, as described in Section 1.2…the RWQCB shall require additional monitoring for the pollutant in place of a water quality-based effluent limitation." (SWRCB, 2005)

Effluent limitations for nickel and zinc should not be established for the next five-year period based on one questionable hardness data point and one single measurement of nickel and zinc in the effluent. We propose that the Regional Board instead determine that at this time there is insufficient data to establish the need for water quality based effluent limits for these constituents and require additional monitoring, as warranted, upon which reasonable potential can be assessed during a future permit renewal.

Furthermore, making the determination that effluent limits are not warranted at this time given an insufficiency in the data set will not lead to an inappropriate level of beneficial use protection in the interim, because the discharge prohibition that limits the effluent discharge to not greater than 1% of the receiving water flow (100:1 dilution) provides ample protection of aquatic life beneficial uses in and of itself.

1-2. Request for Metals Impact Ratio Limitations

As an alternative to using the worst-case measured hardness to set the final effluent limitations, another approach that could be used for determining compliance with the hardness-dependent metals criteria would be to establish metals impact ratio effluent limitations, based on actual hardness data collected in the receiving water at the same time as effluent metal samples are collected. The metals impact ratio effluent limitations could be applied for those hardness-dependent metals that demonstrated reasonable potential based on the worst-case measured hardness in the receiving water, but would allow compliance to be determined based on actual receiving water hardness data at the time of sample collection.

This approach has recently been used in the North Coast Region for assessing compliance with ammonia criteria as it relates to receiving water pH and temperature at the time effluent ammonia samples are collected. A similar approach could be used for hardness-dependent metals where average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) criteria tables could be established for a range of hardness values, and then a metals impact calculator could be used to calculate an impact ratio based on actual receiving water data at the time effluent samples are collected. If the ratio calculated is less than 1, the effluent samples would be in compliance with the criteria, and if the ratio calculated is greater than 1, then the effluent samples would be out of compliance with the criteria. Tables 3 and 4 present draft versions of the proposed metals criteria for discharges of nickel and zinc, respectively.

As discussed in the draft permit, there was one effluent sample collected on February 6, 2017 that was analyzed for nickel and zinc. The nickel concentration measured was 9.3 micrograms per liter (ug/L) and the zinc concentration measured was 13 ug/L. The receiving water hardness measured on February 6, 2017 was 24 mg/L $CaCO_3$. Based on the worst-case hardness approach outlined in the permit, using the minimum hardness 7 mg/L $CaCO_3$, the nickel and zinc effluent samples collected on February 6, 2017 would be considered out of compliance with the hardness-dependent metals criteria, even though the receiving water hardness at the time of sample collection was much greater than 7 mg/L $CaCO_3$.

Table 3. Hardness-Dependent Metals Effluent Criteria – Nickel

Hardness (mg/L $CaCO_3$)[1,2]	Acute ECA[3]	Chronic ECA	Lowest LTA[4]	AMEL[5]	MDEL[6]
5	37.2	4.1	2.2	3.3	6.7
10	66.9	7.4	3.9	6.0	12.1
15	94.3	10.5	5.5	8.6	17.2
20	120.2	13.4	7.1	10.9	22.0
25	145.2	16.1	8.5	13.2	26.4
30	169.4	18.8	9.9	15.4	30.8
35	193	21.5	11.3	17.6	35.2
40	216.1	24	12.6	19.6	39.3
45	238.8	26.5	14.0	21.6	43.4
50	261	29	15.3	23.7	47.5

1. mg/L: milligrams per liter
2. $CaCO_3$: calcium carbonate
3. ECA: Effluent concentration allowance
4. Lowest LTA: lowest LTA (long term average) discharge condition based on ECA acute and chronic multipliers of 0.321 and 0.527, respectively.
5. AMEL: average monthly effluent limitation, based on AMEL multiplier of 1.55
6. MDEL: maximum daily effluent limitations, based on MDEL multiplier of 3.11

Table 4. Hardness-Dependent Metals Effluent Criteria – Zinc

Hardness (mg/L $CaCO_3$)[1,2]	Acute ECA[3]	Chronic ECA	Lowest LTA[4]	AMEL[5]	MDEL[6]
5	9.5	9.5	3.0	4.7	9.5
10	17	17	5.5	8.5	17.0
15	24	24	7.7	11.9	24.0
20	30.6	30.6	9.8	15.2	30.5
25	37	37	11.9	18.4	36.9
30	43.2	43.2	13.9	21.5	43.1
35	49.2	49.2	15.8	24.5	49.1
40	55.1	55.1	17.7	27.4	55.0
45	60.9	60.9	19.5	30.3	60.8
50	66.6	66.6	21.4	33.1	66.5

1. mg/L: milligrams per liter
2. $CaCO_3$: calcium carbonate
3. ECA: Effluent concentration allowance
4. Lowest LTA: lowest LTA (long term average) discharge condition based on ECA acute and chronic multipliers of 0.321 and 0.527, respectively.
5. AMEL: average monthly limitation, based on AMEL multiplier of 1.55
6. MDEL: maximum daily effluent limitations, based on MDEL multiplier of 3.11

If impact ratio effluent limitations were applied instead of using the direct effluent limitations based on the worst-case hardness value, then a receiving hardness of 24 mg/L CaCO3 would correlate with nickel and zinc AMEL criteria of 12.7 ug/L and 17.8 ug/L, respectively; and MDEL criteria of 25.6 ug/L, and 35.7 ug/L, respectively. The resulting impact ratios for the February 6, 2017 data would be 0.7 (AMEL ratio) and 0.4 (MDEL ratio) for nickel and also 0.7 (AMEL ratio) and 0.4 (MDEL ratio) for zinc; all of which are less than one, indicating the effluent sample would be in compliance with the hardness-dependent metals criteria. This method would still provide assurance that under low receiving water hardness conditions appropriate metals limitations would be in place to protect water quality; however, the use of impact ratios would also ensure that dischargers are not assessed discharge penalties year-round based on worst-case receiving water limitations that are not representative of actual discharge conditions during effluent monitoring events.

Updated Facility Description

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Updated Facility Descriptions

(Strikeout indicates deletion; underline indicates added text)

Draft Fact Sheet (Attachment F)

Page F-5 Section II.A. Description of Process Water ~~Wastewater and Biosolids~~ Treatment and Controls

The wet decking operations include the application of water to log decks via sprinkler heads up to 24 hours per day to prevent whole logs from drying out and cracking. Log deck sprinkling occurs year-round. Storm water runoff and log-deck sprinkler water is conveyed from approximately 42 acres of the log deck and scale yard area, through ditches and culverts into four primary catch basins. Each catch basin is ~~vegetated and~~ equipped with a screened outlet. From the catch basins, the commingled process water flows into a large concrete settling/stilling basin. Water for log deck sprinkling is provided from on-site wells and recirculated water from the settling/stilling basin.

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 CWL, 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 CWL. ~~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 CWL. The Permittee maintains a floating oil absorbant 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.

The Permittee completed improvements to the constructed wetland to improve performance during the term of Order No. R1-2013-0008, including minor modifications to the gravel berms in the wetland interior and installation of 20 floating islands at the discharge end of the wetland. Filter fabric is installed around the wetland outlet pipe to prevent the discharge of materials larger than 1 inch.

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. The site was formerly used exclusively for the disposal of non-hazardous woodwaste (woody debris, soil, and gravel), which was generated during log-deck cleanup operations. All log-deck cleanup materials are now taken to the separating yard and separated into hog fuel and non-combustible waste (gravel and soil fines). The gravel is reused at the facility and a bulb farm uses the soil fines. The WDS is permitted under separate Order No. R1-2002-0037 as amended by Amendment Order No. R1-2013-0011.

B. Discharge Point~~s~~ and Receiving Waters

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 ~~Order No. R1-2019-0005 Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company NPDES No. CA0005932~~ 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).~~

Order No. R1-2013-0008 authorized discharges to land at the former Discharge Point 002 consisting of cooling water discharged from the mill processes and storm water runoff from around the hog and fueling areas. These wastewaters were collected in a clarifier and pumped to forested land where it was land applied via a sprinkler system. Process water is no longer discharged at this location, and spray irrigation of storm water is now covered by the General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES No. CAS000001, Order No. 2014-0057-DWQ). Discharge Point 002 has not been retained in this Order.