

**North Coast Regional Water Quality Control Board**

**ORDER NO. R1-2019-0005  
NPDES NO. CA0005932  
WDID NO. 1B80020OHUM**

**WASTE DISCHARGE REQUIREMENTS**

**FOR THE**

**CALIFORNIA REDWOOD COMPANY AND THE TRINITY RIVER TIMBER COMPANY DBA NORTH FORK LUMBER COMPANY**

**KORBEL SAWMILL  
HUMBOLDT COUNTY**

The following Permittee is subject to waste discharge requirements (WDRs) set forth in this Order:

**Table 1. Permittee Information**

<b>Permittee</b>	California Redwood Company (owner) and Trinity River Timber Company dba North Fork Lumber Company (operator)
<b>Name of Facility</b>	Korbel Sawmill
<b>Facility Address</b>	1165 Maple Creek Road
	Korbel, CA 95550
	Humboldt County
<b>Type of Facility</b>	Sawmill and Planing Mill (SIC Code 2421) Log Storage and Handling (SIC Code 2411)
<b>Facility Design Flow</b>	13.6 million gallons per day (mgd)

**Table 2. Discharge Locations**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude (North)</b>	<b>Discharge Point Longitude (West)</b>	<b>Receiving Water</b>
001	Log Deck Sprinkler Water and Commingled Storm Water Runoff	40° 52' 27"	123° 57' 25"	North Fork Mad River

**Table 3. Administrative Information**

This Order was adopted on:	<b>April 18, 2019</b>
This Order shall become effective on:	<b>June 1, 2019</b>
This Order shall expire on:	<b>May 31, 2024</b>
The Permittee shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, (CCR) and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	<b>June 1, 2023</b>
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, North Coast Region have classified this discharge as follows:	Minor

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDR) Order No. R1-2013-0008 and Monitoring and Reporting Program (MRP) No. R1-2013-0008, are rescinded upon the effective date of this Order except for enforcement purposes, and in order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations and guidelines adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements of this Order. This action in no way prevents the North Coast Regional Water Quality Control Board (Regional Water Board) from taking enforcement action for past violations of the previous permit.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on **April 18, 2019**.

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 Matthias St. John, Executive Officer

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## I. FACILITY INFORMATION

Information describing the California Redwood Company Trinity River Timber Company dba North Fork Lumber Company and (Permittee), Korbil Sawmill (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board), finds:

- A. Legal Authorities.** This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Permittee to discharge into waters of the United States at the discharge location described in Table 2 subject to the Waste Discharge Requirements (WDRs) in this Order.
- B. Basis and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittee's application, monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into this Order, and constitutes Findings for this Order. Attachments A through E are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections III.H and V.B of this Order and section X.E of the Monitoring and Reporting Program are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- D. Notification of Interested Parties.** The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- E. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

### III. DISCHARGE PROHIBITIONS

- A. The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.
- B. Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.
- C. The discharge of solids or digester supernatant is prohibited, except as authorized under section VI.C.6.a of this Order (Solids Disposal and Handling Requirements).
- D. The discharge or recycling use of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions G (Bypass) and H (Upset).
- E. The discharge of waste to land that is not owned by the Permittee, governed by City ordinance, or under agreement to use by the Permittee, or for which the Permittee has explicitly permitted such use, is prohibited, except for use for fire suppression as provided in title 22, sections 60307(a) and 60307(b) of the California Code of Regulations (CCR).
- F. The discharge of waste at any point not described in Finding II.B of the Fact Sheet or authorized by a permit issued by the State Water Resources Control Board (State Water Board) or another Regional Water Board is prohibited.
- G. The discharge of treated process water to the North Fork Mad River and its tributaries is prohibited during the period from May 15 through September 30 of each year.
- H. During the period from October 1 through May 14, discharges of treated process water to the North Fork Mad River and its tributaries shall not exceed one percent of the flow of the North Fork Mad River. The Permittee shall propose a method for measuring North Fork Mad River flows for approval by the Regional Water Board Executive Officer as required by Special Provision VI.C.2.a of this Order (Special Studies, Technical Reports and Additional Monitoring Requirements). For the purposes of this Order, compliance with this discharge prohibition shall be determined as follows:
  - 1. The discharge of treated process water shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow of the North Fork Mad River. Daily flow calculations shall be based on flow meter comparisons reasonably read between the hours of 12:01 am and 12:00 midnight; and,
  - 2. In no case shall the total volume of treated process water discharged in a calendar month exceed one percent of the total volume of the North Fork Mad River in the same calendar month. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume comparisons shall be based on the first day of the calendar month to the date when the discharge ceased for the season.
- I. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited under Water Code section 13375.
- J. The discharge of domestic waste, treated or untreated, to surface waters is prohibited.

- K.** The discharge of wood treatment chemicals or stain control fungicides to surface waters or to groundwater is prohibited.
- L.** The discharge of process wastewater from the Sawmill, including process wastewater from bark removal, sawing, resawing, edging, trimming, planing, machining, and by-product manufacturing to surface waters is prohibited. The only discharge water originates from stormwater runoff and log-deck sprinkler water that is treated using settlement basins and a constructed wetland prior to discharge to the Mad River (see item II.A below).
- M.** The discharge of debris<sup>1</sup> is prohibited.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Effluent Limitations – Discharge Point 001**

**1. Final Effluent Limitations – Discharge Point 001**

- a.** The discharge of treated wastewater shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program (MRP) (Attachment E).

**Table 4. Effluent Limitations – Discharge Point 001**

Parameter	Units	Effluent Limitations <sup>1</sup>			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.5	8.5
Nickel Impact Ratio	ratio	1.0 <sup>2</sup>	1.0 <sup>2</sup>	--	--
Zinc Impact Ratio	ratio	1.0 <sup>2</sup>	1.0 <sup>2</sup>	--	--

**Table Notes:**

1. See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.
2. The Nickel Impact Ratio (NIR) and Zinc Impact Ratio (ZIR) are calculated as the ratio of the zinc and nickel concentration in the effluent and the applicable zinc and nickel standard (AMEL and MDEL). Attachment G is a PDF example of the calculator that will be sent to the Permittee to determine compliance with the AMEL/MDEL NIR and ZIR. For each of the applicable nickel and zinc standards. Compliance determination will be based on the receiving water data and metal effluent data taken on the day

- b. Acute Toxicity.** There shall be no acute toxicity in the effluent discharged to the North Fork Mad River. The Permittee will be considered in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following:
  - i.** Minimum for any one bioassay: 70 percent survival; and
  - ii.** Median for any three or more consecutive bioassays: at least 90 percent survival.
 Compliance with this effluent limitation shall be determined in accordance with section VII.G of this Order and section V.A of the MRP (Attachment E).

<sup>1</sup> Debris is defined in Attachment A.

- c. **Chronic Toxicity.** As measured at Monitoring Location EFF-001, there shall be no chronic toxicity in the effluent when discharging to the North Fork Mad River. Compliance with this narrative chronic toxicity effluent limitation shall be determined in accordance with section VII.H of this Order and sections V.B and V.C of the MRP (Attachment E).

## 2. **Interim Effluent Limitations – Not Applicable**

This Order does not establish interim effluent limitations or schedules for compliance with final limitations.

## B. **Land Discharge Specifications and Requirements**

This Order does not authorize discharges of wastewater or solids to land. Permittee is responsible for obtaining all necessary approvals and authorizations prior to the discharge of wastewater or solid waste to land, including all log-deck cleanup materials such as gravel and soil fines.

## C. **Water Recycling Specifications and Requirements – Not Applicable**

This Order does not authorize discharges of recycled water.

## V. **RECEIVING WATER LIMITATIONS**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Receiving water conditions not in conformance with the limitation are not necessarily a violation of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require an investigation to determine cause and culpability prior to asserting that a violation has occurred.

### A. **Surface Water Limitations**

Discharges from the Facility shall not cause the following in the receiving water:

1. The discharge shall not cause the daily minimum dissolved oxygen (DO) concentration of the receiving water to be depressed below 9.0 mg/L. In addition, the Permittee shall not cause the 7-day moving average<sup>5</sup> dissolved oxygen (DO) concentration of the receiving water to be depressed below 11 mg/L.

In those waterbodies for which the aquatic life-based DO requirements are unachievable due to natural conditions<sup>2</sup>, site-specific background DO requirements can be applied<sup>3</sup> as water quality objectives by calculating the daily minimum DO necessary to maintain 85% DO saturation during the dry season and 90% DO saturation during the wet season under

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<sup>2</sup> Natural conditions are conditions or circumstances affecting the physical, chemical, or biological integrity of water that are not influenced by past or present anthropogenic activities.

<sup>3</sup> Upon approval from the Regional Water Board Executive Officer.

site salinity, site atmospheric pressure, and natural receiving water temperature<sup>4</sup>. In no event may controllable factors reduce the daily minimum DO below 6.0 mg/L.

For the protection of estuarine habitat (EST), the dissolved oxygen concentration of enclosed bays and estuaries shall not be depressed to levels adversely affecting beneficial uses as a result of controllable water quality factors.

2. The discharge shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.
3. The discharge shall not cause the specific conductance (micromhos<sup>5</sup>) concentration of the receiving waters to increase above 150 micromhos more than 50 percent of the time<sup>6</sup>, or above 300 micromhos more than 10 percent of the time<sup>7</sup>. Compliance will be determined by evaluating the 50<sup>th</sup> percentile and 90<sup>th</sup> percentile of the monthly means of receiving water data each calendar year.
4. The discharge shall not cause the total dissolved solids concentration of the receiving waters to increase above 90 mg/L more than 50 percent of the time, or above 160 mg/L more than 10 percent of the time. Compliance will be determined by evaluating the 50<sup>th</sup> percentile and 90<sup>th</sup> percentile of the monthly means of receiving water data each calendar year.
5. The discharge shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.
6. The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
7. The discharge shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
8. The discharge shall not cause receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
9. The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

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<sup>4</sup> The method(s) used to estimate natural temperatures for a given waterbody or stream length must be approved by the Executive Officer and may include, as appropriate, comparison with reference streams, simple calculation, or computer models.

<sup>5</sup> A 7-day moving average is calculated by taking the average of each set of seven consecutive daily averages.

<sup>5</sup> Measured at 77°F.

<sup>6</sup> 50% or more of the monthly means, over a calendar year, must be less than or equal to 150 micromhos.

<sup>7</sup> No more than 10% of the monthly means, over a calendar year, may be greater than 300 micromhos.



10. The discharge shall not contain substances in concentrations that result in deposition of material in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
11. The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
12. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.
13. The discharge shall not cause a measurable temperature change in the receiving water at any time.
14. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge shall not cause bioaccumulation of pesticide concentrations in bottom sediments or aquatic life.
15. The discharge shall not cause receiving waters to contain concentrations of pesticides in excess of Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, division 4, chapter 15, article 5.5 of the CCR.
16. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.
17. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.
18. The discharge shall not cause concentrations of chemical constituents to occur in excess of MCLs and secondary MCLs (SMCLs) established for these pollutants in title 22, division 4, chapter 15, article 5.5, section 64444, and article 16, section 64449 of the CCR.
19. The discharge shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life, nor in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.

**B. Groundwater Limitations**

1. The collection, treatment, storage, and disposal of wastewater shall not cause a statistically significant degradation of groundwater quality unless a technical evaluation is performed

that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., Basin Plan) and reasonable best management practices (BMPs), will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.

2. The collection, treatment, storage, and disposal of wastewater shall not cause alterations of groundwater that contain chemical concentrations in excess of limits the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 4, section 64431, article 5.5, section 64444, and article 16 section 64449.
3. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain radionuclides in concentrations that cause nuisance or adversely affect beneficial uses, nor in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.
4. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain taste - or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
5. In groundwaters used for domestic or municipal supply (MUN), the collection, treatment, storage, and disposal of wastewater shall not cause the median of the most probable number of coliform organisms over any 7-day period to exceed 1.1 MPN/100 mL or 1 colony/100 mL.
6. Groundwaters shall not contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, or that adversely affects beneficial uses. This limitation applies regardless of whether the toxicity is caused by a single substance or the synergistic effect of multiple substances.

## VI. PROVISIONS

### A. Standard Provisions.

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

1. **Federal Standard Provisions.** The Permittee shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following Regional Water Board standard provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
  - a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

- b. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, final effluent limitation, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment infrastructure, breach of pond containment, etc., that results in a discharge to a drainage channel or a surface water, the Permittee shall notify Regional Water Board staff within 24 hours of having knowledge of such non-compliance. Spill notification and reporting shall be conducted in accordance with section V.E of Attachment D and section X.E of the Monitoring and Reporting Program.

## B. Monitoring and Reporting Program Requirements

The Permittee shall comply with the MRP, included as Attachment E of this Order, and future revisions thereto.

## C. Special Provisions

### 1. Reopener Provisions

- a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.
- b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.
- c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a narrative or numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.
- d. **303(d)-Listed Pollutants.** If an applicable total maximum daily load (TMDL) (see Fact Sheet, section III.D) program is adopted, this Order may be reopened and effluent limitations for the pollutant(s) that are the subject of the TMDL may be modified or imposed to conform this Order to the TMDL requirements.
- e. **Water Effect Ratios (WERs) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents, except for copper and lead for which site-specific WERs of 50 and >49, respectively, have been used, as further described in section IV.C.3.c of the Fact Sheet. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable. If the Permittee performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators and submits a report that demonstrates that WER or translator studies were performed in accordance with U.S. EPA or other approved guidance, this Order may be reopened to modify the effluent limitations for the applicable constituents.

- f. Authorization for Cogeneration Plant Discharges.** This Order may be reopened to authorize the discharge of wastewater from the proposed cogeneration plant if the Permittee submits a complete Report of Waste Discharge and antidegradation analysis demonstrating that the proposed discharge is consistent with the federal and state antidegradation policies in 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. North Fork Mad River Flow Monitoring Plan.** The Permittee shall submit for Regional Water Board Executive Officer approval, a written proposal for monitoring flow in the North Fork Mad River for the purpose of determining the effluent discharge rate to demonstrate compliance with Discharge Prohibition III.H of this Order. The written proposal shall be submitted by **September 1, 2019** and shall describe the flow monitoring methodology in detail and propose a schedule for implementation of the flow monitoring that is as short as practicable. Until an approved method of measuring flow in the North Fork Mad River has been determined by the Regional Board Executive Officer, the Permittee may continue to use the rating curve developed for the Mad River based on flow measurements at the Little River flow gauging station.

## 3. Best Management Practices and Pollution Prevention

### a. Pollutant Minimization Program (PMP)

- i.** The Permittee shall, as required by the Executive Officer, develop and conduct a PMP as further described below when there is evidence (e.g., sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a CTR priority pollutant is present in the effluent above an effluent limitation and either:
  - (a)** The concentration of the pollutant is reported as “Detected, but Not Quantified” (DNQ) and the effluent limitation is less than the reporting limit (RL);
  - (b)** A sample result is reported as non-detect (ND) and the effluent limitation is less than the method detection limit (MDL), using definitions described in Attachment A and reporting protocols described in MRP section X.B.5.
- ii.** The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:
  - (a)** An annual review and semi-annual monitoring of potential sources of the reportable CTR priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
  - (b)** Quarterly monitoring for the reportable CTR priority pollutant(s) in the influent to the wastewater treatment system;

- (c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- (d) Implementation of appropriate cost-effective control measures for the reportable CTR priority pollutant(s), consistent with the control strategy; and
- (e) An annual status report that shall be submitted as part of the Annual Facility Report due **March 1st** to the Regional Water Board and shall include:
  - (1) All PMP monitoring results for the previous year;
  - (2) A list of potential sources of the reportable pollutant(s);
  - (3) A summary of all actions undertaken pursuant to the control strategy; and
  - (4) A description of actions to be taken in the following year.

**b. Debris and Sediment Control Best Management Practices**

The discharge of debris (as defined in Attachment A) is prohibited. See Discharge Prohibitions III.M. The discharge of sediment and woody material such as heartwood or sapwood, bark, twigs, branches, wood chips, or sawdust that would otherwise pass through a 1.0-inch diameter round opening shall be reduced to the maximum extent practicable by the implementation of Best Management Practices (or BMPs). By **September 1, 2019** the Permittee shall submit a list of updated BMPs, and a recommended monitoring program to the Executive Officer for review and approval. At a minimum, the BMP monitoring program should describe how BMP effectiveness is monitored, and how BMPs are operated and maintained. Once approved, the list of BMPs must be implemented to the maximum extent practicable. The Permittee may seek changes to the list of approved BMPs by submitting a written request for approval by the Executive Officer.

**4. Construction, Operation and Maintenance Specifications**

- a. This Order (Attachment D, Standard Provision I.D) requires that the Permittee at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.
- b. The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the operational components of the Facility. The Permittee shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The Permittee shall operate and maintain the Facility in accordance with the most recently updated O&M Manual. The O&M Manual shall be readily available to operating personnel onsite and for review by state or federal inspectors. The O&M Manual shall include the following.
  - i. Description of the Facility's organizational structure showing the number of employees, duties and qualifications, and plant attendance schedules (daily,

weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the Facility so as to achieve the required level of treatment at all times.

- ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
- iii. Description of laboratory and quality assurance procedures.
- iv. Process and equipment inspection and maintenance schedules.
- v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.
- vi. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

**c. Settling Basin Operating Requirements**

- i. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- ii. Basins shall be managed to prevent breeding of mosquitos. In particular:
  - (a) An erosion control program should assure small coves and irregularities are not created around the perimeter of the water surface;
  - (b) Weeds shall be minimized; and
  - (c) Vegetation, debris, and dead algae shall not accumulate on the water surface.

**5. Special Provisions for Municipal Facilities (POTWs Only) - Not Applicable**

**6. Other Special Provisions**

**a. Solids Disposal and Handling Requirements**

Collected solids removed from liquid wastes shall be disposed of in a proper manner approved by the Executive Officer and consistent with the Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in the CCR, title 27, section 20005, *et seq.* (i.e., at a solid waste facility for which waste discharge requirements have been prescribed by a Regional Water Board) or in a manner approved by the Regional Water Board. For purposes of this provision:

- i. "Woodwaste" includes bark, rock, and/or soil from the surface or perimeter of a log deck.
- ii. "Waste Piles" include windrows, fills, or dikes of woodwaste wherein visually identifiable material of woody origin may be found at depths greater than one foot below the surface.

iii. "Waste Storage" occurs whenever a waste pile remains on the property more than 180 days.

iv. "Waste Treatment" includes burning of wood piles.

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.

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

#### **7. Compliance Schedules – Not Applicable**

This Order does not establish interim effluent limitations or schedules of compliance for final numeric effluent limitations.

### **VII. COMPLIANCE DETERMINATION**

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

#### **A. General**

Compliance with effluent limitations for CTR priority pollutants, when effluent limitations have been established, shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Permittee shall be deemed out of compliance with effluent limitations if the concentration of pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported minimum level (ML).

#### **B. Multiple Sample Data**

When determining compliance with an AMEL for CTR priority pollutants, and more than one sample result is available, the Permittee shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure.

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two middle values unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ and a value of zero shall be used for the ND or DNQ value in the median calculation for compliance purposes only. Using a value of zero for DNQ or ND samples does not apply when performing reasonable potential or antidegradation analysis.

**C. Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection B, above, for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittee will be considered out of compliance for that calendar month. The Permittee will only be considered out of compliance for days when the discharge occurs. If there are ND or DNQ results for a specific constituent in a calendar month, the Permittee shall calculate the median of all sample results within that month for compliance determination with the AMEL as described in section VII.B, above.

**D. Maximum Daily Effluent Limitation (MDEL)**

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Permittee will be considered out of compliance for that parameter for that 1 day only within the reporting period.

**E. Instantaneous Minimum Effluent Limitation**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total sum of time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

**F. Instantaneous Maximum Effluent Limitation**

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total sum of time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.



**G. Acute Toxicity Limitations**

Compliance with the three-sample median acute toxicity effluent limitation shall be determined when there is a discharge, by calculating the median percent survival of the three most recent consecutive samples meeting all test acceptability criteria collected from Monitoring Location EFF-001.

Compliance with the accelerated monitoring and TRE provisions shall constitute compliance with the acute toxicity requirements, as specified in the MRP (Attachment E, sections V.A and V.C).

**H. Chronic Toxicity**

Compliance with the accelerated monitoring and TRE provisions specified in the MRP (Attachment E, sections V.B.8 and V.C) shall constitute compliance with the narrative chronic toxicity requirement specified as Effluent Limitation IV.A.1.c. The MRP, section V.B.6.a, further describes how a determination of Pass/Fail shall be made.

## ATTACHMENT A – DEFINITIONS

### **Arithmetic Mean ( $\mu$ )**

Also called the average is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean =  $\mu = \Sigma x / n$       where:  $\Sigma x$  is the sum of the measured ambient water concentrations, and  $n$  is the number of samples.

### **Average Monthly Effluent Limitation (AMEL)**

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

### **Average Weekly Effluent Limitation (AWEL)**

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

### **Bioaccumulative Pollutants**

Substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

### **Coefficient of Variation (CV)**

A measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

### **Daily Discharge**

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

### **Debris**

Woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening and is present in the discharge from a wet storage facility.

**Detected, but Not Quantified (DNQ)**

Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

**Dilution Credit**

The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

**Effective Concentration (EC)**

A point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

**Effluent Concentration Allowance (ECA)**

A value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as wasteload allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

**Enclosed Bays**

Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

**Estimated Chemical Concentrations**

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

**Estuaries and Coastal Lagoons** are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, Russian, San Diego, and Otay Rivers. Estuaries do not include inland surface waters or ocean waters.

### **Inhibition Concentration**

The IC25 is typically calculated as a percentage of effluent. It is the level at which the organisms exhibit 25 percent reduction in biological measurement such as reproduction or growth. It is calculated statistically and used in chronic toxicity testing.

### **Inland Surface Waters**

All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

### **Instantaneous Maximum Effluent Limitation**

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

### **Instantaneous Minimum Effluent Limitation**

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

### **Lowest Observed Effect Concentration (LOEC)**

The lowest concentration of an effluent or toxicant that results in adverse effects on the test organism (i.e., where the values for the observed endpoints are statistically different from the control).

### **Maximum Daily Effluent Limitation (MDEL)**

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

### **Median**

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements ( $n$ ) is odd, then the median =  $X_{(n+1)/2}$ . If  $n$  is even, then the median =  $(X_{n/2} + X_{(n/2)+1})/2$  (i.e., the midpoint between the  $n/2$  and  $n/2+1$ ).

### **Method Detection Limit (MDL)**

The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

### **Minimum Level (ML)**

The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

### **Mixing Zone**

A limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

**Not Detected (ND)**

Those sample results less than the laboratory's MDL.

**No Observed Effect Concentration (NOEC)**

The highest tested concentration of an effluent or a test sample at which the effect is no different from the control effect, according to the statistical test used (see LOEC). The NOEC is usually the highest tested concentration of an effluent or toxicant that causes no observable effects on the aquatic test organisms (i.e., the highest concentration of toxicity at which the values for the observed responses do not statistically differ from the controls). It is determined using hypothesis testing.

**Persistent Pollutants**

Substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (PMP)**

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a CTR priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative CTR priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

**Pollution Prevention**

Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

**Process Wastewater**

The term "process wastewater" specifically excludes non-contact cooling water, material storage yard runoff (either raw material or processed wood storage), boiler blowdown, and wastewater from washout of thermal oxidizers or catalytic oxidizers, wastewater from biofilters, or wastewater from wet electrostatic precipitators used upstream of thermal oxidizers or catalytic oxidizers installed by facilities covered by subparts B, C, D or M to comply with the national emissions standards for hazardous air pollutants (NESHAP) for plywood and composite wood products (PCWP) facilities (40 C.F.R. part 63, subpart DDDD). For the dry process hardboard, veneer, finishing, particleboard, and sawmills and planing mills subcategories, fire control water is excluded from the definition.

**Publicly Owned Treatment Works (POTW)**

A treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a State or municipality as defined by section 502(4) of the CWA. [Section 502(4) of the CWA defines a municipality as a city, town, borough, county, parish, district, association, or other public body created by or pursuant to

State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the CWA, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

**Recycled Water**

Water which, as a result of treatment of municipal wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource (Water Code section 13050). The terms “recycled water” and “reclaimed water” have the same meaning (Water Code section 26).

**Reporting Level (RL)**

The RL is the ML (and its associated analytical method) chosen by the Permittee for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

**Septage**

Defined as the liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, recreational vehicle’s sanitation tank, or similar storage or treatment works that receives domestic waste.

**Source of Drinking Water**

Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

**Standard Deviation ( $\sigma$ )**

A measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

$\mu$  is the arithmetic mean of the observed values; and

n is the number of samples.

**Toxicity Reduction Evaluation (TRE)**

A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then

confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

### **Test of Significant Toxicity (TST)**

The statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010). TST was developed by the U.S. Environmental Protection Agency (EPA) for analyzing WET and ambient toxicity data. Using the TST approach, the sample is declared toxic if there is greater than or equal to a 25% effect in chronic tests, or if there is greater than or equal to a 20% effect in acute tests at the permitted instream waste concentration (IWC) (referred to as the toxic regulatory management decision (RMD)). The sample is declared non-toxic if there is less than or equal to a 10% effect at the IWC in acute or chronic tests (referred to as the non-toxic RMD).

### **Water Effect Ratio (WER)**

An appropriate measure of the toxicity of a material obtained in a site water divided by the same measure of the toxicity of the same material obtained simultaneously in a laboratory dilution water. After a WER is determined for a site, a site specific aquatic life criterion can be calculated by multiplying an appropriate national, state, or recalculated criterion by the WER. Most WERs are expected to be equal to or greater than 1.0, but some might be less than 1.0.

ATTACHMENT B - MAP

Figure B-1. Facility Location Map

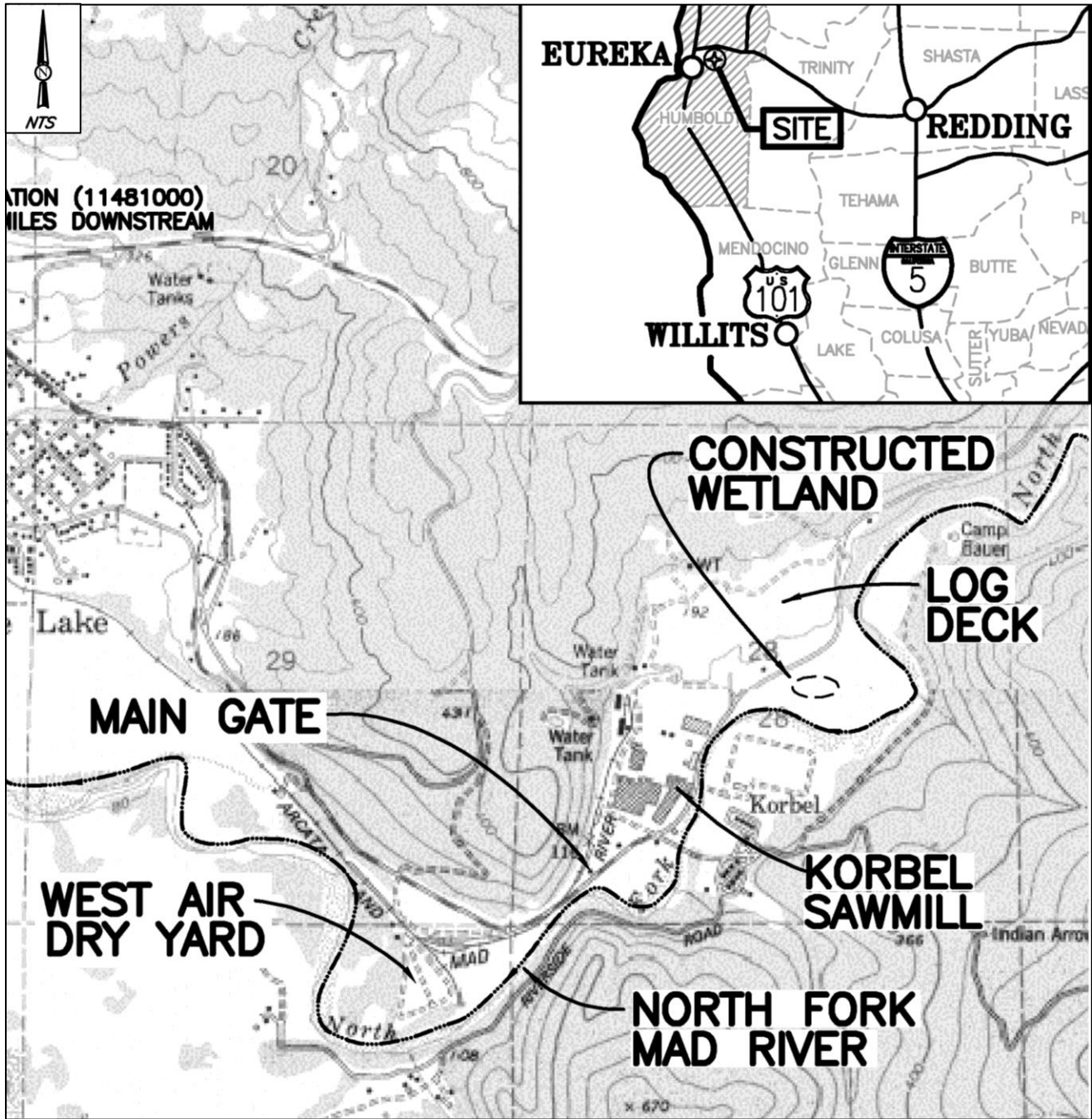
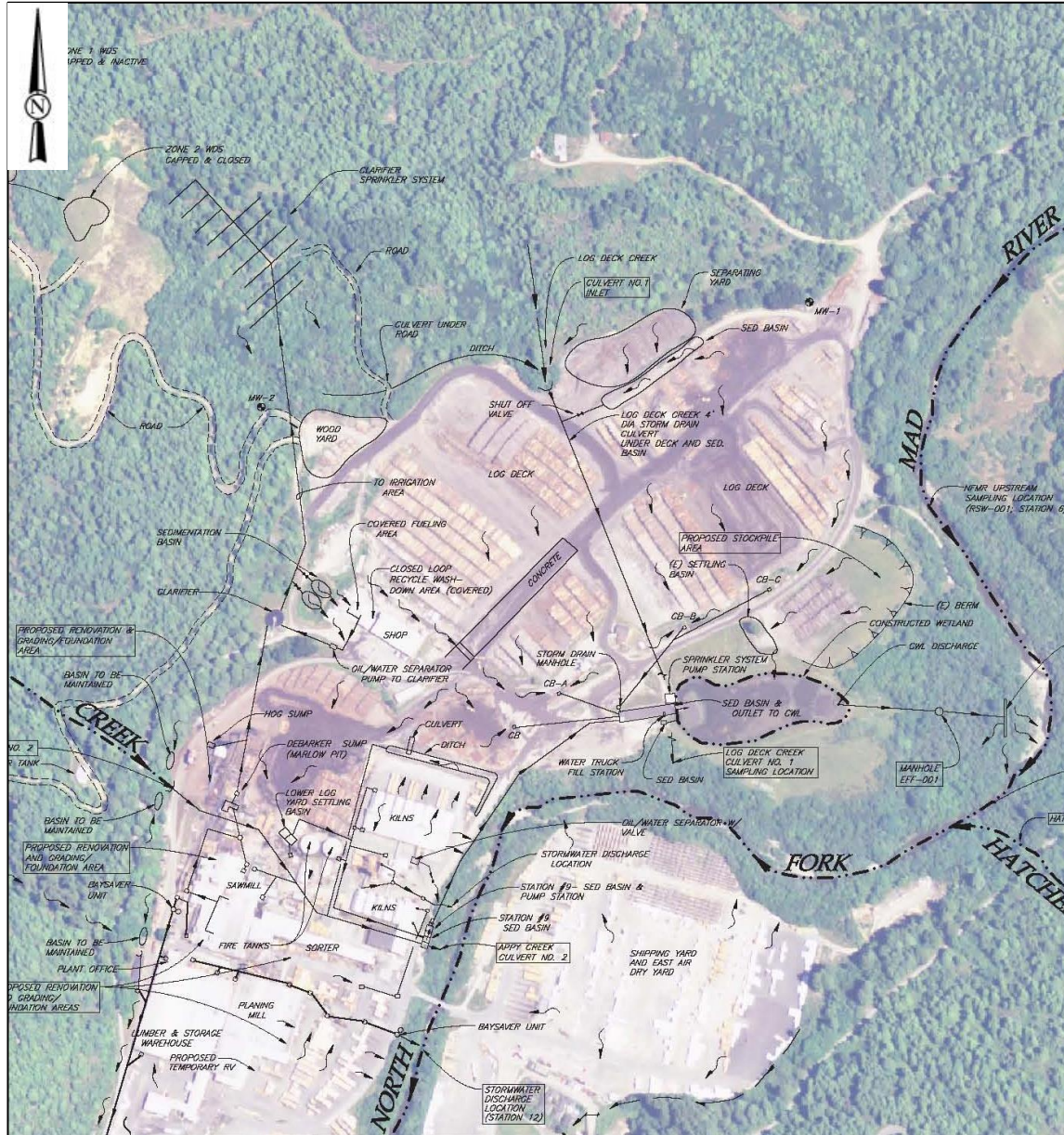




Figure B-2. Site Drainage Plan



**ATTACHMENT C - FLOW SCHEMATIC**

**Figure C-1. Block Flow Diagram of Log Deck and Constructed Wetland**

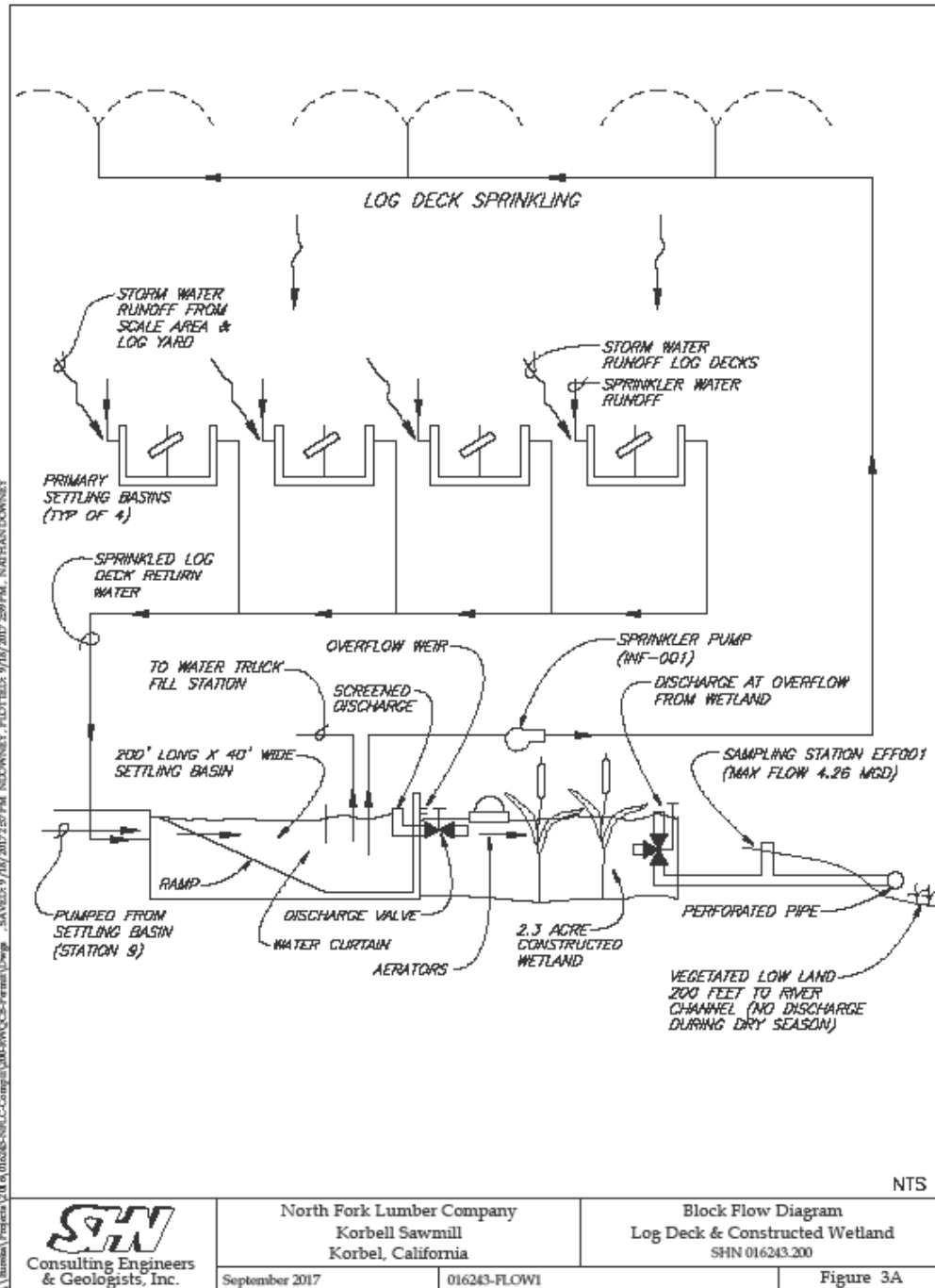
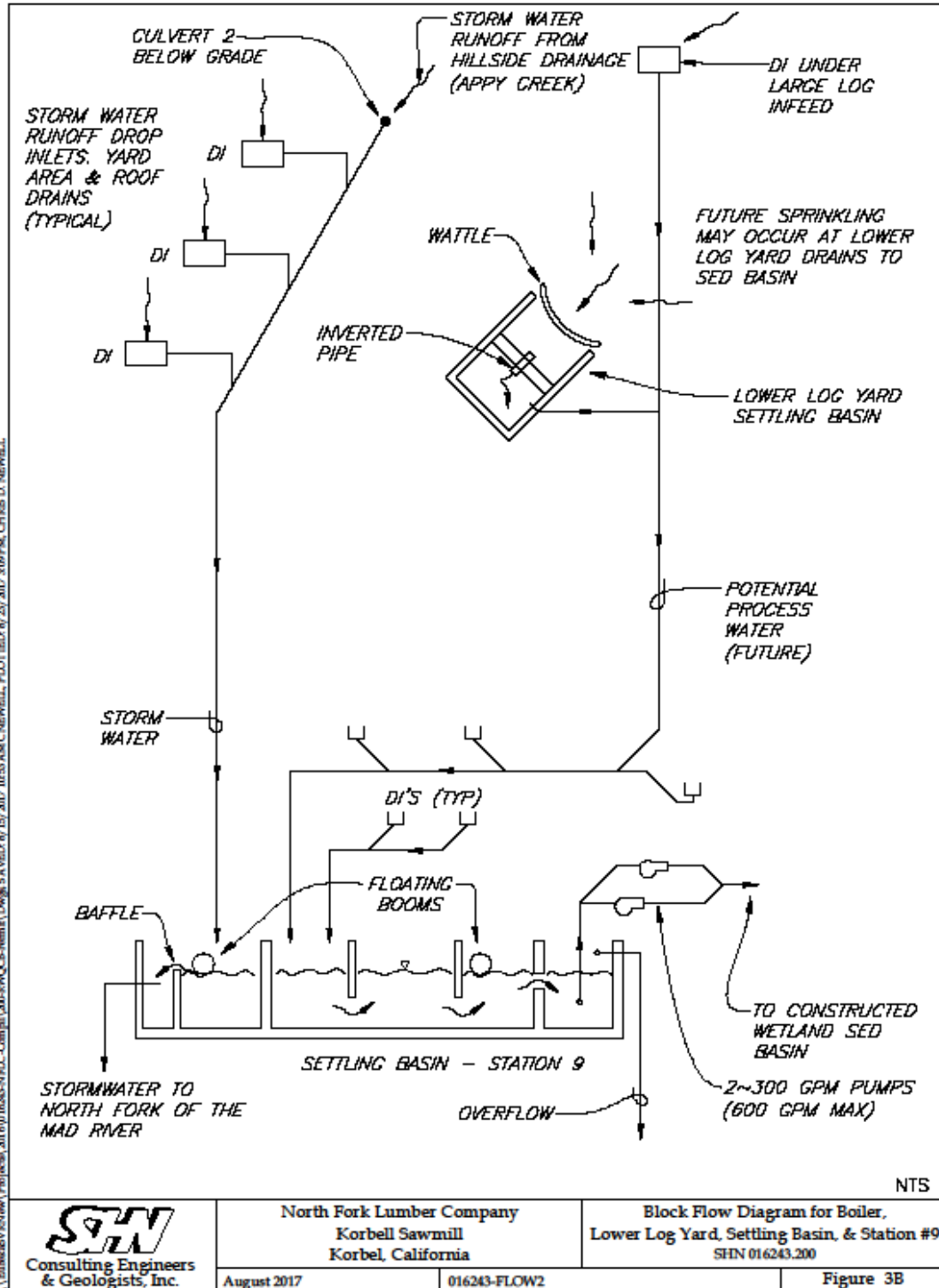


Figure C-1. Block Flow Diagram for the Boiler, Lower Log Yard, Settling Basin, and Station #9



## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Permittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 130001, 13304, 13350, 13385)
2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1))

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c))

#### **C. Duty to Mitigate**

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d))

#### **D. Proper Operation and Maintenance**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e))

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g))
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c))

## F. Inspection and Entry

The Permittee shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383)

## G. Bypass

### 1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i))
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii))
2. **Bypass not exceeding limitations.** The Permittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to

prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

- c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C))
4. **Burden of Proof.** In any enforcement proceeding, the permittee seeking to establish the bypass defense has the burden of proof.
5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii))
6. **Notice**
  - a. **Anticipated bypass.** If the Permittee knows in advance of the need for a bypass, it shall submit a prior notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i))
  - b. **Unanticipated bypass.** The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii))

#### H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1))

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2))
2. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred, and that the Permittee can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The Facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv))

3. **Burden of Proof.** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4))

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f))

### B. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit. (40 C.F.R. § 122.41(b))

### C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61)

## III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1))
- B. Monitoring must be conducted according to test procedures under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is “sufficiently sensitive” when:
  1. The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter, and, either the method ML is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility’s discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
  2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv))

In the case of sludge use or disposal approved under 40 C.F.R. part 136, monitoring must be conducted according to test procedures in part 503 unless otherwise specified in 40 C.F.R. or other test procedures have been specified in this Order.

#### **IV. STANDARD PROVISIONS – RECORDS**

- A.** Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2))
- B. Records of monitoring information shall include:**
1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
  2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
  3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
  4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
  5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
  6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi))
- C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):**
1. The name and address of any permit applicant or Permittee (40 C.F.R. § 122.7(b)(1)); and
  2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2))

#### **V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

The Permittee shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittee shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267)

**B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k))



2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3))
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c))
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for

submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d))

6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e))

**C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the MRP (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4))
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring, sludge use, or disposal practices. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i))
3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii))
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii))

**D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5))

**E. Twenty-Four Hour Reporting**

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i))

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception

of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i))

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A))
  - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B))
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii))

#### **F. Planned Changes**

The Permittee shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the Facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii))
3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii))

#### **G. Anticipated Noncompliance**

The Permittee shall give advance notice to the Regional Water Board of any planned changes in the Facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2))

#### **H. Other Noncompliance**

The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7))

#### **I. Other Information**

When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Permittee shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8))

#### **J. Initial Recipient for Electronic Reporting Data**

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9))

### **VI. STANDARD PROVISIONS – ENFORCEMENT**

The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

### **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

#### **A. Non-Municipal Facilities**

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter ( $\mu\text{g}/\text{L}$ ) (40 C.F.R. § 122.42(a)(1)(i));
  - b. 200  $\mu\text{g}/\text{L}$  for acrolein and acrylonitrile; 500  $\mu\text{g}/\text{L}$  for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter ( $\text{mg}/\text{L}$ ) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

- 2.** That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
  - a.** 500 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(2)(i));
  - b.** 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
  - c.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
  - d.** The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code section 13383 also authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

### I. GENERAL MONITORING PROVISIONS

- A. Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.
- B. Supplemental Monitoring Provision.** If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 C.F.R. part 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.
- C. Laboratory Certification.** Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board), Division of Drinking Water, in accordance with the provisions of Water Code section 13176 and must include quality assurance / quality control data with their analytical reports. The Discharger may analyze pollutants with short hold times (e.g., pH, chlorine residual, etc.) in its on-site laboratory or as a field measurement provided that the Discharger has standard operating procedures (SOPs) that identify quality assurance/quality control procedures to be followed to ensure accurate results.
- D. Instrumentation and Calibration Provision.** All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated no less than the manufacturer's recommended intervals or one-year intervals, (whichever comes first) to ensure continued accuracy of the devices.
- E. Minimum Levels (ML) and Reporting Levels (RL).** Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. EPA approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule (CTR) shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005) (SIP). However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the SIP. For instance, U.S. EPA Method 1631E for mercury is not currently listed in SIP Appendix 4, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with an ML of 5 ng/L.

**F. Discharge Monitoring Report Quality Assurance (DMR-QA) Study.** The Permittee shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually, by December 31, to the State Water Board at the following address:

State Water Resources Control Board  
 Quality Assurance Program Officer  
 Office of Information Management and Analysis  
 1001 I Street, Sacramento, CA 95814

**II. MONITORING LOCATIONS**

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-002	Water flowing over the settling basin weir into the constructed wetland.
001	EFF-001	Process wastewater discharged from the constructed wetland to the North Fork Mad River.
--	RSW-001	Upstream receiving water monitoring location in the North Fork Mad River at the water hole upstream of the constructed wetland discharge at Discharge Point 001.
--	RSW-002	Downstream receiving water monitoring location in the North Fork Mad River downstream of the constructed wetland discharge at Discharge Point 001.

**III. INFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location INF-002**

1. The Permittee shall monitor influent to the Facility at Monitoring Location INF-002 as follows:

**Table E-2. Influent Monitoring – Monitoring Location INF-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Influent Flow <sup>1,2</sup>	gallons	Meter	Continuous	--
<p><u>Table Notes:</u></p> <ol style="list-style-type: none"> <li>1. Each quarter, the Permittee shall report the average daily and average monthly flows.</li> <li>2. Total influent flow should account for both pumped on-site well water, and estimated volume of water recirculated from the large concrete settling/stilling basin to the log deck sprinklers.</li> </ol>				

**IV. EFFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location EFF-001**



1. The Permittee shall monitor process wastewater to be discharged from the constructed wetland to the North Fork Mad River at Monitoring Location EFF-001 as follows:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow <sup>1</sup>	mgd	Meter	Continuous	--
Discharge Dilution Rate	% of stream flow	Calculate	Daily	--
pH	standard units	Field	Monthly <sup>2</sup>	Part 136 <sup>3</sup>
Total Suspended Solids (TSS)	mg/L	Composite	Monthly	Part 136 <sup>3</sup>
Copper, Total Recoverable	µg/L	Composite	Quarterly <sup>4</sup>	Part 136 <sup>3</sup>
Lead, Total Recoverable	µg/L	Composite	Quarterly <sup>4</sup>	Part 136 <sup>3</sup>
Nickel, Total Recoverable	µg/L	Composite	Monthly <sup>2,5</sup>	Part 136 <sup>3</sup>
Zinc, Total Recoverable	µg/L	Composite	Monthly <sup>2,5</sup>	Part 136 <sup>3</sup>
Chemical Oxygen Demand (COD)	mg/L	Composite	Monthly	Part 136 <sup>3</sup>
Color	Color Units	Grab	Monthly	Part 136 <sup>3</sup>
Debris	N/A	Visual	Monthly	N/A
Dissolved Oxygen	mg/L	Field	Monthly	Part 136 <sup>3</sup>
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	Monthly <sup>4</sup>	Part 136 <sup>3</sup>
Settleable Solids	mg/L	Grab	Monthly	Part 136 <sup>3</sup>
Temperature	°C or °F	Field	Monthly	Part 136 <sup>3</sup>
Turbidity	NTU	Field	Monthly	Part 136 <sup>3</sup>
CTR Priority Pollutants <sup>6</sup>	µg/L	Grab	Once per permit term <sup>7</sup>	Part 136 <sup>3,8</sup>
Acute Toxicity <sup>9</sup>	% survival	Composite	Annually	See Section V Below
Chronic Toxicity <sup>9</sup>	Pass or Fail, and % Effect	Composite	Quarterly	See Section V Below

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
<u>Table Notes:</u>				
<ol style="list-style-type: none"> <li>Each quarter, the Permittee shall report the daily average and monthly average flows.</li> <li>Accelerated monitoring (monthly monitoring frequency). If a test result exceeds an effluent limitation, the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.</li> <li>Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of <i>Standard Methods for Examination of Water and Wastewater</i> (American Public Health Administration).</li> <li>Monitoring for copper and lead shall be conducted concurrently with chronic toxicity monitoring.</li> <li>Monitoring for effluent and receiving water hardness shall be conducted concurrently with effluent sampling for nickel and zinc.</li> <li>Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38. The Permittee is not required to sample and analyze for asbestos. Hardness shall be monitored concurrently with the priority pollutant sample.</li> <li>CTR priority pollutant sampling shall be completed no later than <b>April 1, 2023</b>. Effluent and receiving water monitoring shall occur concurrently.</li> <li>Analytical methods must achieve the lowest ML specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and method detection limit (MDL) for each sample result.</li> <li>Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.</li> </ol>				

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Acute Toxicity Testing**

The Permittee shall conduct acute whole effluent toxicity testing (WET) in accordance with the following acute toxicity testing requirements.

- Test Frequency.** The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-3, above.
- Discharge In-stream Waste Concentration (IWC) for Acute Toxicity.** The IWC for this discharge is 100 percent effluent.<sup>1</sup>
- Sample Volume and Holding Time.** The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.
- Freshwater Test Species and Test Methods.** The Permittee shall conduct the following acute toxicity tests in accordance with species and test methods in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

<sup>1</sup> The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-001.

- a. A 96-hour static renewal toxicity test with an invertebrate, the water flea, *Ceriodaphnia dubia* (Survival Test Method 2002.0).
  - b. A 96-hour static renewal toxicity test with a vertebrate, the rainbow trout, *Oncorhynchus mykiss* (Survival Test Method 2019.0).
5. **Species Sensitivity Screening.** Species sensitivity screening shall be conducted during this Order's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct two acute toxicity tests using the invertebrate and fish species identified in section V.A.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine acute toxicity monitoring during the remainder of the permit term.
6. **Quality Assurance and Additional Requirements.** Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual referenced in section V.A.4, above. Additional requirements are specified below.
  - a. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" from acute toxicity tests using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis ( $H_0$ ) for the TST approach is: Mean discharge IWC response  $\leq 0.80 \times$  Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent (%) Effect" at the discharge IWC is defined and reported as:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .
  - b. If the effluent toxicity test does not meet the minimum effluent test acceptability criteria (TAC) specified in the referenced test method, then the Permittee shall re-sample and re-test within 7 days.
  - c. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
  - d. Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the U.S. EPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.
  - e. **Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

7. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing 14 days after receipt of test results exceeding the acute toxicity effluent limitation during regular or accelerated monitoring. The notification shall describe actions the Permittee has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.
8. **Accelerated Monitoring Requirements.** If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all TAC, the Permittee shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three-sample median minimum limitation (90 percent survival), the Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section V.C of the MRP. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all TAC, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.
9. **Reporting.** The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test (WET report). The WET report shall be prepared using the format and content of section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), including:
  - a. The toxicity test results in percent (%) survival for the 100 percent effluent sample.
  - b. The toxicity test results for the TST approach, reported as "Pass" or "Fail" and "Percent (%) Effect" at the acute toxicity IWC for the discharge.
  - c. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
  - d. TRE/toxicity identification evaluation (TIE) results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.
  - e. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

#### B. Chronic Toxicity Testing

The Permittee shall conduct chronic toxicity testing in accordance with the following chronic toxicity testing requirements:

1. **Test Frequency.** The Permittee shall conduct chronic toxicity testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-3, above.

2. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge is 100 percent effluent.<sup>2</sup>
3. **Sample Volume and Holding Time.** The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. For toxicity tests requiring renewals, a minimum of three 24-hour composite samples shall be collected. The lapsed time (holding time) from sample collection to first use of each sample must not exceed 36 hours.
4. **Freshwater Test Species and Test Methods.** The Permittee shall conduct the following chronic toxicity tests in accordance with species and test methods in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (U.S. EPA Report No. EPA-821-R-02-013, or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.
  - a. A 7-day static renewal toxicity test with a vertebrate, the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).
  - b. A static renewal toxicity test with an invertebrate, the water flea, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
  - c. A 96-hour static renewal toxicity test with a plant, the green algae, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).
5. **Species Sensitivity Screening.** Species sensitivity screening shall be conducted during this Order's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct three chronic toxicity tests using the fish, the invertebrate, and the algae species identified in section V.B.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit term.
6. **Quality Assurance and Additional Requirements.** Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.
  - a. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" for chronic toxicity tests using the TST approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis ( $H_0$ ) for the TST approach is Mean discharge IWC response  $0.75 \times$  Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative

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<sup>2</sup> The chronic toxicity test shall be conducted using a series of five dilutions and a control. The series shall consist of the following dilutions: 12.5, 25, 50, 75, and 100 percent. Compliance determination will be based on the IWC (100 percent effluent) and a control as further described in Fact Sheet section IV.C.5.c.

“Percent (%) Effect” at the discharge IWC is defined and reported as:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .

- b. If the effluent toxicity test does not meet the minimum effluent or reference toxicant TAC specified in the referenced test method, then the Permittee shall re-sample and re-test within 14 days.
- c. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
- d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported.
- e. The Permittee shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the MRP and the rationale is explained in the Fact Sheet (Attachment F).
- f. **Ammonia Removal.** Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittee must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.
  - i. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
  - ii. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
  - iii. Conduct graduated pH tests as specified in the TIE methods. For example, mortality should be higher at pH 8 and lower at pH 6.
  - iv. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent.

7. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of a result of “Fail” during routine or accelerated monitoring.
8. **Accelerated Monitoring Requirements.** Accelerated monitoring for chronic toxicity is triggered when a chronic toxicity test, analyzed using the TST approach, results in “Fail” and

the “Percent Effect” is  $\geq 0.50$ . Within 24 hours of the time the Permittee becomes aware of a summary result of “Fail”, the Permittee shall implement an accelerated monitoring schedule consisting of four toxicity tests—consisting of 5-effluent concentrations (including the discharge IWC) and a control—conducted at approximately 2-week intervals, over an 8-week period. If each of the accelerated toxicity tests results is “Pass,” the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results is “Fail”, the Permittee shall immediately implement the TRE Process conditions set forth in section V.C, below.

## 9. Reporting

- a. Routine Reporting.** Chronic toxicity monitoring results shall be submitted with the quarterly SMR for the month that chronic toxicity monitoring was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:
- i.** WET reports shall include the contracting laboratory’s complete report provided to the Permittee and shall be consistent with the appropriate “Report Preparation and Test Review” sections of the methods manual and this MRP. The WET test reports shall contain a narrative report that includes details about WET test procedures and results, including the following:
- (a)** Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia);
  - (b)** The source and make-up of the lab control/diluent water used for the test;
  - (c)** Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;
  - (d)** Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, TUC, and IC25;
  - (e)** Identification of any anomalies or nuances in the test procedures or results;
  - (f)** WET test results shall include, at a minimum, for each test:
    - (1)** Sample date(s);
    - (2)** Test initiation date;
    - (3)** Test species;
    - (4)** Determination of “Pass” or “Fail” and “Percent Effect” following the Test of Significant Toxicity hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). The “Percent Effect” shall be calculated as follows:  
$$\text{“Percent Effect” (or Effect, in \%)} = ((\text{Control mean response} - \text{IWC mean response}) \div \text{Control mean response}) \times 100$$

- (5) End point values for each dilution (e.g., number of young, growth rate, percent survival);
- (6) NOEC value(s) in percent effluent;
- (7) IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent;
- (8) TUC values (100/NOEC);
- (9) Mean percent mortality ( $\pm$ s.d.) after 96 hours in 100 percent effluent (if applicable);
- (10) NOEC and LOEC values for reference toxicant test(s);
- (11) IC50 or EC50 value(s) for reference toxicant test(s);
- (12) Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);
- (13) Statistical methods used to calculate endpoints;
- (14) The statistical program (e.g., TST calculator, CETIS, etc.) output results, which includes the calculation of percent minimum significant difference (PMSD); and
- (15) Results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, to include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

- b. **TRE/TIE results.** The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. TRE/TIE results shall be submitted to the Regional Water Board within 60 days of completion.

### C. Toxicity Reduction Evaluation (TRE) Process

1. **TRE Work Plan.** The Permittee submitted a TRE Work Plan to the Regional Water Board on **July 25, 2018**. The Permittee's TRE Work Plan shall be reviewed once every five years and updated as necessary in order to remain current and applicable to the discharge and discharge facilities.

The Permittee shall notify the Regional Water Board of this review and submit any revisions of the TRE Work Plan within 90 days of the notification, to be ready to respond to toxicity events. The TRE Work Plan shall describe the steps the Permittee intends to follow if toxicity is detected, and should include at least the following items:

- a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.



- b. A description of the Facility’s methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of this Facility.
  - c. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).
- 2. **Preparation and Implementation of a Detailed TRE Work Plan.** If one of the accelerated toxicity tests described in section V.A.8 (above) does not comply with the three sample median minimum limitation (90 percent survival) or in section V.B.8 (above) results in “Fail”, the Permittee shall immediately initiate a TRE using EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989) and within 30 days of receipt submit the accelerated monitoring result to the Regional Water Board Executive Officer. The Permittee shall also submit a Detailed TRE Work Plan, which shall follow the generic TRE Work Plan revised as appropriate for the toxicity event described in section V.A.8 or V.B.8 of this MRP. The Detailed TRE Work Plan shall include the following information, and comply with additional conditions set by the Regional Water Board Executive Officer:
  - a. Further actions by the Permittee to investigate, identify, and correct causes of toxicity.
  - b. Actions the Permittee will take to mitigate effects of the discharge and prevent the recurrence of toxicity.
  - c. A schedule for these actions, progress reports, and the final report.
- 3. **TIE Implementation.** The Permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test methods and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
- 4. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Permittee shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
- 5. The Permittee shall conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.

6. The Regional Water Board recognizes that toxicity may be episodic and identification of the causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

**VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE**

This Order does not authorize discharges to land.

**VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE**

This Order does not authorize discharges of recycled water.

**VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

**A. Monitoring Location RSW-001**

1. The Permittee shall monitor the North Fork Mad River at Monitoring Location RSW-001 during periods of discharge as follows:

**Table E-4. Receiving Water Monitoring – Monitoring Location RSW-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Gage <sup>1</sup>	Daily	--
pH	standard units	Grab	Monthly	Part 136 <sup>2</sup>
Chemical Oxygen Demand (COD)	mg/L	Grab	Monthly	Part 136 <sup>2</sup>
Color	Color Units	Grab	Monthly	Part 136 <sup>2</sup>
Dissolved Oxygen	mg/L	Grab	Weekly <sup>5</sup>	Part 136 <sup>2</sup>
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	Monthly	Part 136 <sup>2</sup>
Temperature	°C or °F	Grab	Monthly	Part 136 <sup>2</sup>
Turbidity	NTU	Grab	Monthly	Part 136 <sup>2</sup>
CTR Priority Pollutants <sup>3</sup>	µg/L	Grab	Once per permit term <sup>4</sup>	Part 136 <sup>2,6</sup>
Specific Conductance	µmhos/cm	Grab	Monthly	Part 136 <sup>2</sup>
Total Dissolved Solids	mg/L	Grab	Monthly	Part 136 <sup>2</sup>

**Table Notes:**

1. Based on flow readings in the North Fork Mad River at an approved location and using a methodology approved by the Regional Water Board Executive Officer (see Special Study requirement IV.C.2.a).
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration).
3. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38. The Permittee is not required to sample and analyze for asbestos. Hardness shall be monitored concurrently with the priority pollutant sample.
4. CTR priority pollutant sampling shall be completed no later than **April 1, 2023**. Effluent and receiving water monitoring shall occur concurrently.
5. DO monitoring frequency could be revised to require continuous monitoring if sampling data indicates that more frequent monitoring is needed to assess compliance with the Basin Plan objective.
6. Analytical methods must achieve the lowest ML specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.

**B. Monitoring Location RSW-002**

1. The Permittee shall monitor the North Fork Mad River at Monitoring Location RSW-002 during periods of discharge as follows:

**Table E-5. Receiving Water Monitoring – Monitoring Locations RSW-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	Monthly	Part 136 <sup>1</sup>
Chemical Oxygen Demand (COD)	mg/L	Grab	Monthly	Part 136 <sup>1</sup>
Color	Color Units	Grab	Monthly	Part 136 <sup>1</sup>
Dissolved Oxygen	mg/L	Grab	Weekly <sup>2</sup>	Part 136 <sup>1</sup>
Temperature	°C or °F	Grab	Monthly	Part 136 <sup>1</sup>
Turbidity	NTU	Grab	Monthly	Part 136 <sup>1</sup>
Specific Conductance	µmhos/cm	Grab	Monthly	Part 136 <sup>1</sup>
Total Dissolved Solids	mg/L	Grab	Monthly	Part 136 <sup>1</sup>

**Table Notes:**

1. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration).
2. DO monitoring frequency could be revised to require continuous monitoring if sampling data indicates that more frequent monitoring is needed to assess compliance with the Basin Plan objective.

**IX. OTHER MONITORING REQUIREMENTS**

**A. Visual Monitoring (Monitoring Locations EFF-001, RSW-001, and RSW-002)**

1. Visual observations of the discharge and receiving water shall be recorded monthly and on the first day of each intermittent discharge. Visual monitoring shall include, but not be limited to, observations for floating materials, coloration, objectionable aquatic growths, oil and grease films, and odors. Visual observations, including corrective action measures taken to address these water quality concerns, shall be recorded and included in the Permittee’s quarterly SMRs.

**X. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

**B. Self-Monitoring Reports (SMRs)**

1. The Permittee shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and

supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.

2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-6. Monitoring Periods and Reporting Schedule<sup>1</sup>**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following the end of each quarter <sup>1</sup> (February 1, May 1, August 1, November 1)
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Quarterly	First day of calendar quarter following permit effective date or on permit effective date if that date is first day of the month	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year (with annual report)
Once per permit term	Permit effective date	All	March 1 following the year that monitoring is completed (with annual report) and at least 180 days prior to permit expiration
<b>Table Notes:</b>			
1. Quarterly monitoring periods are as follows: January 1 through March 31; April 1 through June 30; July 1 through September 30; and October 1 through December 31.			

- 5. Reporting Protocols.** The Permittee shall report with each sample result the applicable ML, the RL, and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

The Permittee shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a.** Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b.** Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c.** Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d.** The Permittee is to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 6.** The Permittee shall submit SMRs in accordance with the following requirements:
- a.** The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment.
  - b.** The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
    - i.** Facility name and address;
    - ii.** WDID number;
    - iii.** Applicable period of monitoring and reporting;
    - iv.** Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);
    - v.** Corrective actions taken or planned; and

vi. The proposed time schedule for corrective actions.

- c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). In the event that an alternate method for submittal of SMRs is required, the Permittee shall submit the SMR electronically via e-mail to [NorthCoast@waterboards.ca.gov](mailto:NorthCoast@waterboards.ca.gov) or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://waterboards.ca.gov/northcoast>.

**C. Discharge Monitoring Reports (DMRs)**

- 1. DMRs are U.S. EPA reporting requirements. The Permittee shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. DMRs shall be submitted quarterly on the first day of the second calendar month following the end of each quarter (February 1, May 1, August 1, and November 1). Electronic DMR submittal shall be in addition to electronic SMR submittal. Information regarding electronic DMR submittal is available at the DMR website at [http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring/](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/).

**D. Other Reports**

- 1. **Special Study Reports and Progress Reports.** As specified in the Special Provisions contained in section VI of the Order, special study and progress reports shall be submitted in accordance with the following reporting requirements.

**Table E-7. Reporting Requirements for Special Provisions Reports**

Order Section	Special Provision Requirement	Reporting Requirements
Special Provision VI.C.2.a	N.Fork Mad River Flow Monitoring Plan	<b>September 1, 2019</b>
Special Provision VI.C.3.a.i	Pollutant Minimization Program	If required by the Executive Officer
Special Provision VI.C.3.b.i	Debris and Sediment Control Best Management Practices	<b>September 1, 2019</b>
Special Provision VI.C.3.c	Pollution Prevention Plan	<b>September 1, 2019</b>
MRP General Monitoring Provision I.F	DMR-QA Study Report	<b>Annually</b> , per State Water Board instructions
MRP Effluent Monitoring Requirement V.B.9.b	Notification of TRE/TIE Results	<b>No later than 30 days</b> from the completion of each aspect of the TRE/TIE analyses
MRP Effluent Monitoring Requirement V.B.9.b	TRE/TIE Results	<b>Within 60 days</b> of completion of TRE/TIE analyses
MRP Effluent Monitoring Requirement V.C.1	TRE Work Plan Revisions	As necessary
MRP Effluent Monitoring Requirement V.C.2	Detailed TRE Work Plan	<b>Within 30 days</b> of an accelerated monitoring test that results in "Fail"

Order Section	Special Provision Requirement	Reporting Requirements
MRP Reporting Requirement X.E	Notification of spills and unauthorized discharges	Oral reporting <b>within 24</b> hours and written report <b>within 5 days</b>

- 2. Annual Report.** The Permittee shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). In the event that an alternate method for submittal of the annual report is required, the Permittee shall submit the annual report electronically via the email address in section X.B.6.c., above. The report shall be submitted by **March 1st** of the following year and certified as required by Standard Provisions (Attachment D) of this Order. The report shall, at a minimum, include the following:
- a. Where appropriate, tabular and/or graphical summaries of the monitoring data and disposal records from the previous year. If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 C.F.R. part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.
  - b. A comprehensive discussion of the Facility’s compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.
  - c. The names and general responsibilities of all persons employed at the Facility;
  - d. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations; and
  - e. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
  - f. **DMR-QA Study Report.** The Permittee shall submit, as part of its annual report to the Regional Water Board, an electronic copy of the annual DMR-QA study report submitted to the State Water Board, Quality Assurance Program Officer pursuant to section I.F of this MRP.

**E. Spill Notification**

- 1. Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges (except SSOs) that may endanger health or the environment shall be provided orally to the Regional Water Board<sup>3</sup> within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with section V.E of Attachment D.

Information to be provided verbally to the Regional Water Board includes:

<sup>3</sup> The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to the California Governor’s Office of Emergency Services Warning Center (CalOES) will satisfy the 24-hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalOES is (800) 852-7550.

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NPDES No. CA0005932

- a.** Name and contact information of caller;
- b.** Date, time, and location of spill occurrence;
- c.** Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;
- d.** Surface water bodies impacted, if any;
- e.** Cause of spill, if known at the time of the notification;
- f.** Cleanup actions taken or repairs made at the time of the notification; and
- g.** Responding agencies.



**ATTACHMENT F – FACT SHEET**

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**ATTACHMENT F – FACT SHEET**

As described in section I, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Permittee. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Permittee.

**I. PERMIT INFORMATION**

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	1B800200HUM
<b>Permittee</b>	Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company
<b>Name of Facility</b>	Korbel Sawmill
<b>Facility Address</b>	1165 Maple Creek Road
	Korbel, CA 95550
	Humboldt County
<b>Facility Contact, Title and Phone</b>	Ken Dunn, Operations Manager, (530) 524-1116
<b>Authorized Person to Sign and Submit Reports</b>	Ken Dunn, Operations Manager, (530) 524-1116
<b>Mailing Address</b>	P.O. Box 1038, Blue Lake, CA 95525
<b>Billing Address</b>	Same as Mailing Address
<b>Type of Facility</b>	Sawmill and Planing Mill (SIC Code 2421)
	Log Storage and Handling (SIC Code 2411)
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	Not Applicable
<b>Recycling Requirements</b>	Not Applicable
<b>Facility Permitted Flow</b>	13.6 million gallons per day (mgd)
<b>Facility Design Flow</b>	13.6 mgd
<b>Watershed</b>	Mad River Hydrologic Unit, North Fork Mad River Hydrologic Area
<b>Receiving Water</b>	North Fork Mad River
<b>Receiving Water Type</b>	Inland surface water

- A. California Redwood Company (Permittee) is the owner and Trinity River Timber Company doing business as North Fork Lumber Company (Permittee) is the operator 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 this Order. California Redwood Company remains secondarily responsible for these requirements.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

The Permittee is authorized to discharge subject to waste discharge requirements (WDRs) in this Order at the discharge locations described in Table 2 on the cover page of this Order. The Code of Federal Regulations at 40 C.F.R. section 122.46 limits the duration of National Pollutant Discharge Elimination System (NPDES) permits to be effective for a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the effective period for the discharge authorized by this Order. Pursuant to California Code of Regulations (CCR), title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on continuation of expired permits are complied with.

- B. The Facility discharges log deck recycled sprinkler water to the North Fork Mad River, a water of the United States. The Permittee was previously regulated by Order No. R1-2013-0008 and NPDES Permit No. CA0005932 adopted on May 2, 2013, expired on June 30, 2018, and administratively continued through the effective date of this Order. Attachment B provides a map of the area around the Facility and a site drainage plan. Attachment C provides flow schematics of the Facility. A site visit was conducted on November 14, 2017 to observe operations and collect additional data to develop permit limitations and requirements for discharge.
- C. The Permittee filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on September 28, 2017. The application was deemed complete on **June 29, 2018**.

## II. FACILITY DESCRIPTION

The Permittees, California Redwood Company and Trinity River Timber Company dba North Fork Lumber Company, respectively, own and operate the Korbel Sawmill situated on approximately 150 acres in the town of Korbel and adjacent to the North Fork of the Mad River. The Facility was formerly owned and operated by California Redwood Company, but North Fork Lumber Company has been operating and maintaining the Facility since June 1, 2016.

Historically, onsite operations included sawmilling operations, lumber planing, lumber drying in kilns with an associated boiler water system, lumber storage and shipping, wet and dry log decking and sorting, and byproduct generation and management. The California Redwood Company decommissioned the boiler and kilns in August 2014 and the sawmill and planing operations in February 2015. Between May 2016 and December 2017, the mill was completely modernized and full-time sawmill operations began in January 2018. Onsite operations now include decking and sprinkling fir logs; debarking and bucking; sawing, milling, and planing operations; lumber storage and shipping; and by-product generation. However, the discharge of any process wastewater from the Sawmill, including process wastewater from bark removal, sawing, resawing, edging, trimming, planing, machining, and by-product manufacturing to surface waters is prohibited (see Discharge Prohibitions. III.L). The only discharge water originates from stormwater runoff and log-deck sprinkler water that is

treated using settlement basins and a constructed wetland prior to discharge to the Mad River (see item II.A below).

**A. Description of Process Water 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 transferred to the large concrete settling/stilling basin. Appy Creek flows underground beneath the site and through the first chamber of Station 9. Appy Creek flows do not commingle with storm water runoff that enters the second chamber.

Log deck sprinkler runoff and 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 withing the basin, which promotes settling and minimizes the amount of suspended sediment being discharged to the constructed wetland. Water from the settling/stilling basin is either recirculated to the log deck sprinklers or allowed to flow over the outlet weir of the basin into the constructed wetland. 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 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 sawmill is the 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 Points and Receiving Waters**

Treated 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 regulated by flows going over the 5-foot 4-inch diameter concrete outlet weir.

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.

**C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data**

Effluent limitations contained in Order No. R1-2013-0008 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order No. R1-2013-0008.

**Table F-2. Historic Effluent Limitations and Monitoring Data – Discharge Point 001**

Parameter	Units	Effluent Limitation			Monitoring Data (March 2015 – April 2018)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	standard units	--	--	6.5-8.5 <sup>1</sup>	--	--	6.4-7.6
Copper, Total Recoverable	µg/L	4.9	--	9.7	18	--	18
Lead, Total Recoverable	µg/L	1.5	--	2.9	4.1	--	4.1
Acute Toxicity	% Survival	70 <sup>2</sup> /90 <sup>3</sup>	--	--	85 <sup>4</sup>	--	--

Table Notes:  
 1. Represents instantaneous minimum and instantaneous maximum effluent limits.  
 2. Minimum for any one bioassay.  
 3. Median for any three or more consecutive bioassays.  
 4. Represents the minimum observed percent survival.

**D. Compliance Summary**

The Permittee was not assessed any administrative civil liability during the term of Order No. R1-2013-0008.

Due to the Facility’s inability to comply with copper and lead effluent limitations in their previous NPDES permit (Order No. R1-2013-0008), a Cease and Desist Order (CDO) was issued to California Redwood Company, Korbil Sawmill (CRC) on May 2, 2013 and became effective on July 1, 2013. The CDO provided a compliance schedule for CRC to develop, submit, and implement

methods of compliance, including the development and implementation of pollution prevention activities, or the construction of necessary treatment facility upgrades to meet the new effluent limitations for copper and lead. The Facility was required to achieve full compliance with the copper and lead effluent limitations by July 1, 2018.

On May 1, 2017, in accordance with task 6 of their CDO, the Facility submitted a Copper and Lead Feasibility Study stating that despite operational modifications, including the implementation of improvements to their treatment wetlands, contributing to a reduction in effluent concentrations of copper and lead, natural variability of wetland systems would likely make it problematic for the Facility to consistently rely on the wetland for treatment to achieve compliance with effluent limitations established in their NPDES permit. As a result, the Permittee proposed to derive site specific water quality criteria for copper and lead by conducting a Water Effect Ratio (WER) study as their preferred alternative to achieving compliance with final limitations. The Permittee submitted their final WER report to the Regional Water Board on June 26, 2018. Results from the study concluded that the Facility's effluent has a WER value greater than one for copper and lead (a condition where the metals are effectively less toxic to the primary test species, *Ceriodaphnia dubia* or water flea, in site water relative to the laboratory-controlled water). Results from the study also provided supporting information for the Regional Water Board to authorize the use of WER values for both copper and lead to calculate site specific water quality criteria.

With the completion of the WER study, as well as treatment modifications to their constructed wetlands, Regional Water Board found that the Permittee had made progress in resolving the Facility's copper and lead discharge exceedances. Furthermore, when results from the finalized WER study and the resulting RPA analysis were weighed in, the Permittee can be considered to have completed task 7 of their CDO which requires achieving full compliance with final effluent limitations for copper and lead.

The R1-2013-0008 CDO was extended on November 14, 2018 (with the issuance of Order No. R1-2018-0057) to provide the Permittee with interim limitations for the 2018-2019 discharge season (to avoid accruing mandatory minimum penalties (MMPs)) for discharge(s) exceeding effluent limitations established in their previous NPDES permit (R1-2013-0008) prior to the adoption of this revised NPDES permit (R1-2019-0005).

Other effluent violations that the Permittee incurred during their previous permit term (R1-2013-0008) include: a pH exceedance of the minimum limit of 6.5 Standards Units (or SU); the reported pH at EFF-001 on April 3<sup>rd</sup>, 2017 was 6.4 SU; chronic toxicity effluent violations (see Factsheet; section IV.B.5.b); a pH exceedance of the minimum limit of 6.5 Standards Units (or SU); the reported pH at EFF-001 on January, 5<sup>th</sup>, 2015 was 6.4 SU; failure to use an analytical test method and Minimum Level (ML) for lead for samples collected on November 3<sup>rd</sup>, 2018; and lastly, a failure to report monthly temperature results at EFF-001, RSW-001, and RSW-002 on November 30<sup>th</sup>, 2018. These effluent exceedances are not covered under the CDO that was issued by the Regional Board on May 2, 2013.

#### **E. Planned Changes**

The North Fork Lumber Company is considering the addition of a cogeneration plant that would utilize wood waste from sawmill operations to generate electricity for the sawmill and for sale to the Pacific Gas and Electric Company (PG&E). Prior to discharging wastewater from the cogeneration plant, the Permittee must submit a complete ROWD and antidegradation analysis.

Based on the ROWD and antidegradation analysis, this Order may be reopened to authorize the proposed discharge.

### **III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in this Order are based on the requirements and authorities described in this section.

#### **A. Legal Authorities**

This Order serves as WDRs pursuant to article 4, chapter 4, and division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a NPDES permit authorizing the Permittee to discharge into waters of the U.S. at the discharge location described in Table 2 subject to the WDRs in this Order.

#### **B. California Environmental Quality Act (CEQA)**

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

#### **C. State and Federal Laws, Regulations, Policies, and Plans**

**1. Water Quality Control Plan.** The Regional Water Board adopted a Water Quality Control Plan for the North Coast Region (hereinafter 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. Beneficial uses applicable to the North Fork Mad River within the North Fork Mad River Hydrologic Area of the Mad River Hydrologic Unit, are summarized in Table F-3, below:



**Table F-3. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	North Fork Mad River within the North Fork Mad River Hydrologic Area of the Mad River Hydrologic Unit	<p><u>Existing:</u>                      Municipal and domestic supply (MUN);                      Agricultural supply (AGR);                      Industrial service supply (IND);                      Industrial process supply (PRO);                      Groundwater recharge (GWR);                      Freshwater replenishment (FRSH);                      Navigation (NAV);                      Water contact recreation (REC-1);                      Non-contact water recreation (REC-2);                      Commercial and sport fishing (COMM);                      Cold freshwater habitat (COLD);                      Wildlife habitat (WILD);                      Rare, threatened, or endangered species (RARE);                      Migration of aquatic organisms (MIGR); and                      Spawning, reproduction, and/or early development (SPWN).</p> <p><u>Potential:</u>                      Hydropower generation (POW); and                      Aquaculture (AQUA).</p>

In addition to the beneficial uses set out in the Basin Plan, there are several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coast Basin. For the Mad River and its tributaries, no point source waste discharges are allowed during the period of May 15 through September 30 and during all other periods when the waste discharge flow is greater than one percent of the receiving stream's flow unless an exception to the requirement is granted by the Regional Water Board.

Requirements of this Order implement the Basin Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.
3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became

effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

4. **Domestic Water Quality.** In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels (MCLs) implemented by the Basin Plan that are designed to protect human health and ensure that water is safe for domestic use.
5. **Compliance Schedules and Interim Requirements.** The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.
6. **Antidegradation Policy.** Federal Regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California). Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. As discussed in detail in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.
7. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Some effluent limitations from the previous Order have been removed or are less stringent than those in the previous Order. As discussed in detail in section IV.D.1 of this Fact Sheet, removal or relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.
8. **Endangered Species Act Requirements.** This Order does not authorize an act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, and endangered species. The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

#### **D. Impaired Water Bodies on the CWA section 303(d) List**

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies every two years. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The CWA requires development of a total maximum daily load (TMDL) or alternate program of implementation for each 303(d)-listed pollutant and water body to remedy the impairment. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources).

On April 6, 2018, the U.S. EPA provided final approval of the 2014 and 2016 303(d) List of Impaired Water Bodies prepared by the state. The list identifies the entire Mad River as impaired by temperature, sediment, and turbidity. Pursuant to CWA section 303(d), the Regional Water Board will develop TMDLs or alternate programs of implementation to address the impairment for temperature, sediment, and turbidity which will be implemented through various programs, including through provisions of NPDES permits.

With regard to temperature, the critical time period for temperature is in the summer, which is also the time period when point source discharges from the Facility are prohibited. Because of the summer discharge prohibition, the Facility does not contribute to temperature loadings in the receiving water during the hottest, most critical season of the year.

With regard to sediment, aspects of the sediment impairing the North Fork Mad River include settleable solids, suspended solids, and turbidity. The impact of settleable solids results when they collect on the bottom of a waterbody over time, making them a persistent or accumulative constituent. The impact of suspended solids and turbidity, by contrast, results from their concentration in the water column.

On December 21, 2007, U.S. EPA approved the Mad River TMDLs for Sediment and Turbidity. In the Mad River basin, turbidity levels are closely linked with suspended sediment load. The TMDL identified that almost all sources of sediment in the Mad River watershed are from diffuse, nonpoint sources. Sediment is the pollutant for both the sediment and the turbidity TMDLs. Turbidity can be measured directly in the stream, but the pollutant causing the exceedance of the turbidity water quality standards in the Mad River watershed is fine sediment, or the suspended sediment load. The sediment and turbidity TMDLs are set equal to the loading capacity of the Mad River watershed. The TMDLs are the estimate of the total amount of sediment, from both natural and human-caused sources, that can be delivered to streams in the watershed without exceeding applicable water quality standards.

The U.S. EPA set the TMDLs at 120 percent of natural sediment loading for Mad River watershed. This approach to setting sediment TMDLs has been used in most of the watersheds in the North Coast of California. It is based on the assumption that a certain amount of loading greater than what is natural is acceptable, and will still result in meeting water quality standards. Prior TMDL studies of the relationship between sediment loading rates and fish habitat effects found that

many North Coast waters supported healthy fish habitat conditions during periods in which sediment loads were up to 125 percent of natural loading rates. For the Mad River TMDL, U.S. EPA set the TMDLs more conservatively, at 120 percent of natural loading rates, in order to ensure that the turbidity water quality standard is met (i.e., that “turbidity shall not be increased more than 20 percent above naturally occurring background levels”).

The TMDL identifies the Korbil Sawmill Complex NPDES permits as not allowing process water discharges to surface waters and, as a result, does not apply waste load allocations (WLAs) to the Facility. The Facility does, however, discharge process water to surface waters at Discharge Point 001. Review of the TMDL WLAs for other point source dischargers indicates that the WLAs for TSS and settleable solids were developed using limitations for these substances from the existing facility NPDES permits. However, Order No. R1-2002-0037 for the Facility did not contain any existing limitations for TSS or settleable solids. The TMDL WLA for turbidity, on the other hand, was derived from the water quality objective for turbidity in the Basin Plan. As a result, the only TMDL WLA applicable to the Facility is for turbidity, which is consistent with the existing receiving water limitation from Order Nos. R1-2002-0037 and R1-2013-0008 that was based on the Basin Plan. The receiving water limitation is an appropriate mechanism to implement the WLA because the allocation is the net increase in receiving water turbidity over naturally occurring background level. In addition, Section VI.C.3.b of this Order contains requirements to develop debris and sediment control BMPs, which will further reduce sediment discharges from Discharge Point 001. The receiving water limitation for turbidity and the sediment control BMP requirements in this Order are consistent with the Mad River TMDL.

#### **E. Other Plans, Policies and Regulations**

1. On November 14, 2016, the Permittee received coverage under the State Water Board Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial Storm Water General Permit) for storm water discharges from the Facility.
2. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Permittee must file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains separate jurisdictional authority to enforce any applicable requirements under Water Code section 1211.

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exists.

**A. Discharge Prohibitions**

- 1. Discharge Prohibition III.A.** The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.

This prohibition is based on the Basin Plan, the previous Order, and State Water Board Order No. WQO 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order No WQO 2002-0012, the State Water Board found that this prohibition is acceptable in orders, but should be interpreted to apply only to constituents that are not disclosed by the Permittee, and are not reasonably anticipated to be present in the discharge. It specifically does not apply to constituents in the discharge that do not have “reasonable potential” to exceed water quality objectives.

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were “*disclosed to the permitting authority and...can be reasonably contemplated.*” [In re the Petition of East Bay Municipal Utilities District et al., (State Water Board, 2002) Order No. WQO 2002-0012, p. 24.] In that Order, the State Water Board cited a case which held the Permittee is liable for the discharge of pollutants “*not within the reasonable contemplation of the permitting authority...whether spills or otherwise...*” [Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland (4<sup>th</sup> Cir. 2001) 268 F. 3d 255, 268.] Thus, the State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the Permittee and (2) can be reasonably contemplated by the Regional Water Board.

- 2. Discharge Prohibition III.B.** Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.

This prohibition has been retained from Order No. R1-2013-0008 and is based on section 13050 of the Water Code and section 5411 of the California Health and Safety Code.

- 3. Discharge Prohibition III.C.** The discharge of solids or digester supernatant is prohibited, except as authorized under section VI.C.6.a of this Order (Solids Disposal and Handling Requirements).

This prohibition is newly established in this Order and is based on restrictions on the disposal of sewage sludge found in federal regulations [40 C.F.R. part 503 (Biosolids), part 527, and part 258] and title 27 of the CCR.

- 4. Discharge Prohibition III.D.** The discharge or recycling use of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions G (Bypass) and H (Upset).

This prohibition is newly established in this Order and is based on the Basin Plan to protect the beneficial uses of the receiving water from unpermitted discharges, and the intent of the Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the state without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility

represents an unauthorized bypass pursuant to 40 C.F.R. section 122.41(m) or an unauthorized discharge which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

5. **Discharge Prohibition III.E.** The discharge of waste to land that is not owned by the Permittee, governed by City ordinance, or under agreement to use by the Permittee, or for which the Permittee has explicitly permitted such use, is prohibited, except for use for fire suppression as provided in title 22, sections 60307(a) and 60307(b) of the California Code of Regulations (CCR).

This prohibition is newly established in this Order to prohibit unauthorized discharges to land.

6. **Discharge Prohibition III.F.** The discharge of waste at any point not described in Finding II.B of the Fact Sheet or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

This prohibition has been retained from Order No. R1-2013-0008. This prohibition is a general prohibition that allows the Permittee to discharge waste only in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

7. **Discharge Prohibition III.G.** The discharge of treated process water to the North Fork Mad River and its tributaries is prohibited during the period from May 15 through September 30 of each year.

This prohibition is retained from Order No. R1-2013-0008 and is required by the Basin Plan. The Basin Plan prohibits discharges to the Mad River and its tributaries during the period May 15 through September 30 (Chapter 4, Waste Discharge Prohibitions for the North Coastal Basin). The original intent of this prohibition was to prevent the contribution of wastewater to the baseline flow of the Mad River during the period of the year when the Mad River and its tributaries experience the heaviest water-contact recreation use.

8. **Discharge Prohibition III.H.** H. During the period from October 1 through May 14, discharges of treated process water to the North Fork Mad River and its tributaries shall not exceed one percent of the flow of the North Fork Mad River. The Permittee shall propose a method for measuring North Fork Mad River flows for approval by the Regional Water Board Executive Officer as required by Special Provision VI.C.2.a of this Order (Special Studies, Technical Reports and Additional Monitoring Requirements). For the purposes of this Order, compliance with this discharge prohibition shall be determined as follows:

- a. The discharge of treated process water shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow of the North Fork Mad River. Daily flow calculations shall be based on flow meter comparisons reasonably read between the hours of 12:01 am and 12:00 midnight; and,
- b. In no case shall the total volume of treated process water discharged in a calendar month exceed one percent of the total volume of the North Fork Mad River in the same calendar month. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume

comparisons shall be based on the first day of the calendar month to the date when the discharge ceased for the season.

This prohibition has been retained from Order No. R1-2013-0008 and is required by the Basin Plan (Chapter 4, North Coastal Basin Discharge Prohibition No. 4). The Basin Plan prohibits discharges to the Mad River and its tributaries when the waste discharge flow is greater than one percent of the receiving water's flow. Basin Plan Prohibition No. 4 does not specify how compliance with the one-percent flow requirement will be determined. This prohibition, set forth in Provision III.H of this Order, specifies that the discharge may comply with the one percent requirement as a monthly average for the surface water discharge season if a reading in the North Fork Mad River is taken at least once daily, and the discharge flow rate shall not be set for greater than one percent of the flow of the river at the time of the daily reading.

- 9. Discharge Prohibition III.I.** The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited under Water Code section 13375.

This prohibition is newly established in this Order and is based on the discharge prohibitions contained in section 13375 of the Water Code.

- 10. Discharge Prohibition III.J.** The discharge of domestic waste, treated or untreated, to surface waters is prohibited.

This prohibition has been retained from Order No. R1-2013-0008 and is based on the Basin Plan policy on the control of water quality with respect to on-site waste treatment and disposal practices.

- 11. Discharge Prohibition III.K.** The discharge of wood treatment chemicals or stain control fungicides to surface waters or to groundwater is prohibited.

This prohibition has been retained from Order No. R1-2013-0008 and is necessary to protect beneficial uses of the receiving water.

- 12. Discharge Prohibition III.L.** The discharge to surface water of process wastewater from bark removal (other than hydraulic barking as defined in 40 C.F.R. 429.11), sawing, resawing, edging, trimming, planning and machining is prohibited.

This prohibition has been retained from Order No. R1-2013-0008 and is based on the effluent limitations, guidelines and standards (ELGs) for the Sawmills and Planing Mills Subcategory for the Timber Products Processing Point Source Category (40 C.F.R. part 429, subpart K), which prohibits discharge of process wastewater pollutants from timber product processing procedures that include bark removal (other than hydraulic barking as defined in 40 C.F.R. 429.11), sawing, resawing, edging, trimming, planning and machining.

- 13. Discharge Prohibition III.M.** The discharge of debris is prohibited.

This prohibition has been retained from Order No. R1-2013-0008 and is based on the ELGs for the Sawmills and Planing Mills Subcategory for the Timber Products Processing Point Source Category (40 C.F.R. part 429, subpart I), which prohibits discharge of debris to surface waters.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgement (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations are established based on several levels of controls:

- a.** Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b.** Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c.** Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including five-day biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the cost of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- d.** New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop ELGs representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R section 125.3 authorize the use of BPJ to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in Section 125.3.

### **2. Applicable Technology-Based Effluent Limitations**

Pursuant to CWA section 306(b)(1)(B), U.S. EPA has established standards of performance (technology-based limitations and standards) for sawmills and planing mills at 40 C.F.R. part 429, Effluent Guidelines and Standards for the Timber Products Processing Point Source Category. The requirements of 40 C.F.R. part 429 are applicable to any timber products processing operation, and any plant producing insulation board with wood as the major raw



material, which discharges or may discharge process wastewater pollutants to the waters of the United States. The current Facility operations include lumber manufacturing, lumber and log storage, and wet decking, therefore effluent limits established 40 C.F.R. part 429, specifically subparts A (Barking), I (Wet Storage), and K (Sawmills and Planing Mills), are applicable to the discharge. Consistent with Order No. R1 2013-0008, this Order applies the requirements of 40 C.F.R. part 429.

**a. Effluent Limitations Guidelines Based on 40 C.F.R. part 429**

**i. Standards of Performance Based on BPT**

**(a) Barking:** There shall be no discharge of process wastewater pollutants from mechanical barking operations into navigable waters [40 C.F.R. section 429.21(a)].

**ii. Standards of Performance Based on BPT and BAT**

**(a) Wet Storage:** There shall be no debris discharged and the pH shall be within the range of 6.0 to 9.0 [40 C.F.R. sections 429.101 and 429.103].

**(b) Sawmills and Planing Mills:** There shall be no discharge of process wastewater pollutants into navigable waters [40 C.F.R. sections 429.121 and 429.123].

**C. Water Quality-Based Effluent Limitations (WQBELs)**

**1. Scope and Authority**

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements to meet applicable water quality standards. The rationale for these requirements is discussed in section IV.C.3 of this Fact Sheet.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

**2. Applicable Beneficial Uses and Water Quality Criteria and Objectives**

- a. **Beneficial Uses.** Beneficial use designations for receiving waters for discharges from the Facility are presented in section III.C.1 of this Fact Sheet.
- b. **Basin Plan Water Quality Objectives.** In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries, including the Russian River and its tributaries. For waters designated for use as MUN, the Basin Plan establishes, as applicable water quality criteria, the MCLs established by the Division of Drinking Water (DDW) for the protection of public water supplies at title 22 of the CCR section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals).
- c. **SIP, CTR, and NTR.** Water quality criteria and objectives applicable to this receiving water are established by the CTR, established by the U.S. EPA at 40 C.F.R. section 131.38; and the NTR, established by the U.S. EPA at 40 C.F.R. section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

The SIP, which is described in section III.C.3 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires permittees to submit data sufficient to do so.

At title 22, division 4, chapter 15 of the CCR, DDW has established MCLs for certain pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply.

Aquatic life freshwater and saltwater criteria are identified as criterion maximum concentrations (CMC) and criterion continuous concentrations (CCC). The CTR defines the CMC as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects and the CCC as the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. The CMC is used to calculate an acute or 1-hour average numeric effluent limitation and the CCC is used to calculate a chronic or 4-day average numeric effluent limitation. Aquatic life freshwater criteria were used for the RPA and for the calculation of effluent limitations for nickel and zinc.

Human health criteria are further identified as “water and organisms” and “organisms only”. “Water and organism” criteria are designed to address risks to human health from multiple exposure pathways. The criteria from the “water and organisms” column of the CTR were used for the RPA because the Basin Plan identifies that the receiving water, the North Fork Mad River, has the beneficial use designation of municipal and domestic supply.

### 3. Determining the Need for WQBELs

NPDES regulations at 40 C.F.R. section 122.44(d) require effluent limitations to control all pollutants, which are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard. The RPA for this Facility was conducted as follows.

**a. Non-Priority Pollutants**

- i. **pH.** The effluent limitation for pH of 6.5 to 8.5 is retained from Order No. R1-2013-0008 and applies to discharges to the North Fork Mad River. This limitation is based on the water quality objective for all surface waters established in Chapter 3, Table 3-1 of the Basin Plan. Federal technology-based requirements prescribed in 40 C.F.R. part 429 subpart I are not sufficient to meet these Basin Plan water quality standards.

**b. Priority Pollutants**

The SIP establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above state water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants showing reasonable potential.

Section 1.3 of the SIP requires the Regional Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct an RPA. For this RPA, the Regional Water Board used effluent and receiving water monitoring data generated from a single sample collected on February 6, 2017 for most of the CTR pollutants. Additional effluent and receiving water data for copper and lead, collected between March 2015 and April 2018, was also used in conducting the RPA.

**Hardness:** The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness; the lower the hardness, the lower the water quality criteria. The SIP requires water quality criteria be properly adjusted for hardness, using the hardness of the receiving water. The hardness-dependent metal criteria include cadmium, copper, chromium (III), lead, nickel, silver, and zinc. The minimum observed receiving water hardness of 7 mg/L was used to calculate the criteria.

To conduct the RPA, Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background (B) concentration for each priority, toxic pollutant from effluent and receiving water data provided by the Permittee, and compared this information to the most stringent applicable water quality criterion (C) for each pollutant with applicable water quality criteria from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

**Trigger 1.** If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

**Trigger 2.** If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required.

**Trigger 3.** After a review of other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish

tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

**c. Reasonable Potential Determination**

The RPA demonstrated reasonable potential for discharges of nickel and zinc from the Facility to cause or contribute to exceedances of applicable water quality criteria. Reasonable potential could not be determined for all pollutants, as there are not applicable water quality criteria for all pollutants. The RPA determined that there is either no reasonable potential or there was insufficient information to conclude affirmative reasonable potential for 124 of the 126 priority pollutants.

Table F-4 summarizes the RPA for each pollutant that was reported in detectable concentrations in the effluent or the receiving water. The MECs, most stringent water quality objectives/water quality criteria (WQO/WQCs), and background concentrations (B) used in the RPA are presented, along with the RPA results (Yes or No and which trigger) for each toxic pollutant analyzed. No other pollutants with applicable, numeric water quality criteria from the NTR, CTR, and the Basin Plan were measured above detectable concentrations during the monitoring events conducted by the Permittee. Attachment F-1 to this Order summarizes the RPA for all 126 priority pollutants.

**Table F-4. Summary of Reasonable Potential Analysis Results**

CTR #	Pollutant	Unit	C or Most Stringent WQO/WQC	MEC or Minimum DL <sup>1</sup>	B or Minimum DL <sup>1,2</sup>	RPA Results <sup>3</sup>
1	Antimony	µg/L	6	0.09	<0.05	No
2	Arsenic	µg/L	10	3	0.57	No
5a	Chromium (III)	µg/L	23	6.7	4.4	No
6	Copper	µg/L	48 <sup>4</sup>	18	9.3	No
7	Lead	µg/L	4.3 <sup>5</sup>	4.1	3.5	No
8	Mercury	µg/L	0.01	0.0079	0.0074	No
9	Nickel	µg/L	5.5 <sup>6</sup>	9.3	5.8	Yes (Trigger 1)
13	Zinc	µg/L	13 <sup>6</sup>	13	4.9	Yes (Trigger 1)
Not Applicable	Chloride	mg/L	250	4.6	Not Available	No
Not Applicable	Sulfate	mg/L	250	7.3	Not Available	No

CTR #	Pollutant	Unit	C or Most Stringent WQO/WQC	MEC or Minimum DL <sup>1</sup>	B or Minimum DL <sup>1,2</sup>	RPA Results <sup>3</sup>
<p><u>Table Notes:</u></p> <ol style="list-style-type: none"> <li>The Maximum Effluent Concentration (MEC) or maximum background concentration (B) is the actual detected concentration unless it is preceded by "&lt;", in which case the value shown is the minimum detection level as the analytical result was reported as not detected (ND).</li> <li>The MEC or B is "Not Available" when there are no monitoring data for a constituent.</li> <li>RPA Results:                      = Yes, if MEC &gt; WQO/WQC, or B &gt; WQO/WQC and MEC is detected.                      = No, if MEC and B or &lt; WQO/WQC or all effluent data are undetected.                      = Undetermined (UD).</li> <li>Copper WQO calculated with a water effect ratio (WER) of 50 and the most stringent WQO from the CTR using the lowest receiving water hardness of 7 mg/L (<math>50 \times 0.96 \mu\text{g/L} = 48 \mu\text{g/L}</math>).</li> <li>Lead WQO calculated with a WER of 49 and the most stringent WQO from the CTR using the lowest receiving water hardness of 7 mg/L (<math>49 \times 0.11 \mu\text{g/L} = 4.3 \mu\text{g/L}</math>).</li> <li>Nickel and zinc WQOs calculated using the lowest receiving water hardness of 7 mg/L.</li> </ol>						

Additional details regarding priority pollutant constituents for which reasonable potential was found are included in the following paragraphs:

Nickel. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for nickel. The criteria for nickel is in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The U.S. EPA default conversion factors for nickel in freshwater are 0.998 for the acute criteria and 0.997 for the chronic criteria. The default WER used for calculating criteria for nickel is 1.0. Using the worst-case measured hardness from the receiving water (7 mg/L), the U.S. EPA recommended dissolved-total translators of 0.998 and 0.997, respectively, and the default WER, the applicable acute criterion (maximum 1-hour average concentration) is >49 µg/L and the applicable chronic criterion (maximum 4-day average concentration) is 5.5 µg/L. The most stringent water quality objective for nickel is, therefore 5.5 µg/L.

The Permittee sampled the effluent and receiving water for nickel once during the term of Order No. R1-2013-0008. Nickel was detected in the effluent at a concentration of 9.3 µg/L and in the receiving water at a concentration of 5.8 µg/L. A determination of reasonable potential has been made based on the MEC of 9.3 µg/L exceeding the most stringent water quality objective of 5.5 µg/L.

Zinc. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. The criteria for zinc is in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The U.S. EPA default conversion factors for zinc in freshwater are 0.978 for the acute criteria and 0.986 for the chronic criteria. The default WER used for calculating criteria for zinc is 1.0. Using the worst-case measured hardness from the receiving water (7 mg/L), the U.S. EPA recommended dissolved-total translators of 0.978 and 0.986, respectively, and the default WER, the applicable acute criterion (maximum 1-hour average concentration) is 13 µg/L and the applicable chronic criterion (maximum 4-day average concentration) is 13 µg/L. The most stringent water quality objective for zinc is therefore 13 µg/L.

The Permittee sampled the effluent and receiving water for zinc once during the term of Order No. R1-2013-0008. Zinc was detected in the effluent at a concentration of 13 µg/L and in the receiving water at a concentration of 4.9 µg/L. A determination of reasonable potential has been made based on the MEC of 13 µg/L being equal to the most stringent water quality objective of 13µg/L.

Copper. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. The criteria for copper is in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The U.S. EPA default conversion factors for copper in freshwater are 0.96 for both the acute and the chronic criteria. The default water effects ratio (WER) used for calculating criteria for copper is 1.0. The Permittee has conducted a WER study to determine the site-specific toxicity of copper in the receiving water at the point of discharge. The Permittee's study concluded that a site specific WER of 50 for total recoverable copper and 43 for dissolved copper apply to the discharge. Using the worst-case measured hardness from the receiving water (7 mg/L), the U.S. EPA recommended dissolved-total translator of 0.96, and the site-specific WER, the applicable chronic criterion (maximum 4-day average concentration of 1.0 µg/L) is adjusted to 48 µg/L and the applicable acute criterion (maximum 1-hour average concentration of 1.1 µg/L) is adjusted to 57 µg/L. The MEC measured for copper was 18.3 µg/L, based on 23 results obtained between March 2015 and April 2018. Therefore, copper in the effluent does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives.

Lead. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for lead. The criteria for lead are in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The acute and chronic the conversion factors for lead are dependent on hardness, and are derived using the following equation:

$$\text{Conversion Factor} = 1.46203 - [(\ln\{\text{hardness}\})(0.145712)]$$

Using the worst-case measured hardness from the receiving water (7 mg/L), the resulting conversion factors are both 1.178. However, since dissolved lead is a fraction of total lead, the conversion factor should not be greater than 1. Therefore, a conservative conversion factor of 1 was used to calculate the acute and chronic CTR criteria.

The WER used for calculating criteria for lead is 1.0. The Permittee has conducted a WER study to determine the site-specific toxicity of lead in the receiving water at the point of discharge. The Permittee's study concluded that a site-specific WER of >49 for dissolved lead applies to the discharge. Total recoverable lead samples collected for the study did not meet test acceptability standards; therefore, a WER for total lead could not be developed. In the absence of a WER for total lead, the WER for dissolved lead has been used to calculate the acute and chronic CTR criteria.

Using the worst-case measured hardness from the receiving water (7 mg/L), a conversion factor of 1, and the site-specific WER of >49, the applicable chronic criterion (maximum 4-day average concentration of 0.11 µg/L) is adjusted to 5.3 µg/L and the applicable acute criterion (maximum 1-hour average concentration of 2.8 µg/L) is

adjusted to 136 µg/L. The MEC measured for lead was 4.14 µg/L, based on 23 results obtained between March 2015 and April 2018. Therefore, lead in the effluent does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives.

**4. WQBEL Calculations**

Final WQBELs have been determined using the methods described in Section 1.4 of the SIP.

**Step 1:** To calculate the effluent limits, an effluent concentration allowance (ECA) is calculated for each pollutant found to have reasonable potential using the following equation, which takes into account dilution and background concentrations:

$$ECA = C + D (C - B),$$

Where:

C = the applicable water quality criterion (adjusted for effluent hardness and expressed as the total recoverable metal, if necessary)

D = dilution credit (here D= 0, as the discharge does not qualify for a dilution credit)

B = background concentration

Here, no credit for dilution is allowed, which results in the ECA being equal to the applicable criterion (ECA = C).

**Step 2:** For each ECA based on an aquatic life criterion/objective (nickel and zinc), the long term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the values of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is reported as ND, the CV is set equal to 0.6. Derivation of the multipliers is presented in Section 1.4 of the SIP.

From Table 1 in the SIP, the ECA multipliers for calculating LTAs at the 99<sup>th</sup> percentile occurrence probability for nickel and zinc are 0.321 (acute multiplier) and 0.527 (chronic multiplier). The LTAs are determined as follows in Table F-5.

**Table F-5. Determination of Long Term Averages**

Pollutant	Units	ECA		ECA Multiplier		LTA	
		Acute	Chronic	Acute	Chronic	Acute	Chronic
Nickel, Total Recoverable	µg/L	49	5.5	0.321	0.527	16	2.9
Zinc, Total Recoverable	µg/L	13	13	0.321	0.527	4.0	6.6

**Step 3:** WQBELs, including an average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL), are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here, the CV is set equal to 0.6, and the sampling frequency is set equal to 4 (n = 4) for the

acute and chronic criterion. The 99th percentile occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. From Table 2 of the SIP, the MDEL multiplier for nickel and zinc is 3.11, and the AMEL multiplier is 1.55. Final WQBELs for nickel and zinc are determined as follows.

**Table F-6. Determination of Final WQBELs Based on Aquatic Life Criteria**

Pollutant	Unit	LTA	MDEL Multiplier	AMEL Multiplier	MDEL	AMEL
Nickel, Total Recoverable	µg/L	2.9	3.11	1.55	9.0	4.5
Zinc, Total Recoverable	µg/L	4.0	3.11	1.55	13	6.3

**Step 4:** When the most stringent water quality criterion/objective is a human health criterion/objective, the AMEL is set equal to the ECA. From Table 2 of the SIP, when CV = 0.6 and n = 4, the MDEL multiplier at the 99th percentile occurrence probability equals 3.11, and the AMEL multiplier at the 95th percentile occurrence probability equals 1.55. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier.

**5. Whole Effluent Toxicity (WET)**

Monitoring and effluent limitations for whole effluent toxicity protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth.

WET requirements are derived from the CWA and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states “*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life.*” Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. For compliance with the Basin Plan’s narrative toxicity objective, this Order requires the Permittee to conduct WET testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Requirements (MRP) (Attachment E, section V).

**a. Acute Aquatic Toxicity**

Consistent with Order No. R1-2013-0008, this Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

The Order implements federal guidelines (Regions 9 and 10 Guidelines for Implementing Whole Effluent Toxicity Testing Programs) by requiring the Permittee to conduct acute toxicity tests on a fish species and on an invertebrate species to determine the most sensitive species. According to the U.S. EPA manual, *Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA-821R-02-012), the acceptable vertebrate species for the acute



toxicity test are the fathead minnow, *Pimephales promelas* and the rainbow trout, *Oncorhynchus mykiss*. The acceptable invertebrate species for the acute toxicity test are the water flea, *Ceriodaphnia dubia*, *Daphnia magna*, and *D. pulex*. This Order requires the Permittee to conduct a screening test using a vertebrate and invertebrate species. After the screening test is completed, monitoring can be reduced to the most sensitive species. Attachment E of this Order requires annual acute WET monitoring. No exceedances of acute toxicity occurred during the previous permit term (R1-2013-0008)

**b. Chronic Aquatic Toxicity**

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. The SIP requires that the Permittee demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, *Pimephales promelas*, the water flea, *Ceriodaphnia dubia*, and the freshwater alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*). Attachment E of this Order requires annual chronic WET monitoring to demonstrate compliance with the narrative toxicity objective.

The Permittee conducted chronic toxicity testing using *P. promelas*, *C. dubia*, and *S. capricornutum*. The following table summarizes the chronic toxicity testing results from the term of Order No. R1-2013-0008.

**Table F-7. Summary of Chronic Toxicity Results**

Date	<i>Pimephales promelas</i>		<i>Ceriodaphnia dubia</i> <sup>1</sup>		<i>Selenastrum capricornutum</i>
	Survival (TUc)	Growth (TUc)	Survival (TUc)	Reproduction (TUc)	Growth (TUc)
March 26, 2014	1	1	1	1	1
January 18, 2016	1	1	1	1.3	1
March 28, 2016 <sup>4</sup>	--	--	1	1.3 <sup>2</sup> /1.3 <sup>3</sup>	--
April 4, 2016	--	--	1	1 <sup>2</sup> /1 <sup>3</sup>	--
April 11, 2016 <sup>4</sup>	--	--	1	2	--
April 18, 2016	--	--	1	1 <sup>2</sup> /1 <sup>3</sup>	--
February 6, 2017	1	1	1	1 <sup>2</sup> /1 <sup>3</sup>	8
March 13, 2017	--	--	--	--	1
March 20, 2017	--	--	--	--	1
March 27, 2017	--	--	--	--	1
April 3, 2017	--	--	--	--	1
February 18, 2018	--	--	1	1.3	4

Date	<i>Pimephales promelas</i>		<i>Ceriodaphnia dubia</i> <sup>1</sup>		<i>Selenastrum capricornutum</i>
	Survival (TUc)	Growth (TUc)	Survival (TUc)	Reproduction (TUc)	Growth (TUc)
<u>Table Notes:</u>					
1. Per the analytical laboratory reports, statistical analyses indicated that one or more of the test replicates at certain treatments (e.g., receiving water control, 12.5% effluent treatment) were statistical outliers. Per the U.S. EPA method manual identified in section V.B.4 of Attachment E to this Order, the laboratory report provided analyses both with and without the outlier data. The reports did not provide an explanation for the cause of the outliers. Section 3.1 of Appendix A of the method manual states, "An outlier is an <i>inconsistent or questionable data point that appears unrepresentative of the general trend exhibited by the majority of the data. Outliers may be detected by tabulation of the data, plotting, and by an analysis of the residuals. An explanation should be sought for any questionable data points. Without an explanation, data points should be discarded only with extreme caution. If there is no explanation, the analysis should be performed both with and without the outlier, and the results of both analyses should be reported.</i> "					
2. Outliers included in results.					
3. Outliers excluded from results.					
4. While these chronic toxicity samples exceeded 1.0 TUc by using the NOEC statistical analysis method, both samples passed the TST statistical analysis method.					

Based on the observed chronic toxicity to *C. dubia* reproduction on January 18, 2016, March 28, 2016, April 11, 2016, and February 18, 2018, and observed chronic toxicity to *S. capricornutum* on February 6, 2017 and February 18, 2018, the Regional Water Board concludes that the discharge has reasonable potential to cause or contribute to an exceedance of the Basin Plan’s narrative toxicity objective. Therefore, this Order establishes a narrative effluent limitation for chronic toxicity.

Numeric chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in basin plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) in the event that persistent toxicity is detected. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-0012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, "In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works, that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits." A statewide toxicity plan is under development to address this issue. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision, it is

infeasible to develop numeric effluent limitations for chronic toxicity at this time. The SIP revision may require a permit modification to incorporate new statewide toxicity criteria established by the upcoming SIP revision.

This Order includes a reopener that allows the Regional Water Board to reopen the permit and include a numeric chronic toxicity limitation, a revised acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

To ensure compliance with the narrative effluent limitation and the Basin Plan's narrative toxicity objective, the Permittee is required to conduct annual chronic WET testing at Discharge Point 001, as specified in the MRP (Attachment E, section V). Furthermore, the MRP (Attachment E, section V.C) requires the Permittee to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates toxicity exceeding the numeric toxicity monitoring trigger, the Permittee is required to initiate a TRE in accordance with an approved TRE work plan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Permittee is required to perform accelerated chronic toxicity monitoring, as well as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

**c. Test of Significant Toxicity (TST)**

Order No. R1-2013-0008 established a numeric chronic toxicity trigger of  $1.0 \text{ TUc} = 100/\text{NOEC}$ , using a five-concentration hypothesis test. In 2010, U.S. EPA endorsed the peer-reviewed *Test of Significant Toxicity (TST) two-concentration hypothesis testing approach in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved hypothesis-testing tool to evaluate data from U.S. EPA's toxicity test methods. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) mean response of regulatory management concern—than the No Observed Effect Concentration (NOEC) hypothesis-testing approach. The TST hypothesis testing approach more reliably identifies toxicity – in relation to the acute (0.20 or more) mean responses of regulatory management concern – than the NOEC approach used previously to establish effluent limitations for acute toxicity.

Since the TST approach has not previously been applied for determining reasonable potential or establishing effluent limitations for acute toxicity, this Order does not include effluent limitations for acute toxicity based on the TST approach. However, this Order does require the Permittee to monitor and report results in a manner that will allow the Regional Water Board to conduct an RPA in accordance with the TST approach at the time of the next permit renewal.

The State Water Board is developing a toxicity amendment to the *Water Quality Control Plan for Enclosed Bays and Estuaries of California* that will standardize the regulation of aquatic toxicity for all non-oceanic surface waters. U.S. EPA's TST approach is an essential component of this draft toxicity amendment as it forms the basis for utilizing numeric water quality objectives and acts as the primary means of determining compliance with the proposed effluent limitations.

In a letter dated February 12, 2014, the State Water Board submitted an alternative test process (ATP) request to U.S. EPA Region 9 for the statewide use of a two-concentration toxicity test design when using the TST approach. This two-concentration test design is composed of a single effluent concentration and a control concentration. U.S. EPA approved the ATP request on March 17, 2014. In June 2014, the approval was challenged in court on procedural grounds under the Administrative Procedures Act by the Southern California Alliance of Publicly Owned Treatment Works (SCAP) and the Central Valley Clean Water Association (CVCWA). The U.S. EPA withdrew the approval and notified State Water Board in a memo dated February 11, 2015.

It is important to note that U.S. EPA's rescission of its approval of the ATP is not based on the substantive TST statistical analysis or the scientific validity of a two-concentration test design. The withdrawal letter also states that currently there is a proposed rulemaking to change the language in the ATP regulations at 40 C.F.R. part 136.

The benefits of requiring the TST in new or amended permits include improving the statistical power of the toxicity test, and simplifying the analysis as compared to the traditional hypothesis statistical approaches or point estimates. The calculations are straightforward and provide a clear pass/fail result. With the withdrawal of the two-concentration test design approval, an NPDES permit can still require the TST for statistical analyses. Toxicity tests shall be run using a multi-concentration tests design in accordance with 40 C.F.R. section 136.3, and the TST shall be utilized with the biological responses from the permitted in-stream waste concentration (IWC) and the control (effluent concentration of zero). However, even with only two of the five concentration biological responses being used, cost savings in the form of time and effort are still realized for the statistical analysis and data interpretation carried out by the Permittee, lab, and permit manager. This Order requires application of the TST for statistical analysis of whole effluent toxicity data.

#### **Tests of Significant Toxicity Design**

The TST's null hypothesis for chronic toxicity is:

$H_0$ : Mean response (IWC in % effluent)  $\leq$  0.75 mean response (control)

Results are analyzed using the TST approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

The chronic IWC (in % effluent) for Discharge Point 001 is 100%. The chronic toxicity trigger for Discharge Point 001 is expressed as a null hypothesis ( $H_0$ ) and regulatory management decision (b value) of 0.75 for the chronic toxicity methods in the MRP. The null hypothesis for this discharge is:

$H_0$ : Mean response (100% effluent)  $\leq$  0.75 mean response (control)

Results shall be analyzed using the TST hypothesis testing approach in section V.B.6.a of the MRP. Compliance with this chronic toxicity limitation is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

When the chronic toxicity test results in a “Fail” or “F,” the Permittee must initiate accelerated monitoring as specified in the MRP (Attachment E, section V). After accelerated monitoring, if conditions of chronic toxicity are found to persist, the Permittee will be required to conduct a TRE, as described by the MRP.

Notification requirements for chronic WET testing include a 72-hour verbal notification requirement and a 14-day written report requirement, if test results indicate toxicity. The 14-day written notification is established in the U.S. EPA WET Guidance documents cited in the MRP. The 72-hour verbal notification requirement is being added to provide the Regional Water Board with knowledge of the toxicity in advance of the written report. The 72-hour requirement is intended to give the Permittee sufficient time to make a telephone call to Regional Water Board staff and accounts for non-working days (e.g., weekends). Verbal notification of WET test exceedances may be left by voice mail if the Regional Water Board staff person is not immediately available by telephone.

This Order includes a requirement for the Permittee to conduct a screening test using at least one vertebrate, invertebrate, and plant species. After the screening test is completed, monitoring can be reduced to the most sensitive species.

This Order also includes a narrative chronic toxicity limitation as required by State Water Board Order No. WQO 2003-0012.

#### **D. Final Effluent Limitation Considerations**

##### **1. Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R1-2013-0008, with the exception effluent limitations for copper and lead.

Order No. R1-2013-0008 included effluent limitations for copper and lead based on the CTR aquatic life criteria. The Permittee has conducted a WER study to determine the site-specific toxicity of copper and lead in the receiving water at the point of discharge. The Permittee’s study concluded that a site specific WER of 50 for total recoverable copper and 43 for dissolved copper, and a site specific WER of >49 for total recoverable and >49 for dissolved lead apply to the discharge. As shown in Table F-4 of this Fact Sheet, effluent monitoring data for copper and lead indicates that the discharge does not demonstrate reasonable potential to cause or contribute to an exceedance of the applicable CTR aquatic life criterion for copper and lead. The updated effluent copper and lead data and the updated WERs constitute new information, which permits the removal of effluent limitations consistent with CWA section 402(o)(2)(B). Therefore, this Order does not retain effluent limitations for copper and lead at Discharge Point 001.

##### **2. Antidegradation Policies**

This Order is consistent with applicable federal and state antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes

of treated wastewater beyond that which was permitted to discharge in accordance with Order No. R1-2013-0008.

### **3. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on debris based on BPT. Restrictions on this pollutant are discussed in section IV.B of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations for pH that are more stringent than the minimum, federal technology-based requirements but are necessary to meet water quality standards. These requirements are discussed in section IV.C.3 of the Fact Sheet.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "*applicable water quality standards for purposes of the CWA*" pursuant to 40 C.F.R. section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

#### **E. Interim Effluent Limitations – Not Applicable**

This Order does not establish interim effluent limitations or schedules for compliance with final limitations.

#### **F. Land Discharge Specifications and Requirements – Not Applicable**

This Order does not authorize discharges to land.

#### **G. Water Recycling Specifications and Requirements – Not Applicable**

This Order does not authorize discharges of recycled water.

### **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, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

The dissolved oxygen limitation in this Order reflects the new Basin Plan dissolved oxygen limit that was adopted by the Regional Water Board on June 18, 2015, and effective beginning April 24, 2017, after receiving approval from U.S. EPA. The new Basin Plan dissolved oxygen limitation specifies limits for the WARM, COLD, and SPWN beneficial uses. The COLD and SPWN beneficial uses occur in the North Fork Mad River Hydrologic Area. However, this Order includes only the SPWN limitations because it is the most restrictive and protective limit, and the SPWN beneficial use is present throughout the entire discharge season.

## **B. Groundwater**

Groundwater limitations in this Order have been retained from the previous Order with minor modification to reflect revised sections of title 22. Groundwater limitations are included in the Order to protect the beneficial uses of the underlying groundwater. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater. Groundwater data must be evaluated using appropriate statistical tools to determine when groundwater degradation is occurring.

The Order includes a new groundwater toxicity limitation that was adopted by the Regional Water Board on June 18, 2015, and effective beginning July 18, 2016 after receiving approval from the California Office of Administrative Law. This new Basin Plan limit requires that groundwaters shall not contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, or that adversely affects beneficial uses. This limitation applies regardless of whether the toxicity is caused by a single substance or the synergistic effect of multiple substances.

## **VI. RATIONALE FOR PROVISIONS**

### **A. Standard Provisions**

#### **1. Federal Standard Provisions**

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D to the Order. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42. The rationale for the special conditions contained in the Order is provided in section VI.C, below.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

## 2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the Permittee shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions VI.A.2 of the Order.

- a. Order Provision VI.A.2.a identifies the state's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., 40 C.F.R. sections 122.41(j)(5) and (k)(2)).
- b. Order Provision VI.A.2.b requires the Permittee to notify Regional Water Board staff, orally and in writing, in the event that the Permittee does not comply or will be unable to comply with any Order requirement. This provision requires the Permittee to make direct contact with a Regional Water Board staff person.

### B. Monitoring and Reporting Program (MRP) Requirements

The Permittee shall comply with the MRP, included as Attachment E of this Order, and future revisions thereto.

### C. Special Provisions

#### 1. Reopener Provisions

- a. **Standard Revisions (Special Provision VI.C.1.a).** Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, which include the following:
  - i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.
  - ii. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.
- b. **Reasonable Potential (Special Provision VI.C.1.b).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Permittee governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.
- c. **Whole Effluent Toxicity (Special Provision VI.C.1.c).** This Order requires the Permittee to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a numeric chronic toxicity limitation, new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.



- d. **303(d)-Listed Pollutants (Special Provision VI.C.1.d).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.
  - e. **Water Effects Ratios (WERs) and Metal Translators (Special Provision VI.C.1.e).** This provision allows the Regional Water Board to reopen this Order if future studies undertaken by the Permittee provide new information and justification for applying a WER or metal translator to a water quality objective for one or more priority pollutants.
  - f. **Authorization of Cogeneration Plant Discharges (Special Provision VI.C.1.f).** This provision allows the Regional Water Board to reopen this Order to authorize the discharge of wastewater from the proposed cogeneration plant if the Permittee submits a complete ROWD and antidegradation analysis demonstrating that the proposed discharge is consistent with the federal and state antidegradation policies.
- 2. **Special Studies and Additional Monitoring Requirements**
  - a. **North Fork Mad River Flow Monitoring Plan. (Special Provision VI.C.2.a).** This Order requires the Permittee to demonstrate compliance with the one percent flow limitation in the North Fork Mad River. The Permittee will need to establish a means to determine the discharge flow rate to the North Fork Mad River.
- 3. **Best Management Practices and Pollution Prevention**
  - a. **Pollutant Minimization Program (Special Provision VI.C.3.a).** This provision is included in this Order pursuant to section 2.4.5 of the SIP. The Regional Water Board includes standard provisions in all NPDES permits requiring development of a Pollutant Minimization Program when there is evidence that a toxic pollutant is present in the effluent at a concentration greater than an applicable effluent limitation.
  - b. **Debris and Sediment Control Best Management Practices (Special Provision VI.C.3.b).** 40 C.F.R section 429.101 requires that no debris, defined as woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening and is present in the discharge from a wet storage facility be discharged. Additionally, the Mad River is subject to TMDLs for sediment and turbidity. Updated BMPs, as required by Provision VI.C.3.b of this Order, will ensure that debris is reduced to the maximum extent practicable, and sediment and turbidity TMDLs are not exceeded.
- 4. **Construction, Operation, and Maintenance Specifications**
  - a. **Operation and Maintenance (Special Provisions VI.C.4.a and b).** 40 C.F.R. section 122.41(e) requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.4.b of this Order, is an integral part of a well-operated and maintained facility.
  - b. **Settling Basin Operating Requirements (Special Provision VI.C.4.c).** The Permittee operates a number of settling basins for commingled process water and storm water runoff. This Order requires the Permittee to operate the settling basins in a manner that prevents nuisance conditions and protects public health.

**5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable**

**6. Other Special Provisions**

- a. **Solids Disposal and Handling Requirements (Special Provision VI.C.6.a).** This provision requires the Permittee to properly dispose of basin sediments and other solids removed from liquid waste in accordance with the provisions of the Water Code and title 27 of the CCR.

**7. Compliance Schedules – Not Applicable**

This Order does not establish interim effluent limitations or schedules of compliance for final numeric effluent limitations.

**VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

Section 122.48 of 40 C.F.R. requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code section 13383 authorizes the Regional Water Board to require technical and monitoring reports. The MRP, Attachment E, establishes monitoring and reporting requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

**A. Influent Monitoring**

- 1. Influent monitoring requirements for flow at Monitoring Location INF-001 from Order No. R1-2013-0008 were changed to Monitoring Location INF-002 and are necessary to evaluate the water balance for the constructed wetland.

**B. Effluent Monitoring**

Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order. Monitoring at Monitoring Location EFF-001 is necessary to demonstrate compliance with effluent limitations and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

**1. Monitoring Location EFF-001**

- a. Effluent monitoring frequencies and sample types for flow, pH, TSS, COD, color, debris, dissolved oxygen, hardness, settleable solids, temperature, and turbidity have been retained from Order No. R1-2013-0008.
- b. Effluent monitoring data collected during the term of Order No. R1-2013-0008 indicates that the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives for nickel and zinc. Therefore, this Order establishes monthly monitoring requirements for nickel and zinc.
- c. Effluent monitoring data collected during the term of Order No. R1-2013-0008 indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for copper and lead. However, in order to ensure discharges of copper and lead are not contributing to chronic toxicity in the effluent this Order maintains periodic monitoring of copper and lead but reduces the monitoring from monthly to quarterly, to be conducted concurrently with chronic toxicity testing.

- d. Effluent monitoring data collected during the term of Order No. R1-2013-0008 indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for CTR priority pollutants, with the exceptions of nickel and zinc. Monthly monitoring requirements have been established in this order for nickel and zinc, therefore, this Order discontinues annual effluent monitoring requirements for detected CTR priority pollutants.
- e. This Order includes a prohibition of discharges that exceed one percent of the flow of the North Fork Mad River as measured at Monitoring Location RSW-001 in the North Fork Mad River near Korb. Therefore, this Order requires the Permittee to calculate and report the discharge dilution rate to determine compliance with the prohibition.
- f. The once per permit term CTR priority pollutant monitoring must be performed in time to submit the data with the Report of Waste Discharge; therefore, Table Note 7 in Table E-3 of the MRP specifies that this monitoring must be completed by **April 1, 2023**

### C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) monitoring requirements are retained from Order No. R1-2013-0008 with modifications to increase chronic toxicity monitoring from annually to quarterly, and to evaluate and report chronic toxicity using TST methods (see section IV.C.5 of this Fact Sheet). The WET requirements are included in this Order to determine compliance with effluent limitations and thereby protect the receiving water quality from the aggregate effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer time period and may measure mortality, reproduction, and/or growth.

As discussed in section IV.C.3 above, chronic criterion for copper and lead were determined using WERs for total metals of 50 and >49, respectively. The U.S. EPA *Water quality Standards Handbook: Second Edition (EPA-823-B-12-002; March 2012)* recommends that additional conditional requirements be considered for WERs greater than 5. Chronic toxicity testing conducted during the term of Order No. R1-2013-0008, demonstrated intermittent toxicity to *C. dubia* and *S. capricornutum*. Based on the relatively high WERs and the observed toxicity, the chronic toxicity monitoring frequency has been increased from annually to quarterly (concurrent with quarterly effluent monitoring for copper and lead) in this Order to provide assurance that the authorization of the site-specific WERs are protective of water quality.

In addition to routine toxicity monitoring, this Order requires the Permittee to maintain and update their TRE Work Plan, in accordance with appropriate U.S. EPA guidance to ensure that the Permittee has a plan to immediately move forward with the initial tiers of a TRE in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring provided as a result of an accelerated monitoring program.

### D. Receiving Water Monitoring

#### 1. Surface Water

##### a. Monitoring Location RSW-001

- i. Receiving water monitoring is required to demonstrate compliance with the Receiving Water Limitations. Monitoring requirements at Monitoring Location

RSW-001 for pH, COD, color, dissolved oxygen, hardness, temperature, turbidity, and CTR priority pollutants have been retained from Order No. R1-2013-0008.

- ii. The once per permit term CTR priority pollutant monitoring must be performed in time to submit the data with the Report of Waste Discharge; therefore, Table Note 4 in Table E-4 of the MRP specifies that this monitoring must be completed by **April 1, 2023**.
- iii. This Order establishes new upstream monitoring requirements for flow, in order to gather data needed to demonstrate compliance with the one percent flow prohibition in the North Fork Mad River. North Fork Mad River upstream flow will be based measurements at Monitoring Location RSW-001 in the North Fork Mad River near Korbel.
- iv. 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.

Additionally, it is an objective of the Regional Board to reduce the cost of compliance wherever feasible.

Therefore, based on the monitoring result, and to reduce the cost of compliance, the Permittee may use weekly monitoring for dissolved oxygen to determine compliance with the 7-day moving average dissolved oxygen limit of 11 mg/L. 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 continuous monitoring for dissolved oxygen in the receiving water.

**b. Monitoring Location RSW-002**

- i. Monitoring Requirements at Monitoring Location RSW-002 for pH, COD, color, dissolved oxygen, temperature, and turbidity have been retained from Order No. R1-2013-0008.

**E. Other Monitoring Requirements**

1. **Visual Monitoring.** This Order establishes visual monitoring requirements for the effluent (Monitoring Location EFF-001) and receiving water (Monitoring Locations RSW-001 and RSW-002) to ensure compliance with receiving water limitations in section V of the Order.
2. **Discharge Monitoring Report Quality Assurance (DMR-QA) Study Program.** Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires major permittees under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support

self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Permittee can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Permittee can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Permittee shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

3. **Accelerated Monitoring Requirements.** Table E-3 of the MRP includes accelerated monitoring requirements for parameters that are required to be monitored monthly.
4. **Flow Monitoring.** Section I.D of the MRP requires proper installation, calibration, operation, and maintenance of flow metering devices.
5. **Spill Notification.** The MRP that is part of this Order establishes requirements for reporting spills and unauthorized discharges, with the exception of Sanitary Sewer Overflows (SSOs), which must be reported in accordance with the requirements of State Water Board Order No. 2006-0003-DWQ and WQ-2013-0058-EXEC.

## VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company Korbil Sawmill. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

### A. Notification of Interested Parties

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following posting on the Regional Water Board's Internet site at:  
[https://www.waterboards.ca.gov/northcoast/public\\_notices/public\\_hearings/npdes\\_permits\\_and\\_wdrs/](https://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs/) and through publication in the **Press Democrat** and **Time Standard** on **January 5, 2019**.

### B. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs as provided through the notification process. Comments were due to the Regional Water Board Executive Office electronically via e-mail to [NorthCoast@waterboards.ca.gov](mailto:NorthCoast@waterboards.ca.gov) or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines

for electronic submittal of documents can be found on the Regional Water Board website at <https://www.waterboards.ca.gov/northcoast/>.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **February 5, 2019**.

### **C. Public Hearing**

The Regional Water Board held a public hearing on the draft WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **April 18, 2019**  
Time: 8:30 a.m. or as announced in the Regional Water Board's agenda  
Location: Regional Water Board Hearing Room  
5550 Skylane Boulevard, Suite A  
Santa Rosa, CA 95403

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

Please be aware that dates and venues may change. Our Web address is <https://www.waterboards.ca.gov/northcoast/> where you can access the current agenda for changes in dates and locations.

### **D. Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's action:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

For instruction on how to file a petition for review see [https://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml).

### **E. Information and Copying**

The ROWD, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address identified in section VIII.C, above, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (707) 576-2220.

### **F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

**Attachment F-1 – Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company RPA Summary**

Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
Antimony	µg/L	=	0.09	<	0.05	6.0	--	--	14	--	6.0	No
Arsenic	µg/L	=	3	=	0.57	10	340	150	--	--	10	No
Beryllium	µg/L	<	0.09	<	0.09	4.0	--	--	--	--	4.0	No
Cadmium	µg/L	<	0.05	<	0.05	0.2	0.22	0.3	--	--	5.0	No
Chromium (III)	µg/L	=	6.7	=	0.44	23	197	23	--	--	--	No
Chromium (VI) or total Cr	µg/L	<	1.5	<	1.5	11	16	11	--	--	50	No
Copper	µg/L	=	18.3	=	9.3	48 <sup>1</sup>	57 <sup>1</sup>	48 <sup>1</sup>	1,300	--	--	No
Lead	µg/L	=	4.14	=	3.5	4.3 <sup>2</sup>	136 <sup>2</sup>	5.3 <sup>2</sup>	--	--	--	No
Mercury	µg/L	=	0.0079	=	0.0074	0.010	--	--	0.050	--	2.0	No
Nickel	µg/L	=	9.3	=	5.8	5.0	49	5.5	610	--	100	Yes
Selenium	µg/L	<	0.4	<	0.4	5.0	--	5	--	--	50	No
Silver	µg/L	<	0.02	<	0.02	0.042	0.042	--	--	--	--	No
Thallium	µg/L	<	0.05	<	0.05	1.7	--	--	1.7	--	2.0	No
Zinc	µg/L	=	13	=	4.9	13	12.6	12.6	--	--	--	Yes
Cyanide	µg/L	<	0.9	<	0.9	5.2	22	5.20	700	--	150	No
Asbestos	MFL	<	1.7	<	1.7	7.0	--	--	7.0	--	7.0	No
2,3,7,8-TCDD (Dioxin)	µg/L	<	1.08 x 10 <sup>-06</sup>	<	1.08 x 10 <sup>-06</sup>	1.3 x 10 <sup>-08</sup>	--	--	1.3 x 10 <sup>-08</sup>	--	3.0 x 10 <sup>-05</sup>	No
Acrolein	µg/L	<	1.7	<	1.7	320	--	--	320	780	--	No
Acrylonitrile	µg/L	<	1.8	<	1.8	0.059	--	--	0.059	--	--	No
Benzene	µg/L	<	0.18	<	0.18	1.0	--	--	1.2	--	1.0	No
Bromoform	µg/L	<	0.15	<	0.15	4.3	--	--	4.3	--	--	No
Carbon Tetrachloride	µg/L	<	0.16	<	0.16	0.25	--	--	0.25	--	0.5	No
Chlorobenzene	µg/L	<	0.18	<	0.18	70	--	--	680	--	70	No
Chlorodibromomethane	µg/L	<	0.17	<	0.17	0.40	--	--	0.40	--	--	No
Chloroethane	µg/L	<	0.38	<	0.38	No Criteria	--	--	--	--	--	Uo
2-Chloroethylvinyl Ether	µg/L	<	0.28	<	0.28	No Criteria	--	--	--	--	--	Uo
Chloroform	µg/L	<	0.19	<	0.19	No Criteria	--	--	--	--	--	Uo
Dichlorobromomethane	µg/L	<	0.16	<	0.16	0.56	--	--	0.56	--	--	No
1,1-Dichloroethane	µg/L	<	0.19	<	0.19	5.0	--	--	--	--	5.0	No
1,2-Dichloroethane	µg/L	<	0.18	<	0.18	0.38	--	--	0.38	--	0.50	No
1,1-Dichloroethylene	µg/L	<	0.21	<	0.21	0.057	--	--	0.057	--	6.0	No
1,2-Dichloropropane	µg/L	<	0.18	<	0.18	0.52	--	--	0.52	--	5.0	No
1,3-Dichloropropylene	µg/L	<	0.2	<	0.2	0.50	--	--	10	--	0.50	No
Ethylbenzene	µg/L	<	0.26	<	0.26	300	--	--	3,100	--	300	No
Methyl Bromide	µg/L	<	0.3	<	0.3	48	--	--	48	--	--	No
Methyl Chloride	µg/L	<	0.3	<	0.3	No Criteria	--	--	--	--	--	Uo
Methylene Chloride	µg/L	<	0.4	<	0.4	4.7	--	--	4.7	--	5.0	No
1,1,2,2-Tetrachloroethane	µg/L	<	0.15	<	0.15	0.17	--	--	0.17	--	1.0	No
Tetrachloroethylene	µg/L	<	0.19	<	0.19	0.80	--	--	0.80	--	5.0	No
Toluene	µg/L	<	0.19	<	0.19	150	--	--	6,800	--	150	No
1,2-Trans-Dichloroethylene	µg/L	<	0.22	<	0.22	10	--	--	700	--	10	No

Order No. R1-2019-0005

Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company

NPDES No. CA0005932

Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
1,1,1-Trichloroethane	µg/L	<	0.19	<	0.19	200	--	--	--	--	200	No
1,1,2-Trichloroethane	µg/L	<	0.16	<	0.16	0.60	--	--	0.60	--	5.0	No
Trichloroethylene	µg/L	<	0.2	<	0.2	2.7	--	--	2.7	--	5.0	No
Vinyl Chloride	µg/L	<	0.25	<	0.25	0.50	--	--	2.0	--	0.50	No
2-Chlorophenol	µg/L	<	0.4	<	0.4	120	--	--	120	--	--	No
2,4-Dichlorophenol	µg/L	<	0.4	<	0.4	93	--	--	93	--	--	No
2,4-Dimethylphenol	µg/L	<	0.3	<	0.4	540	--	--	540	--	--	No
2-Methyl-4,6-Dinitrophenol	µg/L	<	0.4	<	0.3	13	--	--	13	--	--	No
2,4-Dinitrophenol	µg/L	<	0.4	<	0.2	70	--	--	70	--	--	No
2-Nitrophenol	µg/L	<	0.5	<	0.4	No Criteria	--	--	--	--	--	Uo
4-Nitrophenol	µg/L	<	0.5	<	0.5	No Criteria	--	--	--	--	--	Uo
3-Methyl-4-Chlorophenol	µg/L	<	0.4	<	0.5	No Criteria	--	--	--	--	--	Uo
Pentachlorophenol	µg/L	<	0.3	<	0.4	0.28	5.3	4.0	0.28	--	1.0	No
Phenol	µg/L	<	0.5	<	0.3	21,000	--	--	21,000	--	--	No
2,4,6-Trichlorophenol	µg/L	<	0.02	<	0.5	2.1	--	--	2.1	--	--	No
Acenaphthene	µg/L	<	0.02	<	0.02	1,200	--	--	1,200	--	--	No
Acenaphthylene	µg/L	<	0.01	<	0.02	No Criteria	--	--	--	--	--	Uo
Anthracene	µg/L	<	4	<	0.01	9,600	--	--	9,600	--	--	No
Benzidine	µg/L	<	0.02	<	4	0.00012	--	--	0.00012	--	--	No
Benzo(a)Anthracene	µg/L	<	0.02	<	0.02	0.0044	--	--	0.0044	--	--	No
Benzo(a)Pyrene	µg/L	<	0.02	<	0.02	0.0044	--	--	0.0044	--	0.20	No
Benzo(b)Fluoranthene	µg/L	<	0.02	<	0.02	0.0044	--	--	0.0044	--	--	No
Benzo(g,h,i)Perylene	µg/L	<	0.02	<	0.02	No Criteria	--	--	--	--	--	Uo
Benzo(k)Fluoranthene	µg/L	<	0.5	<	0.02	0.0044	--	--	0.0044	--	--	No
Bis(2-Chloroethoxy)Methane	µg/L	<	0.4	<	0.5	No Criteria	--	--	--	--	--	Uo
Bis(2-Chloroethyl)Ether	µg/L	<	0.4	<	0.4	0.031	--	--	0.031	--	--	No
Bis(2-Chloroisopropyl)Ether	µg/L	<	0.5	<	0.4	1,400	--	--	1,400	--	--	No
Bis(2-Ethylhexyl)Phthalate	µg/L	<	0.5	<	0.5	1.8	--	--	1.8	--	4	No
4-Bromophenyl Phenyl Ether	µg/L	<	0.5	<	0.5	No Criteria	--	--	--	--	--	Uo
Butylbenzyl Phthalate	µg/L	<	0.4	<	0.5	3,000	--	--	3,000	--	--	No
2-Chloronaphthalene	µg/L	<	0.5	<	0.4	1,700	--	--	1,700	--	--	No
4-Chlorophenyl Phenyl Ether	µg/L	<	0.02	<	0.5	No Criteria	--	--	--	--	--	Uo
Chrysene	µg/L	<	0.02	<	0.02	0.0044	--	--	0.0044	--	--	No
Dibenzo(a,h)Anthracene	µg/L	<	0.27	<	0.02	0.0044	--	--	0.0044	--	--	No
1,2-Dichlorobenzene	µg/L	<	0.18	<	0.27	600	--	--	2,700	--	600	No
1,3-Dichlorobenzene	µg/L	<	0.18	<	0.18	400	--	--	400	--	--	No
1,4-Dichlorobenzene	µg/L	<	5	<	0.18	5.0	--	--	400	--	5.0	No
3,3'-Dichlorobenzidine	µg/L	<	0.05	<	5	0.040	--	--	0.040	--	--	No
Diethyl Phthalate	µg/L	<	0.5	<	0.5	23,000	--	--	23,000	--	--	No
Dimethyl Phthalate	µg/L	<	0.4	<	0.5	313,000	--	--	313,000	--	--	No
Di-n-Butyl Phthalate	µg/L	<	0.4	<	0.4	2,700	--	--	2,700	--	--	No
2,4-Dinitrotoluene	µg/L	<	0.4	<	0.4	0.11	--	--	0.11	--	--	No
2,6-Dinitrotoluene	µg/L	<	0.4	<	0.4	No Criteria	--	--	--	--	--	Uo



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Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company

NPDES No. CA0005932

Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
Di-n-Octyl Phthalate	µg/L	<	0.5	<	0.4	No Criteria	--	--	--	--	--	Uo
1,2-Diphenylhydrazine	µg/L	<	0.02	<	0.5	0.040	--	--	0.040	--	--	No
Fluoranthene	µg/L	<	0.01	<	0.02	300	--	--	300	--	--	No
Fluorene	µg/L	<	0.4	<	0.01	1,300	--	--	1,300	--	--	No
Hexachlorobenzene	µg/L	<	0.4	<	0.4	0.00075	--	--	0.00075	--	1	No
Hexachlorobutadiene	µg/L	<	0.3	<	0.4	0.44	--	--	0.44	--	--	No
Hexachlorocyclopentadiene	µg/L	<	0.4	<	0.3	50	--	--	240	--	50	No
Hexachloroethane	µg/L	<	0.02	<	0.4	1.9	--	--	1.9	--	--	No
Indeno(1,2,3-cd) Pyrene	µg/L	<	0.5	<	0.02	0.0044	--	--	0.0044	--	--	No
Isophorone	µg/L	<	0.02	<	0.5	8.4	--	--	8.4	--	--	No
Naphthalene	µg/L	<	0.5	<	0.02	No Criteria	--	--	--	--	--	Uo
Nitrobenzene	µg/L	<	0.3	<	0.5	17	--	--	17	--	--	No
N-Nitrosodimethylamine	µg/L	<	0.5	<	0.3	0.00069	--	--	0.00069	--	--	No
N-Nitrosodi-n-Propylamine	µg/L	<	0.3	<	0.5	0.0050	--	--	0.0050	--	--	No
N-Nitrosodiphenylamine	µg/L	<	0.02	<	0.3	5.0	--	--	5.0	--	--	No
Phenanthrene	µg/L	<	0.02	<	0.02	No Criteria	--	--	--	--	--	Uo
Pyrene	µg/L	<	0.4	<	0.02	960	--	--	960	--	--	No
1,2,4-Trichlorobenzene	µg/L	<	0.4	<	0.4	5.0	--	--	--	--	5.0	No
Aldrin	µg/L	<	0.004	<	0.004	0.00013	3	--	0.00013	--	--	No
alpha-BHC	µg/L	<	0.005	<	0.005	0.0039	--	--	0.0039	--	--	No
beta-BHC	µg/L	<	0.004	<	0.004	0.014	--	--	0.014	--	--	No
gamma-BHC	µg/L	<	0.004	<	0.004	0.019	0.95	--	0.019	--	0.20	No
delta-BHC	µg/L	<	0.004	<	0.004	No Criteria	--	--	--	--	--	Uo
Chlordane	µg/L	<	0.02	<	0.02	0.00057	2.4	0.0043	0.00057	--	0.1	No
4,4-DDT	µg/L	<	0.004	<	0.004	0.00059	1.1	0.0010	0.00059	--	--	No
4,4-DDE	µg/L	<	0.003	<	0.003	0.00059	--	--	0.00059	--	--	No
4,4-DDD	µg/L	<	0.004	<	0.004	0.00083	--	--	0.00083	--	--	No
Dieldrin	µg/L	<	0.004	<	0.004	0.00014	0.24	0.056	0.00014	--	--	No
alpha-Endosulfan	µg/L	<	0.004	<	0.004	0.056	0.22	0.056	110	--	--	No
beta-Endosulfan	µg/L	<	0.005	<	0.005	0.056	0.22	0.056	110	--	--	No
Endosulfan Sulfate	µg/L	<	0.005	<	0.005	110	--	--	110	--	--	No
Endrin	µg/L	<	0.005	<	0.005	0.036	0.086	0.036	0.76	--	2.0	No
Endrin Aldehyde	µg/L	<	0.005	<	0.005	0.76	--	--	0.76	--	--	No
Heptachlor	µg/L	<	0.005	<	0.005	0.00021	0.52	0.0038	0.00021	--	0.010	No
Heptchlor Epoxide	µg/L	<	0.004	<	0.004	0.0001	0.52	0.0038	0.00010	--	0.010	No
PCBs sum <sup>3</sup>	µg/L	<	0.05	<	0.05	0.00017	--	0.014	0.00017	--	0.50	No
Toxaphene	µg/L	<	0.3	<	0.3	0.00020	0.73	0.00020	0.00073	--	3.0	No
Chloride	µg/L	=	4,600	--	--	250,000	--	--	--	--	250,000	No
cis-1,2-Dichloroethene	µg/L	<	0.2	<	0.2	6.0	--	--	--	--	6.0	No
Halomethanes, Sum	µg/L	<	0.3	<	0.3	80	--	--	--	--	80	No
Methoxychlor	µg/L	<	0.005	<	0.005	30	--	--	--	--	30	No
Methyl Tert-butyl Ether (MTBE)	µg/L	<	0.15	<	0.15	13	--	--	--	--	13	No
Sulfate	µg/L	=	7,300	--	--	250,000	--	--	--	--	250,000	No

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Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
Trichlorofluoromethane	µg/L	<	0.29	<	0.29	150	--	--	--	--	150	No
Xylenes	µg/L	<	0.47	<	0.47	500	--	--	--	--	1,750	No
<b>Table Notes:</b> 1. Water quality criteria calculated using a WER of 50. 2. Water quality criteria calculated using a WER of 49. 3. PCBs sum refers to sum of PCB 1016, 1221, 1232, 1242, 1248, 1254, and 1260												

**Attachment F-2 Trinity River Timber Company dba North Fork Lumber Company and California Redwood Company Flow Summary**

Date	Average Monthly Discharge EFF-001 (mgd)
November 2014	0.459
December 2014	0.447
January 2015	0.276
February 2015	0.417
March 2015	0.576
April 2015	0.016
October 2015	0.001
November 2015	0.015
December 2015	1.02
January 2016	0.097
February 2016	0.027
March 2016	0.066
April 2016	0.029
May 2016	0.002
October 2016	0.051

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November 2016	0.039
December 2016	0.019
January 2017	0.008
February 2017	0.013
March 2017	0.005
April 2017	0.011
May 2017	0.362
October 2017	0.014
November 2017	0.043
December 2017	0.001
January 2018	0.067
February 2018	0.001
March 2018	0.146
April 2018	0.175
November 2018	0.063
December 2018	0.018

**ATTACHMENT G – PDF EXAMPLE OF THE ZIR AND NIR CALCULATOR**

Date of Sample	Zinc Value in Effluent (ug/L)	Receiving Water Hardness (mg/L)	Zinc ECA Acute	Zinc ECA Chronic	AMEL (mg/L)	MDEL (mg/L)	AMEL ZIR	MDEL ZIR
	13	7	12.6	12.6	6.3	13	2.1	1.0
		10	17.0	17.0	8.5	17	0.0	0.0
		15	24.0	24.0	12.0	24	0.0	0.0
		20	30.6	30.6	15.3	31	0.0	0.0
		25	37.0	37.0	18.4	37	0.0	0.0
		30	43.2	43.2	21.5	43	0.0	0.0
		35	49.2	49.2	24.5	49	0.0	0.0
<b>Nickel Impact Ratio Calculator</b>								
Date of Sample	Nickel Value in Effluent (ug/L)	Receiving Water Hardness (mg/L)	Nickel ECA Acute	Nickel ECA Chronic	AMEL (mg/L)	MDEL (mg/L)	AMEL NIR	MDEL NIR
	9	7	49.5	5.5	4.5	9	2.0	1.0
		10	66.9	7.4	6.1	12	0.0	0.0
		15	94.3	10.5	8.6	17	0.0	0.0
		20	120.2	13.4	10.9	22	0.0	0.0
		25	145.2	16.1	13.2	26	0.0	0.0
		30	169.4	18.8	15.4	31	0.0	0.0
		35	193.0	21.5	17.6	35	0.0	0.0