

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

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**ORDER R5-2019-0048
NPDES NO. CA0082490**

**WASTE DISCHARGE REQUIREMENTS FOR
BURNEY FOREST PRODUCTS, A JOINT VENTURE,
SHASTA GREEN, INC., AND FRUIT GROWERS SUPPLY COMPANY
BURNEY FOREST POWER
SHASTA COUNTY**

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

Table 1. Discharger Information

Discharger	Burney Forest Products, a joint venture, Shasta Green, Inc., and Fruit Growers Supply Company
Name of Facility	Burney Forest Power
Facility Address	35586-B Highway 299 E
	Burney, CA 96013
	Shasta County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
SW-001	Industrial Storm Water (as defined in Attachment A)	40° 52' 35" N	121° 43' 00" W	Canyon Creek

Table 3. Administrative Information

This Order was adopted on:	7 June 2019
This Order shall become effective on:	1 August 2019
This Order shall expire on:	31 July 2024
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	31 July 2023
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	Minor

I, Patrick Pulupa, 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, Central Valley Region, on **7 June 2019**.



PATRICK PULUPA, Executive Officer

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I. FACILITY INFORMATION

Information describing Burney Forest Products, a joint venture, Shasta Green, Inc., and Fruit Growers Supply Company, Burney Forest Power (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, Central Valley Region (hereinafter Central Valley Water Board) finds:

- A. Legal Authorities.** This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, 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 National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge locations described in Table 2 subject to the WDRs in this Order.
- B. Background and Rationale for Requirements.** The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through 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 and constitutes Findings for this Order. Attachments A through E and G are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, V.B, VI.C.4, VI.C.5, and VI.C.6 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. Monitoring and Reporting.** 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. The MRP is provided in Attachment E.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13267, which states the following in subsection (b)(1), *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

The Discharger owns and operates the Facility subject to this Order. The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet.

- E. Notification of Interested Persons.** The Central Valley Water Board has notified the Discharger 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.
- F. Consideration of Public Comment.** The Central Valley 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.

THEREFORE, IT IS HEREBY ORDERED that Order R5-2014-0035 is 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 Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

- A.** Discharge of industrial storm water from the Facility, as the Facility is specifically described in section II.B of the Fact Sheet, in a manner different from that described in this Order, is prohibited.
- B.** The bypass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C.** Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.
- D.** The discharge of recycle water from log yard sprinkling, commingled recycle and storm water (i.e., "first flush"), cooling tower blowdown, boiler blowdown, demineralizer regeneration wastewater, or other waste of recognizable sawmill or cogeneration origin to surface waters is prohibited.
- E.** The discharge of leachate from wood fuel stockpiles to surface waters or surface water drainage courses is prohibited. Best management practices (BMP's) must be implemented to prevent such discharge.
- F.** The discharge of ash, bark, sawdust, wood, or any waste recognized as originating from sawmill or cogeneration operations to surface waters or surface water drainage courses is prohibited.
- G.** The discharge of ash and cooling tower sludge to surface waters is prohibited.
- H.** The discharge of debris (as defined in Attachment A) recognized as originating from the Facility to surface waters or surface water drainage courses is prohibited.
- I.** The discharge of process wastewater from barking, sawmill, and planing operations, as defined in 40 C.F.R. part 429, to surface water is prohibited.
- J.** Discharge of waste classified as 'hazardous,' as defined in the California Code of Regulations (CCR), Title 22, section 66261.1 et seq., including water treatment chemicals, solvents, or petroleum products (e.g., oil, grease, gasoline, and diesel), is prohibited.

- K. Discharge of waste classified as “hazardous” as defined in CCR, Title 23, section 2521(a), or “designated” (other than as specifically allowed in this Order), as defined in section 13173 of the Water Code, to the ponds is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point SW-001

1. Final Effluent Limitations – Discharge Point SW-001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point SW-001. Unless otherwise specified compliance shall be measured at Monitoring Location EFF-001, as described in the MRP, Attachment E:

- a. The Discharger shall maintain compliance with the effluent limitations specified in Table 4:

Table 4. Effluent Limitations

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

- b. **Acute Whole Effluent Toxicity (WET).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - i. 70 percent, minimum for any one bioassay; and
 - ii. 90 percent, median for any three consecutive bioassays.

2. Interim Effluent Limitations – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following in Canyon Creek.

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances that promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen:**
 - a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

- b. The 95th percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
 - c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
8. **pH.** The pH to be depressed below 6.5 nor raised above 8.5.
9. **Pesticides:**
- a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
 - b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
 - c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer;
 - d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution 68-16 and 40 C.F.R section 131.12);
 - e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;
 - f. Pesticides to be present in concentrations in excess of the maximum contaminant levels (MCL's) set forth in CCR, Title 22, division 4, chapter 15; nor
 - g. Thiobencarb to be present in excess of 1.0 µg/L.
10. **Radioactivity:**
- a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
 - b. Radionuclides to be present in excess of the MCL's specified in Table 64442 of section 64442 and Table 64443 of section 64443 of Title 22 of the CCR.
11. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
12. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
13. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
14. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature.** The natural temperature to be increased by more than 5°F. Compliance to be determined based on the difference in temperature at Monitoring Locations RSW-001 and RSW-002.
16. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
17. **Turbidity:**
 - a. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;
 - b. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTU;
 - c. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTU;
 - d. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTU; and
 - e. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTU.

B. Groundwater Limitations

Release of waste constituents from any storage, treatment, or disposal component associated with the facility, in combination with other sources, shall not cause the underlying groundwater to contain waste constituents greater than background quality or water quality objectives, whichever is greater.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. The Discharger shall comply with the following 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. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, division 3, chapter 26.
 - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - i. Violation of any term or condition contained in this Order;
 - ii. Obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 - iv. A material change in the character, location, or volume of discharge.

The causes for modification include:

- v. *New regulations.* New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.
- vi. *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.
- vii. *Change in sludge use or disposal practice.* Under 40 C.F.R. section 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

- c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Central Valley Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
 - i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or
 - ii. Controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA where applicable.

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the state or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by U.S. EPA under section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. A copy of this Order shall be maintained at the Facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

- i. Safeguard to electric power failure:
 - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
 - ii. Upon written request by the Central Valley Water Board, the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.
 - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.
- j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section VI.A.2.i of this Order.

The technical report shall:

 - i. Identify the possible sources of spills, leaks, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
 - ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.
 - iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Central Valley Water Board, after review of the technical report, may establish conditions that it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.
- k. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last 3 years' average dry weather flows, peak wet

weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Central Valley Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Central Valley Water Board may extend the time for submitting the report.

- I. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with CCR, Title 16, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- m. The Central Valley Water Board is authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.
- n. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.
- o. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from the Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- p. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such non-compliance, and shall confirm this notification in writing within 5 days, unless the Central Valley

Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of non-compliance, and shall describe the measures being taken to remedy the current non-compliance and prevent recurrence including, where applicable, a schedule of implementation. Other non-compliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

- a. Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, including, but not limited to:
 - i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended 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. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, WET, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- c. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable. If the Discharger performs studies to determine site-specific WER's and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- d. **Storm Water Action Levels.** This Order requires the Discharger to complete a storm water action level confirmation study to determine appropriate action levels for aluminum, iron, and manganese. The study shall be completed and submitted to the Central Valley Water Board as specified in section VI.C.2.b of this Order. Based on a review of the results of the study, this Order may be reopened for revisions of the storm water action levels for aluminum, iron, and manganese.
- e. **Drinking Water Policy.** On 26 July 2013 the Central Valley Water Board adopted Resolution R5-2013-0098 amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.
- f. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 31 May 2018, as part of the CV-SALTS initiative, the Central Valley Water Board approved Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley. If approved by the State

Water Board, the Office of Administrative Law, and U.S. EPA, the Amendments would impose certain new requirements on salt and nitrate discharges. More information regarding these Amendments can be found at the following link:

https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/

If the Amendments ultimately go into effect, this Order may be amended or modified to incorporate any newly-applicable requirements.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Storm Water Action Levels and Best Management Practice (BMP) Improvement Evaluation.** If the discharge from Discharge Point SW-001 exceeds any industrial storm water action level in Table 5 or any receiving water limitation in section V.A, the Discharger must conduct a BMP Improvement Evaluation and implement, if necessary, BMP improvements to reduce the industrial storm water pollutant concentrations below the action level and/or eliminate the receiving water violation. The BMP Improvement Evaluation and proposed BMP improvements must be submitted to the Central Valley Water Board within 60 days of the exceedance or violation date. The BMP improvement(s) must be implemented as soon as practicable thereafter. The Facility Industrial Storm Water Pollution Prevention Plan (SWPPP) shall be updated in response to any implemented BMP improvements, as appropriate.

This Order includes the following storm water action levels:

Table 5. Storm Water Action Levels

Parameter	Units	Action Level
Aluminum, Total Recoverable	µg/L	750
Chemical Oxygen Demand	mg/L	120
Electrical Conductivity @ 25°C	µmhos/cm	700
Iron, Total Recoverable	µg/L	1,000
Manganese, Total Recoverable	µg/L	1,000

The storm water action levels are not effluent limitations on the storm water discharge. The action levels are the pollutant concentrations above which the Central Valley Water Board has determined represent a level of concern and require further evaluation of the Discharger’s SWPPP as it relates to controlling the discharge of the subject pollutant from the Facility.

Exceedance of a storm water action level requires the Discharger to conduct a BMP Improvement Evaluation. If the storm water action level continues to be exceeded after implementation of initial BMP improvements, the Discharger shall demonstrate that no further pollutant reduction is technologically available and economically achievable in light of best industry practice to meet the action level.

- b. **Storm Water Action Level Confirmation Study.** The Discharger shall conduct a study to determine appropriate storm water action levels for aluminum, iron, and manganese that will ensure compliance with the water quality objectives applicable to the receiving water while not being unnecessarily stringent. The Discharger shall submit a work plan, and complete and submit the study, to the Central Valley Water Board in accordance with the time schedule in the Technical Reports Table E-9.

- c. **Facility Water Balance Evaluation Work Plan.** The Discharger shall prepare and submit a work plan for Central Valley Water Board staff approval to study the water balance for the log deck area, the fuel storage pile area, and the fly ash storage area to determine if there is adequate storage capacity. Submittal of the work plan shall be in accordance with the time schedule in the Technical Reports Table E-9.
 - d. **Facility Water Balance Evaluation Study.** The Discharger shall prepare and submit a study of the water balance for the log deck area, the fuel storage pile area, and the fly ash storage area in accordance with the approved work plan to determine if there is adequate storage capacity. Submittal of the final report shall be in accordance with the time schedule in the Technical Reports Table E-9.
- 3. Best Management Practices and Pollution Prevention**
- a. **Salinity Evaluation and Minimization Plan.** The Discharger shall prepare and implement a salinity evaluation and minimization plan to identify and address sources of salinity discharged from the Facility. The plan shall be completed and submitted to the Central Valley Water Board by the due date in the Technical Reports Table E-9.
 - b. **Storm Water Pollution Prevention Plan (SWPPP)**
 - i. This Order requires the Discharger to continue to implement a site-specific SWPPP for the Facility. An updated SWPPP that addresses the necessary BMP's to ensure compliance with the storm water action levels specified in Table 5 shall be submitted to the Central Valley Water Board by the due date in the Technical Reports Table E-9 of this Order. The SWPPP must include the information needed to demonstrate compliance with all requirements of this Order and shall contain at a minimum, the following elements:
 - (a) Facility name and contact information;
 - (b) Site map;
 - (c) List of significant materials;
 - (d) Description of potential pollution sources;
 - (e) Assessment of potential pollutant sources;
 - (f) Minimum BMP's;
 - (g) Advanced BMP's, if applicable;
 - (h) Monitoring implementation plan; and
 - (i) Date that SWPPP was initially prepared and the date of each SWPPP amendment, if applicable.
 - ii. **BMP Summary Table.** The Discharger shall prepare a table, to be included in the SWPPP, summarizing each identified area of industrial activity, the associated industrial pollutant sources, the industrial pollutants, and the BMP's being implemented.
 - iii. **SWPPP Revisions.** The Discharger shall amend the SWPPP whenever there is a change in construction, site operation, or maintenance, which may affect the discharge of significant quantities of pollutants to surface water or groundwater. The SWPPP must also be amended if there are violations of this permit, or the Discharger has not achieved the general objectives of controlling

pollutants in the storm water discharges. If the SWPPP has been significantly revised, the revised SWPPP shall be submitted to the Central Valley Water Board for review.

iv. A copy of the SWPPP shall be maintained at the Facility.

c. **Facility-Specific Best Management Practice (BMP) – First Flush Collection.**

Each year, after cessation of log yard sprinkling, the Discharger shall collect the first 2 inches of rainfall (i.e., “first flush” or “commingled log deck sprinkle water and storm water”) from the log deck area and discharge the flush event to the log deck recycle pond. The “first flush” shall not reach surface water. The “first flush” must be collected and discharged to the log deck recycle pond after any subsequent sprinkling of the logs prior to storm water discharge to surface water. This Facility-specific BMP may be modified by approval of the Executive Officer.

4. Construction, Operation and Maintenance Specifications

a. **Log Deck Recycle Pond, Power Plant Pond, and Storm Water Retention Pond Operating Requirements**

- i. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
- ii. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- iii. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
 - (a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface;
 - (b) Weeds shall be minimized; and
 - (c) Dead algae, vegetation, and debris shall not accumulate on the water surface.
- iv. Freeboard shall never be less than 2 feet (measured vertically to the lowest pond of overflow) except if lesser freeboard does not threaten the integrity of the pond, no overflow of the pond occurs, and lesser freeboard is due to direct precipitation or storm water runoff occurring as a result of annual precipitation with greater than 100-year recurrence interval, or a storm event with an intensity greater than a 25-year, 24-hour storm event.
- v. The Log Deck Recycle Pond shall have enough capacity to store the runoff from the log deck resulting from the cumulative total of 2 inches of rainfall measured at the Facility according to section IX.A of the MRP, Attachment E. The cumulative total of 2 inches of rainfall shall commence on the date the sprinkling of the log deck ceases for the wet season.
- vi. Objectionable odors originating at the Facility shall not be perceivable beyond the limits of the wastewater pond areas (or property owned by the Discharger).
- vii. As a means of discerning compliance with section VI.C.4.a.v, above, the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.
- viii. Ponds shall not have a pH less than 6.0 or greater than 9.0.

5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable

6. Other Special Provisions

a. Sludge, Wood Waste, and/or Ash Management

- i. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer and consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in CCR, Title 27, division 2, subdivision 1, section 20005, et seq.
- ii. **Ash Management Plan.** The Discharger shall submit an ash management plan to the Central Valley Water Board in accordance with the time schedule included in the Technical Reports Table E-9. The plan shall describe, at a minimum:
 - (a) Sources and amount of ash generated annually;
 - (b) Locations(s) of on-site storage and description of containment area; and
 - (c) Plans for ultimate disposal. For landfill disposal, include the present classification of the landfill and the name and location of the landfill.
- iii. Any proposed change in sludge or ash use or disposal practice shall be reported to the Executive Officer at least 30 days in advance of the change.
- iv. Non-hazardous fly ash and bottom ash removed from the Facility shall be:
 - (a) Beneficially reused, such as for soil amendment; or
 - (b) Disposed in a dedicated unit consistent with Title 27, section 20200(b); or
 - (c) Disposed in a Class III landfill consistent with Title 27, section 20220(d).Any other use shall require approval by the Executive Officer.
- v. This Order does not authorize storage, transportation, or disposal of ash or other wastes characterized as hazardous wastes. Appropriate separate regulatory coverage must be secured for such activities.

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

- A. Storm Water Action Levels (Section VI.C.2.a, Table 5).** The storm water action levels in Table 5 are not effluent limitations on the industrial storm water discharge. An exceedance of an action level does not constitute a violation of this Order. The action levels are the pollutant concentrations above which the Central Valley Water Board has determined represent a level of concern and require further evaluation of the Discharger's SWPPP as it relates to controlling the discharge of the subject pollutant from the Facility. Exceedance of an action level requires the Discharger to conduct a BMP Improvement Evaluation in accordance with section VI.C.2.a.
- B. Dissolved Oxygen Receiving Water Limitation (Section V.A.5.a-c).** Weekly receiving water monitoring is required in the MRP (Attachment E) and is sufficient to evaluate the impacts of the discharge and compliance with this Order. Weekly receiving water monitoring data, measured at monitoring locations RSW-001 and RSW-002, will be used to determine compliance with part "c" of the dissolved oxygen receiving water limitation to ensure the discharge does not cause the dissolved oxygen concentrations in Canyon Creek to be reduced below 7.0 mg/L at any time. However, should more frequent dissolved oxygen and

temperature receiving water monitoring be conducted, Central Valley Water Board staff may evaluate compliance with parts “a” and “b”.

A.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)

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:

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

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.

Best Management Practices (BMP's)

Those control measures taken to mitigate changes to both quantity and quality of runoff caused through changes to land use. Specifically, those measures that are required to reduce or prevent pollutants in industrial storm water discharges in compliance with BAT/BCT.

Bioaccumulative

Those 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.

Carcinogenic

Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)

CV is 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

Debris is 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.

Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit

Dilution Credit is 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.

Effect Concentration (EC)

A point estimate of the toxicant concentration that would cause an observable adverse effect (e.g. death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g. Probit Model). EC_{25} is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

Effluent Concentration Allowance (ECA)

ECA is 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 waste load 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

Enclosed Bays means 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 the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Endpoint

An effect that is measured in a toxicity study. Endpoints in toxicity tests may include, but are not limited to survival, reproduction, and growth.

Estimated Chemical Concentration

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

Estuaries

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Industrial Storm Water

Industrial storm water is regulated by this Order and is defined as storm water runoff from both the sawmill and cogeneration facilities, which may contain non-contact saw cooling water, kiln condensate, wood waste, and sediment, after the “first flush” storm water is collected. The “first flush” is defined as the first 2 inches of rainfall from the log deck area after the time log deck sprinkling has ceased. The “first flush” collection may occur more than once in a wet season if the Discharger intermittently sprinkles logs with pond water during the wet season.

Inhibition Concentration

Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). IC25 is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

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).

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)

MDL is the minimum measured concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Attachment B.

Minimum Level (ML)

ML is 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

Mixing Zone is 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.

No-Observed-Effect-Concentration (NOEC)

The highest concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test, that causes no observable adverse effects on the test organisms (i.e., the highest concentration of toxicant in which the values for the observed responses are not statistically significantly different from the controls).

Not Detected (ND)

Sample results which are less than the laboratory's MDL.

Ocean Waters

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Percent Effect

The percent effect at the instream waste concentration (IWC) shall be calculated using untransformed data and the following equation:

$$\text{Percent Effect of the Sample} = \frac{\text{Mean Control Response} - \text{Mean Sample Response}}{\text{Mean Control Response}} \cdot 100$$

Persistent Pollutants

Persistent pollutants are 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 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 priority pollutants where there is evidence that beneficial uses are being impacted. The Central Valley 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

Pollution Prevention means 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 Water Resources Control Board (State Water Board) or Central Valley Water Board.

Process Wastewater

Process wastewater shall include log deck sprinkling water and “first flush” industrial storm water from the log deck. The “first flush” is defined as the first 2 inches of rainfall from the log yard after the time log deck sprinkling has ceased. The “first flush” collection may occur more than once in a wet season if the Discharger intermittently sprinkles logs during the wet season. Attachment C includes a site plan that identifies the log yard industrial storm water area.

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water

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

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows:

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

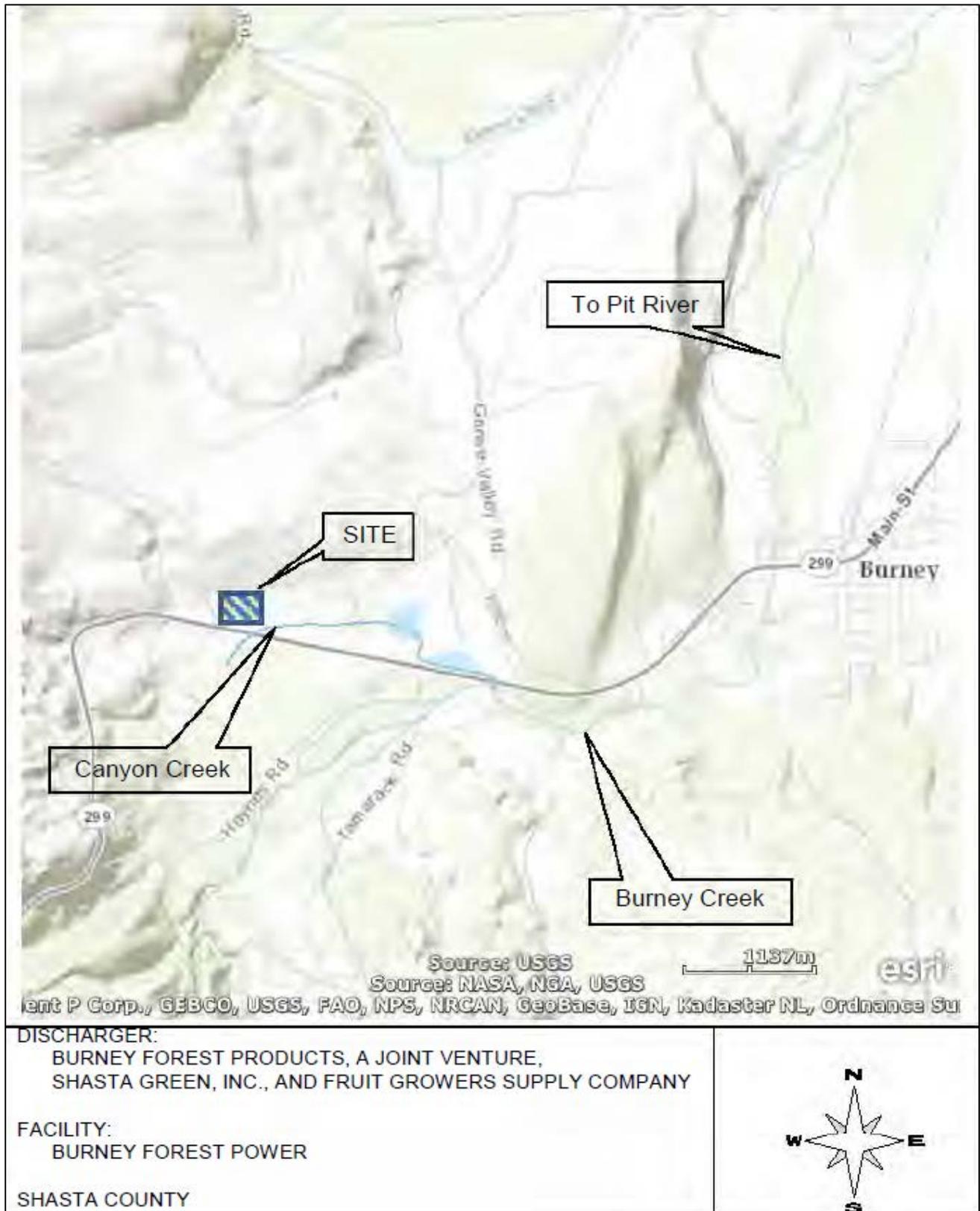
n is the number of samples.

Toxicity Reduction Evaluation (TRE)

TRE is 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.)

B.

ATTACHMENT B – MAP



C.

ATTACHMENT C – FLOW SCHEMATIC

Figure C-1. June through September Flow Schematic

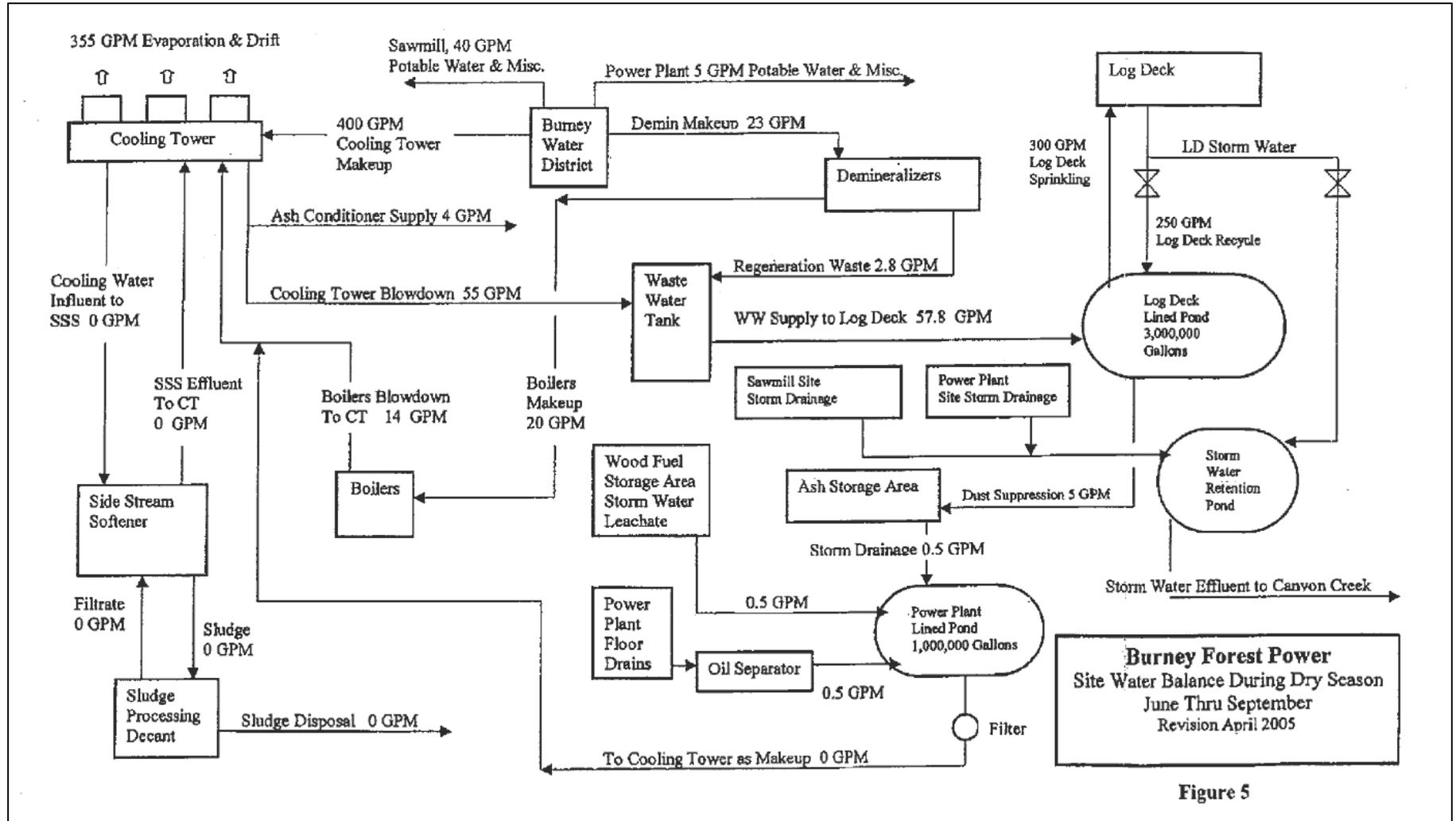
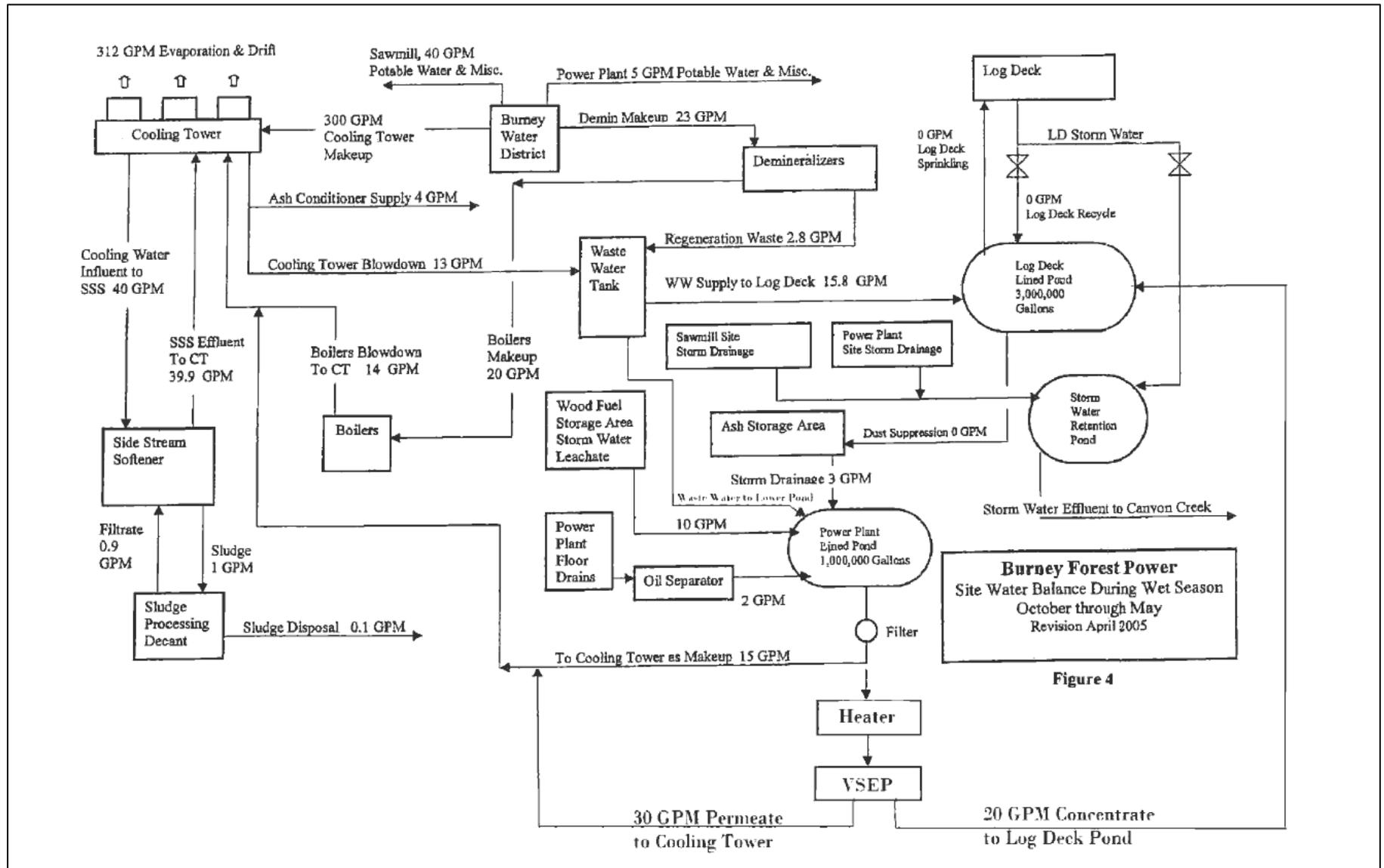


Figure 5

Figure C-2. October through May Flow Schematic



D.

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any non-compliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; 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, 13001, 13304, 13350, 13385)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants 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 Discharger 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 Discharger shall take all reasonable steps to minimize or prevent any discharge 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 Discharger 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 Discharger 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 Discharger 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 Discharger shall allow the Central Valley 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 Discharger'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)(ii); 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 Discharger 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 Central Valley Water Board may take enforcement action against a Discharger 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 Discharger submitted notice to the Central Valley Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C))

4. The Central Valley Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Valley 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))
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Central Valley Water Board. As of 21 December 2020, all notices shall be submitted electronically to the initial recipient (State Water Board), defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i))
 - b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Central Valley Water Board. As of 21 December 2020, all notices shall be submitted electronically to the initial recipient (State Water Board), defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(ii))

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary non-compliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include non-compliance 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 non-compliance 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 non-compliance was caused by upset, and before an action for non-compliance, 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 Discharger 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 Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c. The Discharger 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 Discharger 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 Discharger 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 Discharger 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 Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger 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 Central Valley Water Board. The Central Valley Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger 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 approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is sufficiently sensitive when 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, or when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and:
 - a. The method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter, or;
 - b. The method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge;

In the case of pollutants or pollutant parameters 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 or pollutant parameters. (40 C.F.R. § 122.21(e)(3), 122.41(j)(4); 122.44(i)(1)(iv))

IV. STANDARD PROVISIONS – RECORDS

- A.** Except for records of monitoring information required by this Order related to the Discharger'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 Discharger 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 Central Valley 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 Discharger (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 Discharger shall furnish to the Central Valley Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Central Valley 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 Discharger shall also furnish to the Central Valley 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, 13383)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley 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, V.B.5, and V.B.6 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 Central Valley 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 Central Valley 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 Central Valley 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 such documents described in Standard Provision – 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 of the 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 Monitoring and Reporting Program (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 Central Valley Water Board or State Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of 21 December 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, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i))
3. If the Discharger 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. 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 Central Valley 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

The Discharger shall report any non-compliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance 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 non-compliance.

For non-compliance 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 (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the non-compliance was related to wet weather.

As of 21 December 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient (State Water Board) defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3. The may also require the Discharger 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))

F. Planned Changes

The Discharger shall give notice to the Central Valley Water Board as soon as possible of any planned physical alterations or additions to the permitted 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))

The alteration or addition results in a significant change in the Discharger'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 Non-compliance

The Discharger shall give advance notice to the Central Valley Water Board of any planned changes in the permitted facility or activity that may result in non-compliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2))

H. Other Non-compliance

The Discharger shall report all instances of non-compliance 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 non-compliance 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 Central Valley Water Board may also require the Discharger 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 Discharger 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 Central Valley Water Board, State Water Board, or U.S. EPA, the Discharger 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 appropriate initial recipient, as determined by U.S. EPA, and as 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

- A. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13350, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Valley 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 ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(1)(i));
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/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 Central Valley 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 (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 Central Valley Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv))

E.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley 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.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.
- B.** Final effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- C.** Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory accredited for such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health). Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event an accredited laboratory is not available to the Discharger for any on-site field measurements such as pH, dissolved oxygen, electrical conductivity, turbidity, temperature, or residual chlorine, such analyses performed by a non-accredited laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any on-site field measurements such as pH, dissolved oxygen, turbidity, temperature, or residual chlorine must be kept on-site in the Facility laboratory and shall be available for inspection by Central Valley Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to U.S. EPA guidelines or to procedures approved by the Central Valley Water Board.
- D.** Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E.** Monitoring results, including non-compliance, shall be reported at intervals and in a manner specified in this MRP.
- F.** Laboratories analyzing monitoring samples shall be accredited by DDW, in accordance with the provision of Water Code section 13176 and must include quality assurance/quality control data with their reports.
- G.** The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually 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

- H. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this MRP.
- I. The results of all monitoring required by this Order shall be reported to the Central Valley Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

II. MONITORING LOCATIONS

The Discharger 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
SW-001	EFF-001	Storm Water. A location where a representative sample of the effluent from the storm water retention pond can be collected from the outfall at Discharge Point SW-001. Latitude: 40° 52' 35" N, Longitude: 121° 43' 00" W
--	LND-001	Log Deck Recycle Pond (Pond 1). A location where a representative sample of wastewater in the log deck recycle pond can be collected.
--	LND-002	Power Plant Pond (Pond 2). A location where a representative sample of wastewater in the power plant pond can be collected.
--	LND-003	Storm Water Retention Pond (Pond 3). A location where a representative sample of storm water in the storm water retention pond can be collected.
--	VLT-001	Log Deck Vault. A location where a representative sample of storm water drainage into the log deck concrete vault can be collected.
--	RSW-001	Upstream Receiving Water. Canyon Creek, approximately 50 feet upstream of the confluence of Discharge Point SW-001 and Canyon Creek.
--	RSW-002	Downstream Receiving Water. Canyon Creek, approximately 50 feet downstream of the confluence of Discharge Point SW-001 and Canyon Creek.

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

- 1. When discharging to Canyon Creek, the Discharger shall monitor storm water effluent at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level (ML):

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
Flow	MGD	Calculation	1/Day ²	--
Conventional Pollutants				
pH	standard units	Grab	1/Week ³	4
Total Suspended Solids	mg/L	Grab	1/Month	4
Non-Conventional Pollutants				
Aluminum, Total Recoverable	µg/L	Grab	2/Month ⁵	4
Aluminum, Total Recoverable Filtered	µg/L	Grab	2/Month ⁵	4
Chemical Oxygen Demand (COD)	mg/L	Grab	1/Month	4
Dissolved Organic Carbon	mg/L	Grab	2/Month	4
Dissolved Oxygen	mg/L	Grab	1/Week	4
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	4
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Month	4
Iron, Total Recoverable	µg/L	Grab	2/Month ⁵	4
Iron, Total Recoverable Filtered	µg/L	Grab	2/Month ⁵	4
Manganese, Total Recoverable	µg/L	Grab	2/Month ⁵	4
Manganese, Total Recoverable Filtered	µg/L	Grab	2/Month ⁵	4
Oil and Grease	mg/L	Grab	2/Year ⁶	4
Settleable Solids	mg/L	Grab	1/Month	4
Tannings and Lignins	mg/L	Grab	1/Month	4
Temperature	°C	Grab	1/Week ³	4
Total Dissolved Solids	mg/L	Grab	1/Month	4
Turbidity	NTU	Grab	1/Week ³	4

¹ Samples shall be collected during the first 24 hours from the first discharge after the dry season and according to sampling frequency in Table E-2 thereafter. First discharge event sampling may be limited to weekdays due to staffing and laboratory holding-time needs, and therefore, at times, may exceed the 24-hour sampling requirement. First discharge events occurring on the weekend must be sampled no later than the following business day (e.g., Monday).

² Flow monitoring not required during non-business days.

³ A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.

⁴ Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods requested by the Discharger that have been approved by the Central Valley Water Board or the State Water Board.

⁵ Aluminum, iron, and manganese samples shall be analyzed for total recoverable and/or total recoverable filtered using a 2-micron filter. Filtered samples shall be filtered prior to preservation and analysis using a 2-micron filter.

⁶ Samples shall be collected during the first 24-hours of the first discharge after the dry season and once thereafter during the wet season.

V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. Acute Toxicity Testing. The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform acute toxicity testing twice per year. Samples shall be collected during the first hour (during daylight hours) of the first discharge after the dry season and once thereafter during the wet season. Logistical constraints related to the “first discharge” event (e.g., laboratory notification requirements, sample hold time, etc.) shall be taken into consideration.
2. Sample Types – The Discharger may use flow-through or static renewal testing. For static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The storm water effluent samples shall be taken at Monitoring Location EFF-001.
3. Test Species – Test species shall be rainbow trout (*Oncorhynchus mykiss*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. WET Testing Notification Requirements. The Discharger shall notify the Central Valley Water Board within 24-hours after the receipt of test results exceeding the acute toxicity effluent limitation.

C. WET Testing Reporting Requirements. All toxicity test reports shall include the contracting laboratory’s complete report provided to the Discharger and shall be in accordance with the appropriate “Report Preparation and Test Review” sections of the method manuals. At a minimum, WET monitoring shall be reported as follows:

1. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly self-monitoring reports (SMRs) and reported as percent survival.
2. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
 - a. Results of the applicable reference toxicant data with the statistical output page giving the species, LC₅₀, percent survival, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
 - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
 - c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

A. Monitoring Locations LND-001, LND-002, and LND-003

- The Discharger shall monitor the log deck recycle pond (Pond 1), the power plant pond (Pond 2), and the storm water retention pond (Pond 3) at Monitoring Locations LND-001, LND-002, and LND-003, respectively, as follows:

Table E-3. Land Discharge Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	feet	Visual	1/Week	--

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations RSW-001 and RSW-002

- When discharging to the Canyon Creek, the Discharger shall monitor the receiving water at Monitoring Locations RSW-001 and RSW-002 as follows:

Table E-4. Receiving Water Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
Flow	cfs	Calculation	1/Week	--
Conventional Pollutants				
pH	standard units	Grab	1/Week ²	3
Non-Conventional Pollutants				
Aluminum, Total Recoverable ⁴	µg/L	Grab	2/Month	3
Aluminum, Total Recoverable Filtered ⁴	µg/L	Grab	2/Month	3
Dissolved Organic Carbon	mg/L	Grab	2/Month	3
Dissolved Oxygen	mg/L	Grab	1/Week	3
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	3
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Month	3
Iron, Total Recoverable ⁴	µg/L	Grab	2/Month	3
Iron, Total Recoverable Filtered ⁴	µg/L	Grab	2/Month	3
Manganese, Total Recoverable ⁴	µg/L	Grab	2/Month	3
Manganese, Total Recoverable Filtered ⁴	µg/L	Grab	2/Month	3
Temperature	°C	Grab	1/Week ²	3
Turbidity	NTU	Grab	1/Week ²	3

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
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- ¹ Sampling shall occur during periods of discharge from the storm water retention basin when a hydraulic connectivity between the storm water retention basin discharge and the receiving water exists. First discharge event sampling may be limited to weekdays due to staffing and laboratory holding-time needs, and therefore, at times, may exceed the 24-hour sampling requirement. First discharge events occurring on the weekend must be sampled no later than the following business day (e.g., Monday).
- ² A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer’s instructions. A calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.
- ³ Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods requested by the Discharger that have been approved by the Central Valley Water Board or the State Water Board.
- ⁴ Aluminum, iron, and manganese samples shall be analyzed for total recoverable and/or total recoverable filtered using a 2-micron filter. Filtered samples shall be filtered prior to preservation and analysis using a 2-micron filter.

2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence of:
 - a. Floating or suspended matter;
 - b. Discoloration;
 - c. Bottom deposits;
 - d. Aquatic life;
 - e. Visible films, sheens, or coatings;
 - f. Fungi, slimes, or objectionable growths; and
 - g. Potential nuisance conditions.

Notes on receiving water conditions shall be summarized in the monitoring report.

IX. OTHER MONITORING REQUIREMENTS

A. Log Deck Drainage Monitoring (VLT-001)

1. Upon cessation of sprinkling logs on the log yard until sprinkling of the logs resume, the Discharger shall monitor the Log Deck drainage at Monitoring Location VLT-001 as follows:

Table E-5. Log Deck Drainage Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab ¹	3/Week	²
Turbidity	NTU	Grab ¹	3/Week	²
Temperature	°C	Grab ¹	3/Week	²
Electrical Conductivity @ 25°C	µmhos/cm	Grab ¹	3/Week	²
Precipitation ³	inches (±0.1)	Visual ⁴ (Cumulative)	1/Day	--

¹ A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer’s instructions. A calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.

² Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods requested by the Discharger that have been approved by the Central Valley Water Board or the State Water Board.

³ Daily precipitation (24-hour period cumulative).

⁴ Upon approval by the Executive Officer, precipitation data may be obtained from monitoring station(s) not located at the Facility, as long as the alternate precipitation data is representative of the rainfall experienced at the Facility.

B. Ash Monitoring

1. The Discharger shall keep a log describing the quantities of fly ash and bottom ash generated, stored, and removed from the Facility. The log shall identify the disposal location or soil amendment application area. For soil amendment areas, the volume of ash applied and acreage shall be included. The frequency of log entries is discretionary; however, the log should be complete enough to serve as a basis for an annual report. A representative composite sample of the fly ash shall be tested annually for total and dissolved constituents. Dissolved constituents shall be obtained using the waste extraction test described in the CCR, Title 22, division 4.5, chapter 11, article 3. Note that deionized water is not an acceptable extract. The analytical results and the above information shall be summarized and submitted in a report according to the time schedule included in the Technical Reports Table E-9.

Table E-6. Fly Ash Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	standard units	Composite	1/Year
Electrical Conductivity @ 25°C	µmhos/cm	Composite	1/Year
Total Dissolved Solids	mg/L	Composite	1/Year
Aluminum	mg/kg; µg/L	Composite	1/Year
Barium	mg/kg; µg/L	Composite	1/Year
Boron	mg/kg; µg/L	Composite	1/Year
Cobalt	mg/kg; µg/L	Composite	1/Year
Iron	mg/kg; µg/L	Composite	1/Year
Manganese	mg/kg; µg/L	Composite	1/Year
Molybdenum	mg/kg; µg/L	Composite	1/Year
Vanadium	mg/kg; µg/L	Composite	1/Year
General Minerals ¹	mg/kg; mg/L	Composite	1/Year
Priority Pollutant Metals ²	mg/kg; µg/L	Composite	1/Year
2,3,7,8-TCDD	pg/g; pg/L	Composite	1/Year

¹ General minerals include: bicarbonate, carbonate, calcium, magnesium, nitrate, potassium, silica, sodium, and sulfate.

² Antimony, arsenic, beryllium, cadmium, chromium III, chromium VI, copper, cyanide, lead, mercury, nickel, selenium, silver, thallium, and zinc.

C. Cooling Tower Sludge

The Discharger shall submit an annual cooling tower sludge report according to the time schedule included in the Technical Reports Table E-9 that describes the quantity of solids generated plus the handling and disposal activities for this material. A log shall be kept of the quantities generated and disposal activities. The frequency of entries is discretionary; however, the log shall be complete enough to serve as a basis for the annual report. Upon removal of the sludge, the Discharger shall submit characterization of sludge quality; including percent solids and the most recent quantitative results of chemical analysis for the priority pollutants listed in 40 C.F.R. section 122 Appendix D, Tables II and III (excluding total phenols). Suggested methods for analysis of sludge are provided in U.S. EPA publications titled “Test Methods for Evaluating Solid Waste: Physical/Chemical Methods” and “Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.” Sampling records shall be retained for a minimum of **5 years**.

D. Aboveground Petroleum Storage Monitoring Requirements

The Discharger shall visually inspect the aboveground petroleum storage tanks, as required by the Facility’s Spill Prevention Control and Countermeasure (SPCC) Plan. In the event of a petroleum release of greater than 42 gallons that meets the reporting requirements of the SPCC Plan, a report shall be submitted describing the corrective action that was taken to remediate and dispose of the contaminated area. The results shall be submitted with the monthly SMR.

E. Effluent and Receiving Water Characterization

- Monitoring.** Samples shall be collected from the storm water effluent and upstream receiving water (Monitoring Locations EFF-001 and RSW-001) and analyzed for the constituents listed in Table E-7, below. Monitoring shall be conducted once during the

first three months of discharge during the 2019/2020 wet season and once during the first three months of discharge during the 2020/2021 wet season, and the results of such monitoring shall be submitted to the Central Valley Water Board with the monthly SMRs. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.

2. **Concurrent Sampling.** Effluent and receiving water sampling shall be performed at approximately the same time, on the same date.
3. **Sample Type.** All effluent and receiving water samples shall be taken as grab samples.
4. **Analytical Methods Report.** The Discharger shall submit a report electronically via CIWQS submittal outlining reporting levels (RLs), method detection limits (MDLs), and analytical methods for all constituents to be monitored in the effluent and receiving water, and characterization monitoring by the due date shown in the Technical Reports Table E-9. The Discharger shall comply with the monitoring and reporting requirements for CTR constituents as outlined in sections 2.3 and 2.4 of the SIP. The maximum required RLs for priority pollutant constituents shall be based on the MLs contained in Appendix 4 of the SIP, determined in accordance with sections 2.4.2 and 2.4.3 of the SIP. In accordance with section 2.4.2 of the SIP, when there is more than one ML value for a given substance, the Central Valley Water Board shall include as RLs, in the permit, all ML values, and their associated analytical methods, listed in Appendix 4 that are below the calculated effluent limitation. The Discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the Central Valley Water Board shall select as the RL, the lowest ML value, and its associated analytical method, listed in Appendix 4 for inclusion in the permit. Table E-7, below, provides required maximum RLs in accordance with the SIP.

Table E-7. Effluent and Receiving Water Characterization Monitoring

Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
2-Chloroethyl vinyl ether	µg/L	Grab	1
Acrolein	µg/L	Grab	2
Acrylonitrile	µg/L	Grab	2
Benzene	µg/L	Grab	0.5
Bromoform	µg/L	Grab	0.5
Carbon Tetrachloride	µg/L	Grab	0.5
Chlorobenzene	µg/L	Grab	0.5
Chloroethane	µg/L	Grab	0.5
Chloroform	µg/L	Grab	2
Chloromethane	µg/L	Grab	2
Dibromochloromethane	µg/L	Grab	0.5
Dichlorobromomethane	µg/L	Grab	0.5
Dichloromethane	µg/L	Grab	2
Ethylbenzene	µg/L	Grab	2
Hexachlorobenzene	µg/L	Grab	1
Hexachlorobutadiene	µg/L	Grab	1
Hexachloroethane	µg/L	Grab	1
Methyl bromide (Bromomethane)	µg/L	Grab	1
Naphthalene	µg/L	Grab	10
Tetrachloroethene	µg/L	Grab	0.5
Toluene	µg/L	Grab	2
trans-1,2-Dichloroethylene	µg/L	Grab	1

Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
Trichloroethene	µg/L	Grab	2
Vinyl chloride	µg/L	Grab	0.5
Methyl-tert-butyl ether (MTBE)	µg/L	Grab	--
Trichlorofluoromethane	µg/L	Grab	--
1,1,1-Trichloroethane	µg/L	Grab	0.5
1,1,2-Trichloroethane	µg/L	Grab	0.5
1,1-dichloroethane	µg/L	Grab	0.5
1,1-dichloroethylene	µg/L	Grab	0.5
1,2-dichloropropane	µg/L	Grab	0.5
1,3-dichloropropylene	µg/L	Grab	0.5
1,1,2,2-tetrachloroethane	µg/L	Grab	0.5
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	Grab	0.5
1,2,4-trichlorobenzene	µg/L	Grab	1
1,2-dichloroethane	µg/L	Grab	0.5
1,2-dichlorobenzene	µg/L	Grab	0.5
1,3-dichlorobenzene	µg/L	Grab	0.5
1,4-dichlorobenzene	µg/L	Grab	0.5
1,2-Benzanthracene	µg/L	Grab	5
1,2-Diphenylhydrazine	µg/L	Grab	1
2-Chlorophenol	µg/L	Grab	5
2,4-Dichlorophenol	µg/L	Grab	5
2,4-Dimethylphenol	µg/L	Grab	2
2,4-Dinitrophenol	µg/L	Grab	5
2,4-Dinitrotoluene	µg/L	Grab	5
2,4,6-Trichlorophenol	µg/L	Grab	10
2,6-Dinitrotoluene	µg/L	Grab	5
2-Nitrophenol	µg/L	Grab	10
2-Chloronaphthalene	µg/L	Grab	10
3,3'-Dichlorobenzidine	µg/L	Grab	5
3,4-Benzofluoranthene	µg/L	Grab	10
4-Chloro-3-methylphenol	µg/L	Grab	5
4,6-Dinitro-2-methylphenol	µg/L	Grab	10
4-Nitrophenol	µg/L	Grab	10
4-Bromophenyl phenyl ether	µg/L	Grab	10
4-Chlorophenyl phenyl ether	µg/L	Grab	5
Acenaphthene	µg/L	Grab	1
Acenaphthylene	µg/L	Grab	10
Anthracene	µg/L	Grab	10
Benzidine	µg/L	Grab	5
Benzo(a)pyrene (3,4-Benzopyrene)	µg/L	Grab	2
Benzo(g,h,i)perylene	µg/L	Grab	5
Benzo(k)fluoranthene	µg/L	Grab	2
Bis(2-chloroethoxy) methane	µg/L	Grab	5
Bis(2-chloroethyl) ether	µg/L	Grab	1
Bis(2-chloroisopropyl) ether	µg/L	Grab	10
Bis(2-ethylhexyl) phthalate ²	µg/L	Grab	5
Butyl benzyl phthalate	µg/L	Grab	10
Chrysene	µg/L	Grab	5
Di-n-butylphthalate	µg/L	Grab	10
Di-n-octylphthalate	µg/L	Grab	10

Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
Dibenzo(a,h)-anthracene	µg/L	Grab	0.1
Diethyl phthalate	µg/L	Grab	10
Dimethyl phthalate	µg/L	Grab	10
Fluoranthene	µg/L	Grab	10
Fluorene	µg/L	Grab	10
Hexachlorocyclopentadiene	µg/L	Grab	5
Indeno(1,2,3-c,d)pyrene	µg/L	Grab	0.05
Isophorone	µg/L	Grab	1
N-Nitrosodiphenylamine	µg/L	Grab	1
N-Nitrosodimethylamine	µg/L	Grab	5
N-Nitrosodi-n-propylamine	µg/L	Grab	5
Nitrobenzene	µg/L	Grab	10
Pentachlorophenol	µg/L	Grab	1
Phenanthrene	µg/L	Grab	5
Phenol	µg/L	Grab	1
Pyrene	µg/L	Grab	10
Aluminum ^{3, 4}	µg/L	Grab	--
Antimony	µg/L	Grab	5
Arsenic	µg/L	Grab	10
Asbestos	MFL	Grab	--
Beryllium	µg/L	Grab	2
Cadmium ⁴	µg/L	Grab	0.5
Chromium (Total) ⁴	µg/L	Grab	50
Chromium (VI) ⁴	µg/L	Grab	10
Copper ⁴	µg/L	Grab	25
Cyanide	µg/L	Grab	5
Fluoride	µg/L	Grab	--
Iron ³	µg/L	Grab	--
Lead ⁴	µg/L	Grab	0.5
Mercury	µg/L	Grab	0.5
Manganese ³	µg/L	Grab	--
Nickel ⁴	µg/L	Grab	20
Selenium	µg/L	Grab	5
Silver ⁴	µg/L	Grab	2
Thallium	µg/L	Grab	1
Tributyltin	µg/L	Grab	--
Zinc ⁴	µg/L	Grab	20
4,4'-DDD	µg/L	Grab	0.05
4,4'-DDE	µg/L	Grab	0.05
4,4'-DDT	µg/L	Grab	0.01
alpha-Endosulfan	µg/L	Grab	0.02
alpha-Hexachlorocyclohexane (BHC)	µg/L	Grab	0.01
Aldrin	µg/L	Grab	0.005
beta-Endosulfan	µg/L	Grab	0.01
beta-Hexachlorocyclohexane	µg/L	Grab	0.005
Chlordane	µg/L	Grab	0.1
delta-Hexachlorocyclohexane	µg/L	Grab	0.005
Dieldrin	µg/L	Grab	0.01
Endosulfan sulfate	µg/L	Grab	0.01
Endrin	µg/L	Grab	0.01
Endrin Aldehyde	µg/L	Grab	0.01

Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
Heptachlor	µg/L	Grab	0.01
Heptachlor Epoxide	µg/L	Grab	0.02
Lindane (gamma-Hexachlorocyclohexane)	µg/L	Grab	0.5
PCB-1016	µg/L	Grab	0.5
PCB-1221	µg/L	Grab	0.5
PCB-1232	µg/L	Grab	0.5
PCB-1242	µg/L	Grab	0.5
PCB-1248	µg/L	Grab	0.5
PCB-1254	µg/L	Grab	0.5
PCB-1260	µg/L	Grab	0.5
Toxaphene	µg/L	Grab	--
2,3,7,8-TCDD (Dioxin)	µg/L	Grab	--
Ammonia (as N) ⁵	mg/L	Grab	--
Boron	µg/L	Grab	--
Chloride	mg/L	Grab	--
Flow ³	MGD	Grab	--
Hardness (as CaCO ₃) ^{3, 4}	mg/L	Grab	--
Foaming Agents (MBAS)	µg/L	Grab	--
Methylmercury	ng/L	Grab	--
Nitrate (as N)	mg/L	Grab	--
Nitrite (as N)	mg/L	Grab	--
pH ^{3, 5}	Std Units	Grab	--
Phosphorus, Total (as P)	mg/L	Grab	--
Specific conductance (EC) ³	µmhos/cm	Grab	--
Sulfate	mg/L	Grab	--
Sulfide (as S)	mg/L	Grab	--
Sulfite (as SO ₃)	mg/L	Grab	--
Temperature ^{3, 5}	°C	Grab	--
Total Dissolved Solids ³	mg/L	Grab	--

- ¹ The reporting levels required in this table for priority pollutant constituents are established based on section 2.4.2 and Appendix 4 of the SIP.
- ² In order to verify if bis (2-ethylhexyl) phthalate is truly present, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.
- ³ The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table E-2, except for hardness, pH, and temperature.
- ⁴ Hardness monitoring is required by this section even though regular effluent monitoring is required in Table E-3 and hardness samples must be collected concurrently with metals sampling.
- ⁵ Temperature and pH monitoring is required by this section even though regular effluent monitoring is required in Table E-3, and temperature and pH samples must be collected concurrently with ammonia sampling.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or non-compliance with the specific date and task. If non-compliance is reported, the Discharger shall state the reasons for non-compliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "*Emergency Planning and Community Right to Know Act*" of 1986.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly 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 Discharger 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. Monthly SMRs are required even if there is no discharge. If no discharge occurs during the month, the monitoring report must be submitted stating that there has been no discharge.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
2/Month	Permit effective date	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Month	Permit effective date	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
2/Year	Permit effective date	1 January through 30 June 1 July through 31 December	1 August 1 February of following year
1/Year	Permit effective date	1 January through 31 December	1 February of following year

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable RL and the current laboratory's MDL, as determined by the procedure in 40 C.F.R. part 136.

The Discharger 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 RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, 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. 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. Dischargers are 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 Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
5. **Multiple Sample Data.** When determining compliance with an average monthly effluent limitation (AMEL), average weekly effluent limitation (AWEL), or maximum daily effluent limitation (MDEL) for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- a. 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.
 - b. 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 values around the middle 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.

6. The Discharger shall submit SMRs in accordance with the following requirements:
 - a. The Discharger 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 Discharger 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 Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements (WDRs), discuss corrective actions taken or planned, and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. The Discharger shall attach final laboratory reports for all contracted, commercial laboratories, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed.
7. The Discharger shall submit in the SMRs calculations and reports in accordance with the following requirements:
 - a. **Dissolved Oxygen Receiving Water Limitations.** The Discharger shall report monthly in the SMRs the dissolved oxygen concentrations in the effluent (Monitoring Location EFF-001) and the receiving water (Monitoring Locations RSW-001 and RSW-002).
 - b. **Turbidity Receiving Water Limitations.** The Discharger shall calculate and report the turbidity increase in the receiving water applicable to the natural turbidity condition specified in section V.A.17.a-e of the WDRs.
 - c. **Temperature Receiving Water Limitations.** The Discharger shall calculate and report the temperature change in the receiving water based on the difference in temperature at Monitoring Locations RSW-001 and RSW-002.

C. Discharge Monitoring Reports (DMRs)

DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal will be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/.

D. Other Reports

1. **Annual Operations Report.** The Discharger shall submit a written report to the Central Valley Water Board, electronically via CIWQS submittal, containing the following by the due date in the Technical Reports Table below:
 - a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.
 - b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

- c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
 - d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the Facility as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
 - e. The Discharger may also be requested to submit an annual report to the Central Valley Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the WDRs.
2. **Technical Report Submittals.** This Order includes requirements to submit a ROWD, special study technical reports, progress reports, and other reports identified in the MRP (hereafter referred to collectively as “technical reports”). The Technical Reports Table below summarizes all technical reports required by this Order and the due dates for submittal. All technical reports shall be submitted electronically via CIWQS submittal. Technical reports should be uploaded as a PDF, Microsoft Word, or Microsoft Excel file attachment.

Table E-9. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
Standard Reporting Requirements			
1	Report of Waste Discharge	31 July 2023	ROWD
2	Analytical Methods Report	1 1 October 2019	MRP IX.D.3
3	Annual Operations Report	30 January 2020	MRP X.D.1
4		30 January 2021	
5		30 January 2022	
6		30 January 2023	
7		30 January 2024	
Other Reports			
8	Best Management Practice (BMP) Improvement Evaluation	Within 60 days following storm water action level exceedance or receiving water violation	WDR VI.C.2.a
9	Storm Water Action Level Confirmation Study Work Plan	1 February 2020	WDR VI.C.2.b
10	Storm Water Action Level Confirmation Study	1 August 2021	WDR VI.C.2.b
11	Facility Water Balance Evaluation Work Plan	1 February 2020	WDR VI.C.2.c
12	Facility Water Balance Evaluation Final Report	1 February 2021	WDR VI.C.2.d
13	Salinity Evaluation and Minimization Plan	1 August 2020	WDR VI.C.3.a
14	Storm Water Pollution Prevention Plan (SWPPP)	1 February 2020	WDR VI.C.3.b
15	Ash Management Plan	1 February 2020	WDR VI.C.6.a
16	Annual Ash Monitoring Report	30 January 2020	MRP X.A
17		30 January 2021	

Report #	Technical Report	Due Date	CIWQS Report Name
18		30 January 2022	
19		30 January 2023	
20		30 January 2024	
21	Cooling Tower Sludge Monitoring Report	30 January 2020	MRP X.B
22		30 January 2021	
23		30 January 2022	
24		30 January 2023	
25		30 January 2024	

F.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Central Valley Water Board incorporates this Fact Sheet as findings of the Central Valley Water Board supporting the issuance of this Order. This Fact Sheet discusses 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 Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	5A452030002
CIWQS Facility Place ID	210849
Discharger	Burney Forest Products, a joint venture, Shasta Green, Inc., and Fruit Growers Supply Company
Name of Facility	Burney Forest Power
Facility Address	35586-B, Highway 299 E
	Burney, CA 96013
	Shasta County
Facility Contact, Title and Phone	Kraig Strauch, Plant Manager, (530) 335-5023, ext. 102
Authorized Persons to Sign and Submit Reports	Kraig Strauch, Plant Manager, (530) 335-5023, ext. 102 or Michael Mazowita (248) 844-2573
Mailing Address	Same as Facility Address
Billing Address	Same as Facility Address
Type of Facility	Electric Services (SIC 4911) Sawmill and Planing Mill (SIC 2421)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	Not Applicable
Facility Design Flow	Not Applicable
Watershed	Pit River Hydrologic Unit (526.00)
Receiving Water	Canyon Creek
Receiving Water Type	Inland Surface Water

- A. Burney Forest Products, a joint venture, dba Burney Forest Power, owns and operates a biomass fired cogeneration power plant on property leased from Fruit Growers Supply Company. Burney Forest Power subleases a portion of the Facility site to Shasta Green, Inc., who owns and operates a sawmill/planing mill. The cogeneration power plant and sawmill/planing mill are hereinafter designated as the Facility. Burney Forest Products,

Shasta Green, Inc., and Fruit Growers Supply Company are hereinafter collectively designated as the Discharger.

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 Discharger herein.

- B. The Facility discharges storm water to Canyon Creek, a water of the United States and tributary to Burney Creek within the Pit River Hydrologic Unit (526.00). The Discharger was previously regulated by Order R5-2014-0035 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0082490 adopted on 27 March 2014 with an expiration date of 30 April 2019. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on 26 October 2018. The application was deemed complete on 18 December 2018. A site visit was conducted on 22 October 2018 to observe operations and collect additional information to develop permit limitations and requirements for waste discharge.
- D. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed 5 years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. Under 40 C.F.R. section 122.6(d), states authorized to administer the NPDES program may administratively continue state-issued permits beyond their expiration dates until the effective date of the new permits, if state law allows it. Pursuant to California Code of Regulations (CCR), Title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The sawmill operation at the Facility consists of log scaling, wet and dry log storage, mechanical log debarking, sawmill, planning mill, kilns, lumber storage, aboveground petroleum storage areas, equipment fueling and maintenance, paved and unpaved roadways, and an office. Wastes generated at the Facility include runoff from log storage areas, wood waste, saw cooling water, kiln condensate, waste petroleum products, and storm water runoff. Wood waste from the sawmill is delivered to the cogeneration power plant by conveyor.

The cogeneration plant component of the Facility consists of a wood fuel storage area, two biomass-fired (wood-fueled) boilers, a steam turbine, an ammonia storage and delivery system, aboveground petroleum storage, a water treatment system, a cooling tower, ash storage, and paved and unpaved roadways. The primary fuel source for the cogeneration plant is wood waste from the sawmill and wood waste from off-site sources. Natural gas is used as a supplementary fuel for startup and flame stabilization for the cogeneration plant's boilers. The Discharger has submitted a list of chemicals used to treat the cogeneration plant's water and to maintain the boiler and cooling tower. The cogeneration plant's wastes include fuel storage pile leachate, demineralizer regeneration wastewater, cooling tower blowdown, boiler blowdown, cooling tower treatment sludge, fly ash, bottom ash, used petroleum products, sewage, and storm water runoff. The bottom ash is used on-site for rods; the fly ash is transported to private agricultural lands for use as soil amendment or to a manufacturer for reuse. The cooling tower sludge is filtered, and the cake disposed of at a Class III landfill.

The Discharger has three wastewater management units: a 3-million-gallon (MG) lined log deck recycle pond, a 1-MG lined power plant pond, and a 3.6-acre-foot unlined storm water retention pond. The log deck recycle pond and the power plant pond are both single-lined with a 60-mil

HDPE geosynthetic membrane liner. The synthetically-lined ponds do not meet the current construction requirements specified in Title 27 of the California Code of Regulations (CCR). The log deck recycle pond is underlain by a four-inch perforated PVC drain pipe, which historically discharged a short distance from the pond to an internal surface drainage ditch. However, due to the underdrain system not functioning properly, drainage from the 4-inch pipe had ceased prior to May 2013. During 1 September 2013 liner repair, a new pipe was installed beneath the liner of the pond east side wall to replace the existing underdrain system. An additional pipe was installed beneath the liner on the west side wall during the March 2018 liner replacement. Both pipes may be used to siphon water from underneath the liner to either an internal surface drainage ditch or to the cooling tower for evaporation. Domestic sewage disposal is to a septic tank leachfield system.

The log deck recycle pond received continuous wastewater discharges from sprinkling logs during the dry season and the initial flush of storm water runoff from the log yard at the start of the wet season. Subsequent storm water runoff from the log deck is routed around the log deck recycle pond and discharged to the storm water retention pond. In addition, the cogeneration plant discharges wastewater from demineralizer regeneration and cooling tower blow down to the log deck recycle pond. The log deck recycle pond water is used to sprinkle logs located on the log deck during the dry season. The log deck recycle pond water is also used to sprinkle ash for fugitive dust and fire control. Discharges to surface waters from the log deck recycle pond are prohibited.

The power plant pond receives wastewater from the cogeneration plant floor drains, leachate from the fuel storage pile, and storm water runoff from the wood fuel storage pile and fly ash storage area. In case of emergency, wastewater can be pumped from the power plant pond to the log deck recycle pond. Wastewater from the log deck recycle pond can also be discharged to the power plant pond. If the power plant pond or log deck recycle pond reach capacity, the wastewater is trucked offsite for disposal. Discharges to surface waters from the power plant pond are prohibited.

The storm water retention pond receives storm water runoff from both the sawmill and cogeneration facilities, which may contain non-contact saw cooling water, kiln condensate, wood waste, and sediment. When the storm water retention pond storage capacity is reached, the storm water discharges to Canyon Creek, a tributary of Burney Creek, at Discharge Point SW-001.

A. Description of Storm Water Treatment and Controls

Storm water at the Facility is captured through a series of ditches and conveyed, by gravity, to the storm water retention pond. The storm water retention pond has a capacity of 1.173 MG and is divided into two sections with a rock barrier and an invert siphon from the smaller section to the larger main settling pond. The initial smaller section of the storm water retention pond retains bark and other floatable materials. The main storm water retention pond is designed with two discharge weirs, a floating weir and a stationary weir, both discharging at Discharge Point SW-001. During storm events, storm water enters the retention pond until sufficient settling has occurred with discharge through the floating weir only. The stationary weir is a safety discharge, which protects the storm water retention pond from overflowing its containment.

When the wet season begins, the log deck sprinklers are shut off. Prior to allowing storm water runoff from the paved log deck area to enter the storm water retention basin, storm water runoff from a minimum of 2 inches of rainfall is directed to the log deck recycle pond. The practice of collecting the first 2 inches of log deck rainfall runoff in the log deck recycle pond is considered a BMP to reduce pollutants in the storm water discharge to surface waters. The 2 inches of rainfall commingled with residual pond water on the paved log decks is referred to as the "first flush." The "first flush" collection may occur more than once in a wet

season if the Discharger intermittently sprinkles logs with pond water during the wet season. After capturing the “first flush” from the paved log decks, the control valve to the log deck recycle pond is closed and storm water from the log decks is screened and directed to the storm water retention pond. Storm water runoff from the sawmill and cogeneration plant is also directed to the storm water retention pond, except for the leachate and storm water from the wood fuel, petroleum storage, and ash storage areas, which are directed to the power plant pond.

B. Discharge Points and Receiving Waters

1. The Facility is located in Section 23, T35N, R2E, MDB&M, as shown in Attachment B, a part of this Order.
2. Settled storm water is discharged at Discharge Point SW-001 to Canyon Creek, a water of the United States within the Pit River Hydrologic Unit (526.00), at a point latitude 40° 52' 35" N and longitude 121° 43' 00" W.

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

Effluent limitations contained in Order R5-2014-0035 for discharges from Discharge Point SW-001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order R5-2014-0035 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation		Monitoring Data (October 2015 – May 2018)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
pH	standard units	--	6.0 – 9.0	--	6.54 – 8.03
Settleable Solids	ml/L	0.10	0.20	ND	ND
Acute Toxicity	% Survival	--	70 ¹ /90 ²	--	90 ³

ND – Non-Detect

- 1 Minimum percent survival for any one bioassay.
- 2 Median percent survival of three consecutive acute bioassays.
- 3 Represents the minimum observed percent survival.

D. Compliance Summary

The Central Valley Water Board issued a Notice of Violation and California Water Code section 13267 Order for Information for violations of Discharge Prohibitions III.A, III.B, III.D, III.E, and III.F and Special Provision VI.C.4.a resulting from the unauthorized discharge of approximately 347,844 gallons of process wastewater from the power plant pond to the storm water system, which ultimately discharges to Canyon Creek, on 12-13 December 2014. In response, the Discharger submitted a technical report that stated that rainfall accumulations during the first 24-hours of the storm event was greater than the precipitation amount for a 25-year, 24-hour storm and was within the 90% confidence interval for a 100-year, 24-hour storm event. Therefore, the Discharger submitted a technical report with a general evaluation of all onsite storage capacities and whether existing storage ponds is sufficient and a determination of whether existing onsite facilities, operational practices, and pond storage capacities are sufficient to prevent future discharges from the power plant pond to surface waters.

E. Planned Changes – Not Applicable

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, 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. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

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 Plans.** Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- a. **Basin Plan.** The Central Valley Water Board adopted a Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition, May 2018 (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. Requirements in this Order implement the Basin Plan.

The Basin Plan at section 2.1 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan in Table 2-1, section 2, does not specifically identify beneficial uses for Canyon Creek, but does identify present and potential uses for the Pit River from the mouth of Hat Creek to Shasta Lake, to which Canyon Creek, via Burney Creek, is tributary. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, beneficial uses applicable to Canyon Creek are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
SW-001	Canyon Creek	<p><u>Existing:</u> Municipal and domestic supply (MUN); agricultural supply, including irrigation and stock watering (AGR); hydropower generation (POW); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); cold freshwater habitat (COLD); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).</p> <p><u>Potential:</u> Warm freshwater habitat (WARM).</p>

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About forty criteria in the NTR applied in California. On 18 May 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 13 February 2001. These rules contain federal water quality criteria for priority pollutants.
3. **State Implementation Policy.** On 2 March 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 28 April 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 Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 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 24 February 2005, which became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control.

The SIP states in footnote 1, “*This Policy does not apply to regulation of storm water discharges. The SWRCB has adopted precedential decisions addressing regulation of municipal storm water discharges in Orders WQ 91-03, 91-04, 96-13, 98-01, and 99-05. The SWRCB has also adopted two statewide general permits regulating the discharge of pollutants contained in storm water from industrial and construction activities.*” This Order regulates the discharge of storm water from industrial activity to surface water. Therefore, the SIP provisions for establishment of effluent limitations are not applicable and effluent limitations for priority pollutants have not been established. However, receiving water limitations and best management practices (BMP’s) ensure that beneficial uses of the receiving water are protected, and water quality standards are not exceeded.

4. **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 68-16 (“*Statement of Policy with Respect to Maintaining High Quality of Waters in California*”) (State Antidegradation Policy). The State Antidegradation Policy is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. The State Antidegradation Policy requires that existing water quality be maintained unless degradation is justified based on specific findings. The 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 the State Antidegradation Policy. The Central Valley Water Board finds this Order is consistent with the federal and State Water Board antidegradation regulations and policy.
5. **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) 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.

6. **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 (MCL's) designed to protect human health and ensure that water is safe for domestic use.
7. **Endangered Species Act Requirements.** This Order does not authorize any 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, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 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. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
8. **Storm Water Requirements.** U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from Steam Electric Generating Facilities, Sawmills, and Planing Mills. Steam Electric Generating Facilities, Sawmills, and Planing Mills are applicable industries under the storm water program and are obligated to comply with the federal regulations.

The storm water discharge from the Facility could be regulated under the existing State Water Board Water Quality Order 2014-0057-DWQ, General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES General Permit No. CAS000001) (General Storm Water Permit); however, due to the complexity of the Facility and unique threats to water quality, the Central Valley Water Board has elected to regulate this Facility with an individual NPDES permit. Therefore, the Facility has not submitted an NOI to be covered under the General Storm Water Permit and the discharge of storm water to surface water is covered under this Order.

D. Impaired Water Bodies on CWA 303(d) List

1. Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments (WQLS's). The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 6 April 2016, U.S. EPA gave final approval to California's 2014 and 2016 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of WQLS's, which are defined as "*...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 C.F.R. part 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLS's]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" Canyon Creek is not listed as impaired on the 2014 and 2016 303(d) list.
2. **Total Maximum Daily Loads (TMDLs).** At the time of this permit renewal, there are no approved TMDLs with waste load allocations (WLAs) that apply to this Facility.

3. The 303(d) listings and TMDLs have been considered in the development of the Order. A pollutant-by-pollutant evaluation of each pollutant of concern is described in section IV.C.3 of this Fact Sheet.

E. Other Plans, Policies and Regulations

1. **Title 27.** Title 27 of the CCR (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Title 27, section 20090(b) contains an exemption for discharges of wastewater to land where the discharge is covered by WDRs, the discharge is in compliance with the Basin Plan, and the discharge does not need to be managed as a hazardous waste.

The Discharger utilizes lined wastewater ponds (log deck recycle pond and power plant pond) to contain industrial wastewater associated with the sawmill and cogeneration facilities. It is not uncommon for the log deck recycle pond water and the power plant pond water to be discharged back and forth to each other. Based on data collected from October 2015 through August 2018, pH in the wastewater discharged to the log deck recycle pond and power plant pond has ranged from 5.22 to 10.38, with an average of 7.7. Electrical conductivity in the wastewater discharged to the log deck recycle pond and power plant pond has ranged from 601 $\mu\text{mhos/cm}$ to 10,220 $\mu\text{mhos/cm}$, with an average of 4,007 $\mu\text{mhos/cm}$. The ponds are lined with a single 60-mm HDPE geomembrane. The Discharger performed a leak detection test on the pond liners for both ponds during the term of Order R5-2014-0035, which determined the groundwater impacts from the discharge of industrial wastewater to the lined ponds are insignificant. Groundwater impacts from the discharge of industrial wastewater to the lined recycle ponds should be insignificant.

The discharges authorized herein are exempt from the requirements of CCR, Title 27, section 20005 *et seq* (hereafter Title 27). The exemption, pursuant to CCR, Title 27, section 20090(b), is based on the following:

- a. The Central Valley Water Board is issuing WDRs;
 - b. The discharge is in compliance with the Basin Plan; and
 - c. The wastewater effluent discharged to the ponds does not need to be managed as hazardous waste.
2. **Wood Ash.** Pursuant to state and federal regulations, wood ash, classified as non-hazardous solid waste, may be beneficially reused as an agricultural soil amendment, or other appropriate use. This Order does not authorize storage, transportation, or disposal of ash or other wastes characterized as hazardous wastes. Appropriate separate regulatory coverage must be secured for such activities.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular

pollutants. Pursuant to federal regulations, 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.*” Federal regulations, 40 C.F.R. section 122.44(d)(1)(vi), further provide that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”

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 WQBEL’s to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Basin Plan at page 4-27 contains an implementation policy, “*Policy for Application of Water Quality Objectives*,” which specifies that the Central Valley Water Board “*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.*” This policy complies with 40 C.F.R. section 122.44(d)(1). With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) U.S. EPA’s published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley Water Board’s “*Policy for Application of Water Quality Objectives*”)(40 C.F.R. § 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*” (Basin Plan at section 3.1.20) The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, “*...water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCL’s)*” in Title 22 of CCR. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCL’s. The narrative tastes and odors objective states: “*Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.*”

A. Discharge Prohibitions

- 1. Prohibition III.A (No discharge of industrial storm water or application of waste other than that described in this Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

2. **Prohibition III.B (No bypasses or overflow of untreated wastewater, except under the conditions at 40 C.F.R. section 122.41(m)(4)).** As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the Facility. Federal regulations, 40 C.F.R. section 122.41(m), define “bypass” as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 C.F.R. section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board’s prohibition of bypasses, the State Water Board adopted a precedential decision, Order WQO 2002-0015, which cites the federal regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.
3. **Prohibition III.C (No controllable condition shall create a nuisance).** This prohibition is based on Water Code section 13050 that requires water quality objectives be established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.
4. **Prohibition III.D (No discharge of recycle water from log yard sprinkling, commingled recycle and storm water, cooling tower blowdown, boiler blowdown, boiler feedwater treatment system effluent, or other waste of recognizable sawmill or cogeneration origin).** Consistent with Order R5-2014-0035, this Order prohibits discharges of recycle water from log yard sprinkling, commingled recycle and storm water, cooling tower blowdown, boiler blowdown, boiler feedwater treatment system effluent, or other waste of recognizable sawmill or cogeneration origin to surface waters or surface water drainage courses.
5. **Prohibition III.E (No discharge of storm water leachate from wood fuel stockpiles).** Consistent with Order R5-2014-0035, this Order prohibits discharges of storm water leachate from wood fuel stockpiles to surface water or surface water drainage courses. This Order requires the Discharger to implement BMP’s to prevent these discharges.
6. **Prohibition III.F (No discharge of ash, bark, sawdust, wood, or any waste recognized as originating from sawmill or cogeneration operations).** Consistent with Order R5-2014-0035, this Order prohibits the discharge of ash, bark, sawdust, wood, or any waste recognized as originating from sawmill or cogeneration operations to surface waters or surface water drainage courses.
7. **Prohibition III.G (No discharge of ash and cooling tower sludge to surface waters).** Consistent with Order R5-2014-0035, this Order prohibits the discharge of ash and cooling tower sludge to surface waters or surface water drainage courses.
8. **Prohibition III.H (No discharge of debris recognized as originating from the Facility).** Effluent limitation guidelines (ELGs) were established in 40 C.F.R. part 429, subpart I for the Wet Storage Subcategory of the Timber Products Point Source Category, which applies to discharges from the storage of logs or roundwood on land during which water is sprayed or deposited intentionally on the logs (wet decking). The Discharger stacks logs on a paved log yard and keeps them wet by a sprinkler system to prevent checking and blue staining, and thus the requirements of 40 C.F.R. part 429, subpart I are applicable to the Facility. 40 C.F.R. section 429.101 and 429.103 require that existing point sources subject to subpart I achieve effluent limitations representing the degree of effluent reduction attainable by the application of best practicable control technology currently available (BPT) and best available technology economically achievable (BAT), respectively. For wet storage operations, 40 C.F.R. section 429.101 and 429.103 both require that there shall be no debris discharged. Debris is defined as

woody material such as bark, twigs, branches, heartwood, or sapwood that will not pass through a 2.54-cm (1.0-inch) diameter round opening and is present in the discharge from a wet storage facility. Consistent with 40 C.F.R. sections 429.101 and 429.103, this Order prohibits discharges of debris recognized as originating from the Facility to surface waters or surface water drainage courses.

9. **Prohibition III.I (No discharge of wastewater from barking, sawmill, and planing operations).** ELGs were established at 40 C.F.R. part 429, subpart A for the Barking Subcategory of the timber Products Point Source Category, which applies to discharges from the barking of logs, and at subpart K for the Sawmills and Planing Mills Subcategory, which applies to discharges from timber products processing procedures that include bark removal, sawing, re-sawing, edging, trimming, planing, and machining. The Discharger operates barking, sawmill, and planing mill operations, and thus the requirements of 40 C.F.R. part 429, subparts A and K are applicable to the Facility. 40 C.F.R. section 429.21(a) require that existing point sources subject to subpart A achieve effluent limitations representing the degree of effluent reduction attainable by the application of BPT. For mechanical barking operations, 40 C.F.R. section 429.2(a) requires that there shall be no discharge of process wastewater pollutants into navigable waters. 40 C.F.R. sections 429.121 and 429.123 require that existing point sources subject to subpart K achieve effluent limitations representing the degree of effluent reduction attainable by the application of BPT and BAT, respectively. For sawmill and planing mill operations, 40 C.F.R. sections 429.121 and 429.123 require that there shall be no discharge of process wastewater pollutants into navigable waters. Consistent with 40 C.F.R. section 429.21(a), 429.121, and 429.123, this Order prohibits discharges of process wastewater from barking, sawmill, and planing operations.
10. **Prohibition III.J (No discharge of hazardous or toxic substances).** This prohibition is based on CCR, Title 22, section 66261.1 et seq. that prohibits discharge of hazardous waste. The Basin Plan also provides that all waters shall be maintained free of toxic substances. Water treatment chemicals used in maintaining the water quality within the boiler and cooling tower may cause toxicity to aquatic life. This Order prohibits the discharge of boiler blowdown, hazardous, or toxic substances (including water treatment chemicals) to surface waters or surface water drainage courses. In addition, the Basin Plan states that surface water shall not contain oils, greases, or other materials in concentrations that cause nuisance or result in a visible film or coating on the surface of the water. This Order prohibits the discharge of petroleum products, including oil, grease, gasoline, and diesel, to surface waters or surface water drainage courses.
11. **Prohibition III.K (No discharge of hazardous or designated waste to the ponds).** This prohibits the discharge to land of hazardous waste according to CCR, Title 23, section 2521(a) or of designated waste according to section 13173 of the Water Code.

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 ELGs for the Timber Products Processing Point Source Category in 40 C.F.R. part 429, specifically, subpart A (Barking Subcategory), subpart I (Wet Storage

Subcategory), and subpart K (Sawmills and Planing Mills), in addition to BPT, best professional judgment (BPJ), and BAT in accordance with 40 C.F.R. section 125.3.

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

- a. 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. 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 5-day biochemical oxygen demand (BOD₅), 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 costs 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 Central Valley Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

The Discharger operates a “wet deck” log storage operation, a “barking” operation, and a “sawmills and planing mills” operation. Therefore, ELGs established in the Timber Products Processing Point Source Category (40 C.F.R. part 429), specifically, subpart A (Barking Subcategory), subpart I (Wet Storage Subcategory), and subpart K (Sawmills and Planing Mills Subcategory) are applicable.

Except as provided in 40 C.F.R. section 125.30 through 125.32, any existing point source subject to these subparts must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT. The following effluent limitations apply to Discharge Point SW-001:

- a. **Barking Operations.** As discussed in section IV.A.9 of this Fact Sheet, ELGs established at 40 C.F.R. part 429, subpart A for the Barking Subcategory of the Timber Products Point Source Category are applicable to the Facility. Consistent with 40 C.F.R. section 429.21(a), this Order establishes a prohibition of discharges of process wastewater from barking operations.
- b. **Wet Storage Operations.** As discussed in section IV.A.8 of this Fact Sheet, ELGs established at 40 C.F.R. part 429, subpart I for the Wet Storage Subcategory of the

Timber Products Point Source Category are applicable to the Facility. Consistent with 40 C.F.R. sections 429.101 and 429.103, this Order prohibits discharges of debris recognized as originating from the Facility to surface waters or surface water drainage courses.

40 C.F.R. section 429.101 and 429.103 also require that the pH be within the range of 6.0 to 9.0. The ELGs for the Wet Storage Subcategory at 40 C.F.R. sections 429.101 and 429.103 are not directly applicable to discharges of industrial storm water (i.e., subsequent to the “first flush”) from the log yard. However, if an instantaneous minimum and maximum pH of 6.0 and 9.0, respectively, must be achieved for discharges of process wastewater from the log yard area, the Central Valley Water Board finds that it should also be achievable for subsequent discharges of industrial storm water. Therefore, this Order includes instantaneous minimum and maximum effluent limitations for pH of 6.0 and 9.0, respectively, for discharges of industrial storm water at Discharge Point SW-001 based on BPJ.

- c. **Sawmill and Planing Mill Operations.** As discussed in section IV.A.9 of this Fact Sheet, ELGs established at 40 C.F.R. part 429, subpart K for the Sawmills and Planing Mills Subcategory of the Timber Products Point Source Category are applicable to the Facility. Consistent with 40 C.F.R. sections 429.121 and 429.123, this Order establishes a prohibition of discharges of process wastewater from sawmill and planing mill operations.

**Summary of Technology-based Effluent Limitations
 Discharge Point SW-001**

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

Parameter	Units	Effluent Limitations	
		Instantaneous Minimum	Instantaneous Maximum
<i>Conventional Pollutants</i>			
pH	standard units	6.0	9.0

C. Water Quality-Based Effluent Limitations (WQBEL’s) and Storm Water Action Levels

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.

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, WQBEL’s 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 40 C.F.R. section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBEL's 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

Finally, 40 C.F.R. section 122.44(d)(1)(vii) requires effluent limits to be developed consistent with any available WLAs developed and approved for the discharge.

As specified in 40 C.F.R. section 122.44(k), BMP's may be used in lieu of numeric effluent limitations when:

- a. Authorized under section 304(e) of the CWA for control of toxic pollutants and hazardous substances for ancillary industrial activities;
- b. Authorized under section 402(p) of the CWA for the control of storm water discharges;
- c. Numeric effluent limitations are infeasible; or
- d. The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the CWA.

Section 402(p) of the CWA authorizes regulation of storm water discharges associated with industrial activities. Therefore, a combination of BMP's, storm water action levels, and receiving water limitations are utilized in this Order to regulate the discharge of pollutants in discharges of industrial storm water.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan 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 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for MUN.

The Basin Plan on page 2-1 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*" and with respect to disposal of wastewaters states that "*...disposal of wastewaters is [not] a prohibited use of waters of the state; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

The federal CWA section 101(a)(2) states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal regulations, 40 C.F.R. sections 131.2 and 131.10, require that all waters of the state be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal regulation, 40 C.F.R. section 131.10, requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected, and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

- a. **Receiving Water and Beneficial Uses.** The Facility discharges industrial storm water to Canyon Creek, a tributary of Burney Creek, within the Pit River Hydrologic Unit. The Burney Creek watershed supports valuable commercial timberland and high-quality sport fishing for resident rainbow trout. The majority of the Burney Creek watershed is privately owned and managed for commercial timber production. The watershed also encompasses several large ranches with irrigated land used for pasture, hay, and wild rice. Refer to section III.C.1 above for a complete description of the beneficial uses.
- b. **Effluent and Ambient Background Data.** The evaluation of compliance with receiving water objectives, as described in section IV.C.3 of this Fact Sheet, was based on data from October 2015 through May 2018, which includes storm water effluent and ambient background data submitted in SMRs.
- c. **Assimilative Capacity/Mixing Zone.** Current flow data indicates that, at times, Canyon Creek is dominated by effluent from the Facility downstream of the discharge. The ephemeral nature of Canyon Creek means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available. Although the discharge, at times, maintains the aquatic habitat, constituents may not be discharged that may cause harm to aquatic life.

The Discharger has not submitted a mixing zone/dilution study requesting dilution credits. Thus, consistent with the assumption used for Order R5-2014-0035, the worst-case dilution for Canyon Creek is assumed to be zero to provide protection of the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that effluent limitations are applied end-of-pipe, with no allowance for dilution within the receiving water.

- d. **Conversion Factors.** The CTR contains aquatic life criteria for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc, which are presented in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total recoverable criteria.
- e. **Hardness-Dependent CTR Metals Criteria.** 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 metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc.

Based on 24 samples collected between October 2015 and May 2018, the effluent hardness ranged from 33 mg/L to 166 mg/L. Based on 21 paired samples collected between October 2015 and May 2018, the upstream receiving water hardness ranged from 20 mg/L to 45 mg/L and the downstream receiving water hardness ranged from 22 mg/L to 56 mg/L. The average hardness of both the upstream and downstream receiving water was approximately 34 mg/L. Actual observed ambient hardness data were used for evaluating compliance with water quality objectives for the storm water discharge.

3. Determining the Need for Storm Water Action Levels

This Order regulates the discharge of storm water from industrial activity to surface water. The discharge is storm water; therefore, the SIP provisions for establishment of effluent limitations for CTR constituents are not applicable to the discharge. However, due to the complexity of the Facility and unique threats to water quality, the Central

Valley Water Board has elected to regulate this Facility with an individual NPDES permit. In accordance with 40 C.F.R. section 122.44(d)(1)(i), the Central Valley Water Board has conducted a review of effluent (storm water) and upstream and downstream receiving water data collected during the term of Order R5-2014-0035 for comparison with applicable water quality objectives and/or criteria to determine if the discharge is causing exceedances of the applicable water quality objectives in the downstream receiving water. In addition, storm water discharge data has been compared to applicable storm water benchmark values to assess whether the storm water discharge could potentially impair or contribute to impairing water quality or affect human health from ingestion of water or fish.

In accordance with 40 C.F.R. section 122.44(k), in lieu of WQBEL's, this Order includes storm water action levels for pollutants in the discharge that exceed applicable storm water benchmark values or are causing exceedances of applicable water quality objectives in the downstream receiving water. The storm water action levels are not effluent limits and should not be interpreted as such; they are merely levels that the Central Valley Water Board has used to determine if storm water discharges from the Facility merit further monitoring to ensure that the Facility has been successful in implementing BMP's identified in the Storm Water Pollution Prevention Plan (SWPPP).

Downstream receiving water monitoring data, applicable water quality criteria and objectives, and storm water action levels have been provided in Attachment G.

Most constituents are not discussed in this Order, as the storm water discharge is well below the pollutant benchmark values and/or the water quality objectives/criteria for these constituents. However, the following constituents are notable for discussion upon assessment of the data.

- a. **Aluminum.** DDW has established Secondary MCL's to assist public drinking water systems in managing their drinking water for public welfare considerations, such as taste, color, and odor. The Secondary MCL for aluminum is 200 µg/L for protection of the MUN beneficial use. Title 22 requires compliance with Secondary MCL's on an annual average basis.

The Code of Federal Regulations promulgated criteria for priority toxic pollutants for California's surface waters as part of CTR section 131.38, including metals criteria. However, aluminum criteria were not promulgated as part of the CTR. Absent numeric aquatic life criteria for aluminum, WQBEL's in the Central Valley Region's NPDES permits are based on the Basin Plans' narrative toxicity objective. The Basin Plans' *Policy for Application of Water Quality Objectives* requires the Central Valley Water Board to consider, "*on a case-by-case basis, direct evidence of beneficial use impacts, all material and relevant information submitted by the discharger and other interested parties, and relevant numerical criteria and guidelines developed and/or published by other agencies and organizations. In considering such criteria, the Board evaluates whether the specific numerical criteria which are available through these sources and through other information supplied to the Board, are relevant and appropriate to the situation at hand and, therefore, should be used in determining compliance with the narrative objective.*" Relevant information includes, but is not limited to, (1) U.S. EPA's 1988 National Ambient Water Quality Criteria (NAWQC) and subsequent Correction, (2) site-specific conditions of Canyon Creek, and (3) site-specific aluminum studies conducted by dischargers within the Central Valley Region. (Basin Plan, section 4.2.2.1.9; see also, 40 C.F.R. section 122.44(d)(vi))

1988 U.S. EPA NAWQC. U.S. EPA recommended the NAWQC aluminum acute criterion at 750 µg/L based on test waters with a pH of 6.5 to 9.0. U.S. EPA also recommended the NAWQC aluminum chronic criterion at 87 µg/L based on the following two toxicity tests. All test waters contained hardness at 12 mg/L as CaCO₃.

- i. Acute toxicity tests at various aluminum doses were conducted in various acidic waters (pH 6.0 – 6.5) on 159- and 160-day old striped bass. The 159-day old striped bass showed no mortality in waters with pH at 6.5 and aluminum doses at 390 µg/L, and the 160-day old striped bass showed 58 percent mortality at a dose of 174.4 µg/L in same pH waters. However, the 160-day old striped bass showed 98 percent mortality at an aluminum dose of 87.2 µg/L in waters with pH at 6.0, which is U.S. EPA's basis for the 87 µg/L chronic criterion. The varied results draw into question this study and the applicability of the NAWQC chronic criterion of 87 µg/L.
- ii. Chronic toxicity effects on 60-day old brook trout were evaluated in circumneutral pH waters (pH 6.5-6.9) in five cells at various aluminum doses (4, 57, 88, 169, and 350 µg/L). Chronic evaluation started upon hatching of eyed eggs of brook trout, and their weight and length were measured after 45 days and 60 days. The 60-day old brook trout showed 24 percent weight loss at 169 µg/L of aluminum and 4 percent weight loss at 88 µg/L of aluminum, which is the basis for U.S. EPA's chronic criteria. Though this test study shows chronic toxic effects of 4 percent reduction in weight after exposure for 60-days, the chronic criterion is based on 4-day exposure; so again, the applicability of the NAWQC chronic criterion of 87 µg/L is questionable.

Site-specific Conditions. U.S. EPA advises that a water effects ratio (WER) may be more appropriate to better reflect the actual toxicity of aluminum to aquatic organisms when the pH and hardness conditions of the receiving water are not similar to that of the test conditions.¹ Effluent and receiving water monitoring data indicate that the pH and hardness values of Canyon Creek are not similar to the low pH and hardness conditions under which the chronic criterion for aluminum was developed, as shown in the table below. Therefore, the Central Valley Water Board does not expect aluminum to be as toxic in Canyon Creek as in the previously described toxicity tests. The pH of Canyon Creek upstream of Discharge Point SW-001 ranged from 6.4 to 7.82 based on 72 samples collected from October 2015 through May 2018. These water conditions typically are circumneutral pH where aluminum is predominately in the form of Al(OH)₃ and non-toxic to aquatic life. Hardness concentrations within Canyon Creek upstream of Discharge Point SW-001 ranged from 20 mg/L to 45 mg/L based on 21 samples collected between October 2015 and May 2018. The hardness concentrations within Canyon Creek are above the conditions, and thus less toxic, than the tests used to develop the NAWQC chronic criterion for aluminum.

¹ "The value of 87 µg/L is based on a toxicity test with striped bass in water with pH = 6.5-6.6 and hardness < 10 mg/L. Data in [a 1994 Study] indicate that aluminum is substantially less toxic at higher pH and hardness, but the effects of pH and hardness are not well quantified at this time." U.S. EPA 1999 NAWQC Correction, Footnote L

Table F-5. Site-Specific Aluminum Toxicity Data

Parameter	Units	Test Conditions for Applicability of Chronic Criterion	Effluent	Canyon Creek
pH	standard units	6.0 – 6.5	6.54 – 8.03	6.4 – 7.82
Hardness, Total (as CaCO ₃)	mg/L	12	33 – 166	20 – 45
Aluminum, Total Recoverable	µg/L	87.2 – 390	49.1 – 3,390	65.9 – 436

Local Environmental Conditions and Studies. Twenty-one site-specific aluminum toxicity tests have been conducted within the Central Valley Region. The pH and hardness of Canyon Creek are similar, as shown in the table below, and thus the results of these site-specific aluminum toxicity tests are relevant and appropriate for Canyon Creek. As shown in the following table, all EC₅₀¹ toxicity study result values are at concentrations of aluminum above 5,000 µg/L. Thus, the toxic effects of aluminum in these surface waters and in Canyon Creek are less toxic (or less reactive) to aquatic species than demonstrated in the toxicity tests that U.S. EPA used for the basis of establishing the chronic criterion of 87 µg/L. This new information, and review of the toxicity tests U.S. EPA used to establish the chronic criterion, indicates that 87 µg/L is overly stringent and not applicable to Canyon Creek.

Table F-6. Central Valley Region Site-Specific Aluminum Toxicity Data

Discharger	Test Waters	Hardness Value	Total Aluminum EC ₅₀ Value	pH	WER
<i>Oncorhynchus mykiss</i> (rainbow trout)					
Manteca	Surface Water/Effluent	124	>8,600	9.14	N/C
Auburn	Surface Water	16	>16,500	7.44	N/C
Modesto	Surface Water/Effluent	120/156	>34,250	8.96	>229
Yuba City	Surface Water/Effluent	114/164 ¹	>8,000	7.60/7.46	>53.5
<i>Ceriodaphnia dubia</i> (water flea)					
Auburn	Effluent	99	>5,270	7.44	>19.3
	Surface Water	16	>5,160	7.44	>12.4
Manteca	Surface Water/Effluent	124	>8,800	9.14	N/C
	Effluent	117	>8,700	7.21	>27.8
	Surface Water	57	7,823	7.58	25.0
	Effluent	139	>9,500	7.97	>21.2
	Surface Water	104	>11,000	8.28	>24.5
	Effluent	128	>9,700	7.78	>25.0
	Surface Water	85	>9,450	7.85	>25.7
	Effluent	106	>11,900	7.66	>15.3
	Surface Water	146	>10,650	7.81	>13.7

¹ The effect concentration is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g. death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g. Probit Model). EC₅₀ is a point estimate of the toxicant concentration that would cause an observable adverse effect in 50 percent of the test organisms. The EC₅₀ is used in toxicity testing to determine the appropriate chronic criterion.

Discharger	Test Waters	Hardness Value	Total Aluminum EC ₅₀ Value	pH	WER
Modesto	Surface Water/Effluent	120/156	31,604	8.96	211
Yuba City	Surface Water/Effluent	114/164 ¹	>8,000	7.60/7.46	>53.5
Placer County (SMD 1)	Effluent	150	>5,000	7.4 – 8.7	>13.7
<i>Daphnia magna</i> (water flea)					
Manteca	Surface Water/Effluent	124	>8,350	9.14	N/C
Modesto	Surface Water/Effluent	120/156	>11,900	8.96	>79.6
Yuba City	Surface Water/Effluent	114/164 ¹	>8,000	7.60/7.46	>53.5

¹ Hardness values may be biased high because the EDTA titrimetric method is subject to interferences that measure as hardness (barium, cadmium, lead, manganese, strontium, and zinc will be measured as hardness) producing hardness numbers that are likely to be greater than the calculation of hardness based upon the ICP analysis of calcium and magnesium. Upstream receiving water hardness ranged from 30 to 50.9 mg/L as CaCO₃ between January 2008 and August 2011. Furthermore, the upstream receiving water hardness was 37 mg/L as CaCO₃ on 4 October 2005, 7 days prior to the Feasibility Assessment (first phase of a WER study) sample collection date of 11 October 2005. It is likely that matrix interferences from other metals were responsible for the unexpected hardness values reported by Pacific EcoRisk.

2018 U.S. EPA NAWQC. On 21 December 2018, U.S. EPA finalized updated NAWQC for aluminum in freshwater that reflect the latest science and allow for development of criteria reflecting the impact of local water chemistry on aluminum toxicity to aquatic life. The updated criteria account for the site-specific bioavailability of aluminum in receiving waters, which is dependent on pH, dissolved organic carbon, and hardness. Receiving water monitoring for dissolved organic carbon is not available; therefore, sufficient data is not available to calculate updated aluminum criteria applicable to Canyon Creek. In addition to pH and hardness, this Order establishes effluent and receiving water monitoring requirements for dissolved organic carbon to collect sufficient data for calculating future site-specific freshwater aluminum criteria in accordance with the 2018 NAWQC.

Applicable WQO's. This Order implements the Secondary MCL of 200 µg/L as an annual average for the protection of MUN and implements the Basin Plan's narrative toxicity objective for the protection of aquatic life using an acute (1-hour) criterion and chronic (4-day) criterion of 750 µg/L based on U.S. EPA's 1988 NAWQC and the discussion above.

Total recoverable aluminum concentrations in the storm water effluent ranged from 49.1 µg/L to 3,390 µg/L, with a maximum annual average of 2,920 µg/L, based on eight samples collected from October 2015 through May 2018. Based on six samples collected concurrently in the upstream and downstream receiving water between October 2015 and May 2018, total recoverable aluminum concentrations in the upstream receiving water ranged from 65.9 µg/L to 436 µg/L, with a maximum annual average of 422 µg/L, and total recoverable aluminum concentrations in the downstream receiving water ranged from 63.4 µg/L to 616 µg/L, with a maximum annual average of 545 µg/L. Based on the available data, total recoverable aluminum concentrations in the downstream receiving water, exceed the Secondary MCL. Additionally, there is evidence that the aluminum concentrations in the storm water effluent are contributing to exceedances of water quality objectives in the downstream receiving water. Therefore, this Order establishes a storm water action level for aluminum of 750 µg/L based on the U.S. EPA NAWQC. If exceeded, the

Discharger is required to evaluate and update, if necessary, the Facility's BMP's in order to reduce aluminum concentrations in the storm water discharge.

Based on the observed aluminum concentrations in the Facility's storm water effluent, the Discharger may not be able to consistently comply with the storm water action level of 750 µg/L. Therefore, this Order requires the Discharger to complete a storm water action level study, as described in Special Provision VI.C.2.b, to determine an appropriate action level for aluminum that will meet water quality objectives while not being unnecessarily stringent.

- b. **Chemical Oxygen Demand (COD).** COD is the amount of dissolved oxygen in water consumed by the chemical breakdown of organic and inorganic matter (i.e., COD is not a specific component in a discharge). A high COD value indicates elevated quantities of pollutants in runoff, especially carbon. The storm water benchmark value in U.S. EPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) for General Sawmills and Planing Mills* (SIC code 2421) for COD is 120 mg/L.

Effluent COD ranged from 12 mg/L to 177 mg/L in 22 samples collected between October 2015 and May 2018. Upstream and downstream receiving water monitoring data for COD is not available. Based on the levels of COD in the effluent and the nature of runoff from sawmill operations, a storm water action level of 120 mg/L for COD has been established in this Order based on the benchmark in U.S. EPA's MSGP. If exceeded, the Discharger is required to evaluate and update, if necessary, the Facility's BMP's in order to reduce the COD in the storm water discharge.

- c. **Copper.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. These criteria for copper are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the effluent and receiving water. The Basin Plan also includes hardness-dependent criteria for copper for the Sacramento River and its tributaries above the State Highway 32 bridge at Hamilton City, expressed in dissolved concentrations.

Based on 21 samples collected concurrently from October 2015 through May 2018, the MEC for dissolved copper was 6.8 µg/L, the maximum observed dissolved copper concentration in the upstream receiving water was 2.1 µg/L, and the maximum observed dissolved copper concentration in the downstream receiving water was 2.6 µg/L. Based on evaluation of downstream receiving water data, the discharge of storm water from the Facility is not causing or contributing to exceedances of water quality objectives in the downstream receiving water. Therefore, a storm water action level for copper has not been established in this Order.

- d. **Electrical Conductivity.** Electrical conductivity measures the ability of water to conduct an electrical current, which directly correlates to the concentration of dissolved salts in the water and the quality of water used for drinking, irrigation, and other beneficial uses. DDW has adopted Secondary MCL's for electrical conductivity of 900 µmhos/cm as a recommended level, 1,600 µmhos/cm as an upper level, and 2,200 µmhos/cm as a short-term maximum. Title 22 requires compliance with Secondary MCL's on an annual average basis. Electrical conductivity in fresh water streams typically range from 100 to 2,000 µmhos/cm and pure rain water typically

has a very low electrical conductivity value (i.e., less than 10 $\mu\text{mhos/cm}$). Order R5-2014-0035 included a storm water action level of 500 $\mu\text{mhos/cm}$ for electrical conductivity as well as an annual average receiving water limitation of 900 $\mu\text{mhos/cm}$.

A review of the Discharger's monitoring reports shows a maximum observed calendar annual average electrical conductivity of 526 $\mu\text{mhos/cm}$, with a range from 249 $\mu\text{mhos/cm}$ to 1,293 $\mu\text{mhos/cm}$. These levels do not exceed the Secondary MCL recommended level. Based on sampling conducted in the upstream and downstream receiving water between October 2015 and May 2018, the maximum observed upstream receiving water calendar annual average electrical conductivity was 118 $\mu\text{mhos/cm}$ and the maximum observed downstream receiving water calendar annual average electrical conductivity was 121 $\mu\text{mhos/cm}$. Therefore, the storm water discharge from the Facility does not cause or contribute to an in-stream excursion above the Secondary MCL's for electrical conductivity. However, the electrical conductivity measurements in the Facility's storm water discharge exceed the observed range of the receiving water and what would generally be expected in pollutant-free storm water runoff. For this reason, this Order requires the Discharger to prepare and implement a salinity evaluation and minimization plan to identify and address sources of salinity discharged from the Facility and establishes a storm water action level for electrical conductivity of 700 $\mu\text{mhos/cm}$ based on the CV-SALTS recommended level for protection of the agricultural supply beneficial use.

- e. **Iron.** U.S. EPA developed National Recommended Ambient Water Quality Criteria (NAWQC) for the protection of freshwater aquatic life for iron. The recommended 4-day average (chronic) criterion is 1,000 $\mu\text{g/L}$. In addition, the State Water Board Division of Drinking Water (DDW) has established Secondary MCL's to assist public drinking water systems in managing their drinking water for public welfare considerations, such as taste, color, and odor. The Secondary MCL for iron is 300 $\mu\text{g/L}$ for protection of the MUN beneficial use. Title 22 requires compliance with Secondary MCL's on an annual average basis. Order R5-2014-0035 included a storm water action level of 1,000 $\mu\text{g/L}$ for iron based on the U.S. EPA NAWQC. Order R5-2014-0035 also included an annual average receiving water limitation for iron of 300 $\mu\text{g/L}$ based on the Secondary MCL.

Total recoverable iron concentrations in the storm water effluent ranged from 102 $\mu\text{g/L}$ to 4,070 $\mu\text{g/L}$, with a maximum annual average of 2,278 $\mu\text{g/L}$, based on 24 samples collected from October 2015 through May 2018. Based on 21 samples collected concurrently in the upstream and downstream receiving water between October 2015 and May 2018, total recoverable iron concentrations in the upstream receiving water ranged from 175 $\mu\text{g/L}$ to 594 $\mu\text{g/L}$, with a maximum annual average of 302 $\mu\text{g/L}$, and total recoverable iron concentrations in the downstream receiving water ranged from 182 $\mu\text{g/L}$ to 694 $\mu\text{g/L}$, with a maximum annual average of 340 $\mu\text{g/L}$. Based on the available data, total recoverable iron concentrations in the downstream receiving water exceed the Secondary MCL. Additionally, there is evidence that the iron concentrations in the storm water effluent are contributing to exceedances of water quality objectives in the downstream receiving water. Therefore, this Order will retain the storm water action level for iron of 1,000 $\mu\text{g/L}$ from Order R5-2014-0035 based on the U.S. EPA NAWQC. If exceeded, the Discharger is required to evaluate and update, if necessary, the Facility's BMP's in order to reduce iron concentrations in the storm water discharge. This Order does not retain the annual average receiving water limitation for iron included in Order

R5-2014-0035 since a storm water action level has been established to protect the downstream receiving water.

Based on the observed iron concentrations in the Facility's storm water effluent, the Discharger may not be able to consistently comply with the storm water action level of 1,000 µg/L. Therefore, this Order requires the Discharger to complete a storm water action level study, as described in Special Provision VI.C.2.b, to determine an appropriate action level for iron that will meet water quality objectives while not being unnecessarily stringent.

- f. **Manganese.** DDW has established Secondary MCL's to assist public drinking water systems in managing their drinking water for public welfare considerations, such as taste, color, and odor. The Secondary MCL for manganese is 50 µg/L for protection of the MUN beneficial use. Title 22 requires compliance with Secondary MCL's on an annual average basis.

Total recoverable manganese concentrations in the storm water effluent ranged from 34.8 µg/L to 642 µg/L, with a maximum annual average of 440 µg/L, based on eight samples collected from October 2015 through May 2018. Based on six samples collected concurrently in the upstream and downstream receiving water between October 2015 and May 2018, total recoverable manganese concentrations in the upstream receiving water ranged from 7.2 µg/L to 123 µg/L, with a maximum annual average of 28 µg/L, and total recoverable manganese concentrations in the downstream receiving water ranged from 16 µg/L to 126 µg/L, with a maximum annual average of 59 µg/L. Based on the available data, total recoverable manganese concentrations in the downstream receiving water exceed the Secondary MCL. Additionally, there is evidence that the manganese concentrations in the storm water effluent are contributing to exceedances of water quality objectives in the downstream receiving water. Therefore, this Order establishes a storm water action level for manganese of 1,000 µg/L based on the storm water benchmark value for manganese included in U.S. EPA's 2000 MSGP.

Considering the maximum observed manganese concentration in the storm water effluent was 642 µg/L and the Secondary MCL for manganese is 50 µg/L, a storm water action level of 1,000 µg/L may not be stringent enough to ensure water quality objectives are achieved in the receiving water. Therefore, this Order requires the Discharger to complete a storm water action level study, as described in Special Provision VI.C.2.b, to determine an appropriate action level for manganese that will meet water quality objectives while not being unnecessarily stringent.

- g. **pH.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "...pH shall not be depressed below 6.5 nor raised above 8.5." The effluent pH ranged from 6.54 to 8.03 and the downstream receiving water pH ranged from 6.5 to 7.7 based on samples collected between October 2015 and May 2018. Based on monitoring data indicating that the downstream receiving water is in compliance with the Basin Plan objectives, the Central Valley Water Board finds that the discharge is not causing exceedances of the applicable water quality objectives in the downstream receiving water for pH. Therefore, this Order does not include action levels for pH. However, as discussed in section IV.B.2 of this Fact Sheet, this Order includes technology-based minimum and maximum effluent limitations of 6.0 and 9.0, respectively, based on BPJ for discharges of industrial storm water.

- h. **Settleable Solids.** The Basin Plan states that waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses. To ensure compliance with the Basin Plan objectives, Order R5-2014-0035 included an average monthly effluent limit (AMEL) and maximum daily effluent limit (MDEL) for settleable solids of 0.10 ml/L and 0.20 ml/L, respectively. Settleable solids were not detected in the effluent based on 78 samples collected from October 2015 through May 2018; therefore, the discharge is not causing exceedances of the applicable water quality objectives in the downstream receiving water for settleable solids and effluent limits for settleable solids have not been retained in this Order. Removal of these effluent limitations is in accordance with the federal anti-backsliding regulations (see section IV.D.3 of the Fact Sheet).
- i. **Zinc.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. These criteria for zinc are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the effluent and receiving water. The Basin Plan also includes hardness-dependent criteria for zinc for the Sacramento River and its tributaries above the State Highway 32 bridge at Hamilton City, expressed in dissolved concentrations.

As described in section IV.C.2.e of this Fact Sheet, the applicable criteria for evaluation of compliance with the water quality objectives for hardness-dependent metals were calculated using an average receiving water hardness of 34 mg/L. Based on a design hardness of 34 mg/L, the applicable CTR acute and chronic criteria for zinc in the effluent are 47 µg/L, as dissolved concentrations. Additionally, using a design hardness of 34 mg/L, the applicable Basin Plan objective for zinc is 14 µg/L, as a dissolved concentration.

Based on 21 samples collected concurrently from October 2015 through May 2018, the MEC for dissolved zinc was 32.2 µg/L, the maximum observed dissolved zinc concentration in the upstream receiving water was 1.0 µg/L, and the maximum observed dissolved zinc concentration in the downstream receiving water was 4.4 µg/L. Based on evaluation of paired downstream receiving water data, the discharge of storm water from the Facility is not causing or contributing to exceedances of water quality objectives in the receiving water. Therefore, a storm water action level for zinc has not been established in this Order.

4. **WQBEL Calculations**

This Order does not include WQBEL's for individual pollutants.

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

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct WET testing for acute toxicity, as specified in the Monitoring and Reporting Program (MRP) (Attachment E, section V). Due to the intermittent nature (rainfall-dependent) of the discharge, no chronic WET monitoring is required. This Order also contains effluent limitations for acute toxicity.

- a. **Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at section 3.1.20) The Basin Plan also states that, "...*effluent limits*

based upon acute biotoxicity tests of effluents will be prescribed where appropriate...

Due to the site-specific conditions of the discharge, the Central Valley Water Board has used professional judgment in determining the appropriate method for determining compliance with receiving water objectives. U.S. EPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "*State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available...A permitting authority might also determine that WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's discharging to contact recreational waters).*" Acute toxicity effluent limits are required to ensure compliance with the Basin Plan's narrative toxicity objective.

U.S. EPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "*Guidance for NPDES Permit Issuance,*" dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc.*" Consistent with Order R5-2014-0035, effluent limitations for acute toxicity have been included in this Order as follows:

Acute Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay -----	70%
Median for any three consecutive bioassays -----	90%

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations

40 C.F.R section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order does not include effluent limitations expressed in terms of mass. Pursuant to the exceptions to mass limitations provided in 40 C.F.R. section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCL's) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45(d) requires AMEL's and MDEL's for all dischargers other than POTW's unless impracticable. For pH, AMEL's and MDEL's have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3 of this Fact Sheet.

3. Satisfaction of Anti-Backsliding Requirements

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 C.F.R. section 122.44(l).

The effluent limitations in this Order are at least as stringent as the effluent limitations in Order R5-2014-0035, with the exception of effluent limitations for settleable solids. The effluent limitations for settleable solids have not been retained from Order R5-2014-0035. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

- a. **CWA sections 402(o)(1) and 303(d)(4).** CWA section 402(o)(1) prohibits the establishment of less stringent WQBEL's "except in compliance with section 303(d)(4)." CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters.
 - i. For waters where standards are not attained, CWA section 303(d)(4)(A) specifies that any effluent limit based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limits based on such TMDLs or WLAs will assure the attainment of such water quality standards.
 - ii. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy.

Canyon Creek is considered an attainment water for settleable solids because the receiving water is not listed as impaired on the 303(d) list for this constituent.¹ As discussed in section IV.D.4, below, removal of the effluent limits complies with federal and state antidegradation requirements. Thus, removal of effluent limitations for settleable solids from Order R5-2014-0035 meets the exception in CWA section 303(d)(4)(B).

- b. **CWA section 402(o)(2).** CWA section 402(o)(2) provides several exceptions to the anti-backsliding regulations. CWA section 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less-stringent effluent limitation for a pollutant if information is available that was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and that would have justified the application of a less-stringent effluent limitation at the time of permit issuance.

As described further in section IV.C.3 of this Fact Sheet, updated information that was not available at the time Order R5-2014-0035 was issued indicates that settleable solids in the storm water discharge do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. The updated information that supports the removal of effluent limitations for settleable solids includes the following:

- i. **Settleable Solids.** Effluent and receiving water monitoring data collected between October 2015 and May 2018 indicates that the discharge is not

¹ "The exceptions in section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list." State Water Board Order WQ 2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility.

causing exceedances of the applicable water quality objectives for settleable solids in the downstream receiving water.

Thus, removal of the effluent limitations for settleable solids from Order R5-2014-0035 is in accordance with CWA section 402(o)(2)(B)(i), which allows for the removal of effluent limitations based on information that was not available at the time of permit issuance.

4. Antidegradation Policies

- a. **Surface Water.** This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. The Order requires compliance with applicable federal technology-based standards and with WQBEL's where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. The permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy. Compliance with these requirements will result in the use of BPTC of the discharge. The impact on existing water quality will be insignificant.

This Order removes effluent limitations for settleable solids based on updated information, as described in sections IV.C.3 and IV.D.3 of this Fact Sheet. The removal of these WQBEL's will not result in a decrease in the level of treatment or control, or a reduction in water quality. Therefore, the Central Valley Water Board finds that the removal of the effluent limitations for settleable solids does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

- b. **Groundwater.** The Discharger utilizes two wastewater ponds (log deck recycle pond and power plant pond) to contain industrial wastewater associated with the sawmill and cogeneration facilities, which are both lined with a single 60-mm HDPE geomembrane. The Discharger performed a leak detection test on the pond liners for both ponds during the term of Order R5-2014-0035, which determined the groundwater impacts from the discharge of industrial wastewater to the lined ponds are insignificant. Therefore, based on leak detection testing results, this Order removes groundwater limitations for electrical conductivity, iron, manganese and pH, and the narrative limit for taste, odor, chemical constituents, toxicity, or color from Order R5-2014-0035, based on updated information. The removal of groundwater limitations will not result in a decrease in the level of treatment or control, or a reduction in water quality. Therefore, the Central Valley Water Board finds that the removal of the groundwater limitations does not result in an allowed increase in pollutants or any additional degradation of groundwater. Thus, the removal of groundwater limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBEL's for individual pollutants. The technology-based effluent limitations consist of restrictions on pH. Restrictions on pH are discussed in section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

WQBEL’s 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. Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**Summary of Final Effluent Limitations
 Discharge Point SW-001**

Table F-7. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				Basis ¹
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Conventional Pollutants						
pH	standard units	--	--	6.0	9.0	BPJ
Non-Conventional Pollutants						
Acute Toxicity	% survival	--	70 ² /90 ³	--	--	BP

- ¹ BPJ – Based on best professional judgment.
 BP – Based on water quality objectives contained in the Basin Plan.
- ² 70 percent minimum of any one bioassay.
- ³ 90 percent median for any three consecutive bioassays.

- E. Interim Effluent Limitations – Not Applicable**
- F. Land Discharge Specifications – Not Applicable**
- G. Recycling Specifications – Not Applicable**

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria, where they are necessary to protect beneficial uses. The Central Valley 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 bacteria, biostimulatory substances, color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.
2. **Electrical Conductivity.** Order R5-2014-0035 established an annual average receiving water limitation for electrical conductivity based on the Secondary MCL’s. As discussed in section IV.C.3 of this Fact Sheet, the storm water discharge from the Facility does not cause or contribute to an in-stream excursion above the Secondary MCL’s for electrical conductivity. Therefore, this Order does not retain the annual average receiving water limit for electrical conductivity from Order R5-2014-0035. The removal of the electrical conductivity receiving water limitations will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than described in applicable policies. The removal of the receiving water limitation is not expected to cause other

impacts on water quality. The Central Valley Water Board finds that the removal of the electrical conductivity receiving water limitation a) is to the maximum benefit to the people of the state; b) will not unreasonably affect present and anticipated beneficial use of waters; and c) will not result in water quality less than that prescribed in policies, and is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

3. **Hardness-Dependent Metals.** Order R5-2014-0035 established hardness-dependent receiving water limitations for cadmium, copper, lead, silver, and zinc that were based on the applicable CTR freshwater aquatic life criteria and Basin Plan objectives. As discussed in section IV.C.3 of this Fact Sheet, the storm water discharge from the Facility is not causing exceedances of the applicable CTR criteria or Basin Plan objectives in the downstream receiving water for any hardness-dependent metals, including copper and zinc. Therefore, this Order does not retain the receiving water limitations for cadmium, copper, lead, silver, or zinc from Order R5-2014-0035. The removal of receiving water limitations for these constituents will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than described in applicable policies. The removal of the receiving water limitation is not expected to cause other impacts on water quality. The Central Valley Water Board finds that the removal of receiving water limitations for cadmium, copper, lead, silver and zinc a) is to the maximum benefit to the people of the state; b) will not unreasonably affect present and anticipated beneficial use of waters; and c) will not result in water quality less than that prescribed in policies, and is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.
4. **Iron.** Order R5-2014-0035 established an annual average receiving water limitation for total recoverable iron based on the Secondary MCL. As discussed in section IV.C.3 of this Fact Sheet, this Order establishes a storm water action level for iron that, if exceeded, requires the Discharger to evaluate and update, if necessary, the Facility's BMP's to reduce iron concentrations in the storm water discharge. The purpose of including a storm water action level in the Order is to protect the beneficial uses of the receiving water; therefore, this Order does not retain the annual average receiving water limit for total recoverable iron from Order R5-2014-0035. The removal of the receiving water limitation for iron will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than described in applicable policies. The removal of the receiving water limitation is not expected to cause other impacts on water quality. The Central Valley Water Board finds that the removal of the receiving water limitation for iron a) is to the maximum benefit to the people of the state; b) will not unreasonably affect present and anticipated beneficial use of waters; and c) will not result in water quality less than that prescribed in policies, and is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

B. Groundwater

1. Order R5-2014-0035 included site-specific groundwater limitations for electrical conductivity, iron, manganese and pH, and a narrative limit for taste, odor, chemical constituents, toxicity, and color, to protect the beneficial uses of underlying groundwater from unanticipated percolation from the Facility's lined wastewater ponds (log deck recycle pond and power plant pond). The Discharger performed a leak detection test on the pond liners for both ponds during the term of Order R5-2014-0035, which determined the groundwater impacts from the discharge of industrial wastewater to the lined ponds are insignificant. Therefore, based on leak detection testing results, this Order has not retained the site-specific groundwater limitations from Order R5-2014-0035. The removal

of site-specific groundwater limitations will not unreasonably affect present and anticipated beneficial uses of the underlying groundwater nor result in water quality less than described in applicable policies. The removal of site-specific groundwater limitation is not expected to cause other impacts on water quality. The Central Valley Water Board finds that the removal of the site-specific groundwater limitations a) is to the maximum benefit to the people of the state; b) will not unreasonably affect present and anticipated beneficial uses of the underlying groundwater; and c) will not result in water quality less than that prescribed in policies, and is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

VI. RATIONALE FOR PROVISIONS

A. 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. The Discharger must comply with all Standard Provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42.

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) of 40 C.F.R. 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).

B. Special Provisions

1. Reopener Provisions

- a. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable. If the Discharger performs studies to determine site-specific WER's and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- b. **Storm Water Action Levels.** This Order requires the Discharger to complete a storm water action level confirmation study to determine appropriate action levels for aluminum, iron, and manganese that will ensure compliance with the water quality objectives applicable to the receiving water while not being unnecessarily stringent. This Order may be reopened for modification, or revocation and reissuance, as a result of the findings of the storm water action level confirmation study.
- c. **Drinking Water Policy.** On 26 July 2013, the Central Valley Water Board adopted Resolution R5-2013-0098, amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.

- d. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 31 May 2018, as part of the CV-SALTS initiative, the Central Valley Water Board approved Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley. If approved by the State Water Board, the Office of Administrative Law, and U.S. EPA, the Amendments would impose certain new requirements on salt and nitrate discharges. If the Amendments ultimately go into effect, this Order may be amended or modified to incorporate any newly-applicable requirements.

2. Special Studies and Additional Monitoring Requirements

- a. **Storm Water Action Levels and Best Management Practice (BMP) Improvement Evaluation.** As discussed in section IV.C.3 of this Fact Sheet, this Order establishes action levels for constituents of concern in discharges of industrial storm water. The storm water action levels are pollutant concentrations above which the Central Valley Water Board has determined the storm water discharge could adversely affect receiving water quality (and control measures must be evaluated). The storm water action levels are not effluent limitations. The levels are used to determine if storm water discharges from the Facility merit further monitoring to ensure that the Facility has been successful in implementing the SWPPP and/or if storm water pollution control measures must be reevaluated and improved upon.

In order to address storm water action level exceedances and/or receiving water limitation violations, the Discharger must evaluate BMP's and make necessary improvements to the Facility BMP's in order to reduce pollutants in the storm water discharge and to ensure protection of water quality.

- b. **Storm Water Action Level Confirmation Study.** Based on effluent and receiving water monitoring conducted over the term of Order R5-2014-0035, there are indications the Discharger may not be able to consistently comply with the storm water action levels in this Order for aluminum and iron, and the storm water action level established for manganese may not be stringent enough to ensure water quality objectives are achieved in the receiving water. Therefore, this Order requires the Discharger to complete a storm water action level confirmation study to determine appropriate action levels for aluminum, iron, and manganese that will ensure compliance with the water quality objectives applicable to the receiving water while not being unnecessarily stringent.
- c. **Facility Water Balance Evaluation Work Plan and Study.** The Discharger shall prepare and submit a work plan to study and measure the volume of runoff from the log deck area, the fuel storage pile area, and the fly ash storage area to determine if the Facility currently has adequate pond storage for each runoff area to ensure wastewater is not discharged to surface water.

3. Best Management Practices and Pollution Prevention

- a. **Salinity Evaluation and Minimization Plan.** An Evaluation and Minimization Plan for salinity is required in this Order to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity to Canyon Creek.
- b. **Storm Water Pollution Prevention Plan (SWPPP).** This Order requires the Discharger to implement BMP's, including treatment controls where necessary, to support attainment of water quality standards. The use of BMP's to control or abate the discharge of pollutants is allowed by 40 C.F.R. section 122.44(k)(3) because

effluent limitations are infeasible, and BMP's are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. (40 C.F.R. 122.44(k)(4))

This Order requires the Discharger to continue to implement a site-specific SWPPP for the Facility. The SWPPP is necessary to identify potential sources of pollutants that may come in contact with storm water and to control or abate the discharge of pollutants to surface water or groundwater.

In order to maintain an accurate and useful SWPPP, the SWPPP must be revised whenever there is a change in construction, site operation, or maintenance, which may affect the discharge of significant quantities of pollutants to surface water or groundwater. The SWPPP must also be amended if there are violations of this Order or if the Discharger has not achieved the general objectives of controlling pollutants in the storm water discharges.

- c. **Facility-Specific Best Management Practice (BMP) – First Flush Collection.** This Order specifies a BMP that defines a quantity of storm water that must be collected, after cessation of log sprinkling, and discharged to the Facility log deck recycle pond prior to subsequent storm water being allowed to be discharged off-site to surface water. The BMP was developed by the Discharger after performing a log deck flushing study, which identified a minimum amount of rainfall needed to “flush” the log deck area of pollutants related to the dry season sprinkling activity. The “first flush” collection may occur more than once in a wet season if the Discharger intermittently sprinkles logs with pond water during the wet season.

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

- a. **Log Deck Recycle Pond, Power Plant Pond, and Storm Water Retention Pond Operations**
 - i. The operation and maintenance specifications for the log deck recycle pond, power plant pond, and storm water retention pond are necessary to protect the beneficial uses of the surface waters and groundwater. The specifications in this Order have been retained from Order R5-2014-0035.
 - ii. Anaerobic (lacking oxygen) processes tend to produce aesthetically undesirable odors. To minimize production of undesirable odors, the Discharger is required to maintain some (at least 1.0 mg/L) dissolved oxygen in the upper one foot of the log deck recycle pond and power plant pond.

5. **Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable**

6. **Other Special Provisions**

- a. **Sludge, Wood Waste, and/or Ash Management.** Sludge disposal provisions are necessary to ensure proper disposal of collected screening, sludges, wood ash, wood waste, and other solids removed from liquid wastes, ponds, or other sources in a manner that is consistent with CCR, Title 27, division 2, subdivision 1, section 20005, et seq, and approved by the Executive Officer.

7. **Compliance Schedules – Not Applicable**

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

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to establish monitoring, inspection, entry,

reporting, and recordkeeping requirements. The MRP, Attachment E of this Order, establishes monitoring, reporting, and recordkeeping 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 – Not Applicable

B. Effluent Monitoring

1. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2), effluent monitoring is required for all constituents with effluent limitations or discharge prohibitions. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.
2. Effluent monitoring frequencies and sample types for flow (daily), pH (weekly), TSS (monthly), chemical oxygen demand (monthly), dissolved oxygen (weekly), hardness (monthly), oil and grease (twice per year), tannins and lignins (monthly), temperature (weekly), total dissolved solids (monthly), and turbidity (weekly) have been retained from Order R5-2014-0035 to determine compliance with effluent limitations, where applicable, and characterize the storm water discharge for these parameters.
3. Monitoring data collected over the previous permit term for cadmium, copper, lead, silver, and zinc demonstrated that the discharge is not causing exceedances of the applicable water quality objectives/criteria in the downstream receiving water. Thus, specific monitoring requirements for these parameters have not been retained from Order R5-2014-0035.
4. Monitoring data collected over the previous permit term for electrical conductivity and settleable solids demonstrated that the discharge is not causing exceedances of the applicable water quality objectives/criteria in the downstream receiving water. Thus, this Order reduces the effluent monitoring frequency for these parameters from weekly to monthly. The Central Valley Water Board finds that this frequency is sufficient for characterizing the storm water discharge for these parameters.
5. Order R5-2014-0035 required effluent monitoring for aluminum and manganese twice per year. This Order increases the monitoring frequency for aluminum and manganese from twice per year to twice per month. The Central Valley Water Board finds that this frequency is necessary to demonstrate compliance with the storm water action levels for these parameters.
6. Order R5-2014-0035 required monthly effluent monitoring for iron. This Order increases the monitoring frequency for iron from monthly to twice per month. The Central Valley Water Board finds that this frequency is necessary to determine compliance with the storm water action level for iron.
7. This Order establishes monthly effluent monitoring requirements for dissolved organic carbon in order to collect sufficient data for calculating aquatic life criteria for aluminum in accordance with the 2018 NAWQC.
8. Periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires effluent monitoring for priority pollutants and other constituents of concern once during the first three months of discharge during the 2021/2022 wet season and once during the first three months of discharge during the 2022/2023 wet season. See section IX.D of the

MRP (Attachment E) for more detailed requirements related to performing priority pollutant monitoring.

9. Water Code section 13176, subdivision (a), states: “*The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with section 100825) of chapter 4 of part 1 of division 101 of the Health and Safety Code.*” DDW accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA (Wat. Code §§ 13370, subd. (c), 13372, 13377). Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements (Wat. Code § 13372, subd. (a)). The holding time requirements are 15 minutes for chlorine residual, dissolved oxygen, and pH, and immediate analysis is required for temperature (40 C.F.R. § 136.3(e), Table II). Due to the location of the Facility, it is both legally and factually impossible for the Discharger to comply with section 13176 for constituents with short holding times.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Consistent with Order R5-2014-0035, 96-hour bioassay testing is required twice per year to demonstrate compliance with the effluent limitation for acute toxicity.
2. **Chronic Toxicity.** Consistent with Order R5-2014-0035, due to the intermittent nature (rainfall-dependent) of the discharge, no chronic WET monitoring is required.

D. Receiving Water Monitoring

1. Surface Water

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.
- b. Receiving water monitoring frequencies and sample types for flow (weekly), pH (weekly), dissolved oxygen (weekly), hardness (monthly), temperature (weekly), and turbidity (weekly) at Monitoring Locations RSW-001 and RSW-002 have been retained from Order R5-2014-0035 to determine compliance with the applicable receiving water limitations and characterize the receiving water for these parameters.
- c. Monitoring data collected over the previous permit term for cadmium, copper, lead, silver, and zinc demonstrated that the discharge is not causing exceedances of the applicable water quality objectives/criteria in the downstream receiving water. Thus, specific receiving water monitoring requirements for these parameters have not been retained from Order R5-2014-0035.
- d. Monitoring data collected over the previous permit term for electrical conductivity demonstrated that the discharge is not causing exceedances of the applicable water quality objectives/criteria in the downstream receiving water. Thus, this Order reduces the receiving water monitoring frequency for electrical conductivity from weekly to monthly. The Central Valley Water Board finds that this frequency is sufficient for characterizing the receiving water for this parameter.
- e. Order R5-2014-0035 required receiving water monitoring for aluminum and manganese twice per year at Monitoring Locations RSW-001 and RSW-002. This Order increases the monitoring frequency for aluminum and manganese from twice

per year to twice per month. The Central Valley Water Board finds that this frequency is necessary to assess the impact of the discharge on the receiving water for these parameters.

- f. Order R5-2014-0035 required monthly receiving water monitoring for iron at Monitoring Locations RSW-001 and RSW-002. This Order increases the monitoring frequency for iron from monthly to twice per month. The Central Valley Water Board finds that this frequency is necessary to assess the impact of the discharge on the receiving water for this parameter.
- g. This Order establishes monthly receiving water monitoring requirements for dissolved organic carbon at Monitoring Locations RSW-001 and RSW-002 in order to collect sufficient data for calculating aquatic life criteria for aluminum in accordance with the 2018 NAWQC.
- h. Periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires upstream receiving water monitoring for priority pollutants and other pollutants of concern at Monitoring Location RSW-001 once during the first three months of discharge during the 2021/2022 wet season and once during the first three months of discharge during the 2022/2023 wet season, concurrent with effluent monitoring, in order to collect data to determine compliance with receiving water objectives for the next permit renewal. See section IX.D of the MRP (Attachment E) for more detailed requirements related to performing priority pollutant monitoring.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. Pond Monitoring

- a. Pond monitoring is required to ensure proper operation of the log deck recycle pond, power plant pond, and storm water retention pond.
- b. Weekly pond monitoring requirements for freeboard in the log deck recycle pond, power plant pond, and storm water retention pond have been retained from Order R5-2014-0035 in order to assess compliance with the pond operating requirements.
- c. Order R5-2014-0035 required monitoring for pH, chemical oxygen demand, chloride, electrical conductivity, iron, manganese, sulfate, and total dissolved solids in the log deck recycle pond and power plant pond. These ponds are lined and, based on a leak detection test on the pond liners for both ponds completed by the Discharger over the term of Order R5-2014-0035, the groundwater impacts from the discharge of industrial wastewater to the lined ponds are insignificant. Therefore, specific monitoring requirements for these parameters within the log deck recycle pond and power plant pond have not been retained from Order R5-2014-0035.
- d. Order R5-2014-0035 required monitoring for pH and electrical conductivity within the storm water retention pond. This Order includes weekly effluent monitoring requirements for pH and monthly effluent monitoring requirements for electrical conductivity to evaluate compliance with effluent limitations, where applicable, and characterize discharges from the storm water retention pond for these parameters. Therefore, the Central Valley Water Board finds that pH and electrical conductivity monitoring within the storm water retention pond are not necessary and specific

monitoring requirements for these parameters within the storm water retention pond have not been retained from Order R5-2014-0035.

2. Log Deck Drainage Monitoring

The annual Log Deck drainage monitoring is necessary to determine the when the stormwater runoff from the “first flush” of the Log Deck is complete and the runoff can be directed to the stormwater pond. Precipitation monitoring is necessary to assess rainfall events and to determine compliance with monitoring requirements. Consistent with Order R5-2014-0035, this Order requires the Discharger to assess daily precipitation at the Facility.

3. Ash and Cooling Tower Sludge Monitoring

The annual ash and cooling tower sludge report is necessary to determine the quantity of ash and cooling tower sludge generated at the Facility and to ensure the proper handling of such material.

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs that will serve as an NPDES permit for Burney Forest Power. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the posting of the Notice of Public Hearing at the Facility, the Burney City Hall, and the local post office. The Notice of Public Hearing was also posted on the Central Valley Water Board’s website.

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board’s website at:

http://www.waterboards.ca.gov/centralvalley/board_info/meetings/

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office by 5:00 p.m. on **29 April 2019**.

C. Public Hearing

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

Date: **7 June 2019**
Time: 8:30 a.m.
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons were invited to attend. For accuracy of the record, important testimony was requested in writing. No comments were received, nor did anyone wish to speak at the public hearing regarding the tentative WDRs. Therefore, the Central Valley Water Board approved the item with the Uncontested Calendar.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, Title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the 30th day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

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

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the address 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 Central Valley Water Board by calling (530) 224-4845.

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 Central Valley Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Michael Collins at (530) 224-4785.

G.

ATTACHMENT G – SUMMARY OF COMPLIANCE WITH RECEIVING WATER OBJECTIVES

Constituent	Units	Receiving Water Downstream	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	SWAL	RW Obj. Met? ¹
Aluminum, Total Recoverable	µg/L	616 ² 545 ³	750	750 ⁴	--	--	--	--		Yes
Chemical Oxygen Demand	mg/L	NR	120	--	--	--	--	--	120 ⁵	Inconclusive ⁶
Electrical Conductivity @ 25°C	µmhos/cm	121 ³	700	--	--	--	--	--	700 ⁷	Yes
Iron, Total Recoverable	µg/L	694 ² 340 ³	1,000	--	1,000 ⁸	--	--	--		Yes
Manganese, Total Recoverable	µg/L	59 ³	1,000	--	--	--	--	--	1,000 ⁹	Yes

General Note: All inorganic concentrations are given as a total recoverable.

C = Criterion used for compliance with water quality objective

NTR = National Toxics Rule

CMC = Criterion Maximum Concentration (NTR)

CCC = Criterion Continuous Concentration (NTR)

Water & Org = Human Health Criterion for Consumption of Water & Organisms (NTR)

Org. Only = Human Health Criterion for Consumption of Organisms Only (NTR)

Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective

SWAL = Storm Water Action Level

NR = Not Reported

Footnotes:

- (1) Evaluates whether the maximum downstream concentrations are at or below the most stringent criteria, C.
- (2) Represents the maximum observed.
- (3) Represents the maximum observed annual average concentration for comparison with the criteria, C.
- (4) U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour average.
- (5) SWAL benchmark value from U.S. EPA NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP) for General Sawmills and Planing Mills (SIC code 2421).
- (6) See section IV.C.3 of the Fact Sheet for a discussion of the determination of compliance with receiving water objectives.
- (7) SWAL based on the CV-SALTS recommended level for protection of the agricultural supply beneficial use.
- (8) U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 4-day average.
- (9) SWAL benchmark value from U.S. EPA 2000 MSGP.