

Central Valley Regional Water Quality Control Board
23 February 2023 Board Meeting

Response to Comments
for
Malakoff Diggins State Historic Park
Tentative Waste Discharge Requirements

The following are Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff responses to comments submitted by interested persons and parties regarding the tentative Waste Discharge Requirements (WDRs), National Pollutant Discharge Elimination System (NPDES) Permit CA0085332 renewal for the Department of Parks and Recreation (Discharger), Malakoff Diggins State Historic Park (Park) discharge to Humbug Creek.

The tentative NPDES Permit was issued for a 30-day public comment period on 12 December 2022 with comments due by 11 January 2023. The Central Valley Water Board received public comments regarding the tentative Permit by the due date from the Discharger. Changes were made to the proposed NPDES Permit based on public comments received.

The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses. Revisions proposed by staff are also summarized below the comments.

DISCHARGER COMMENTS

1. Receiving Water Temperature Limitation.

The Discharger requested adding compliance determination language for the temperature receiving water limitation.

RESPONSE: Central Valley Water Board Staff concur. Compliance determination language was added for the temperature receiving water limitation as Section VII.D (Shown below) and the following section was renumbered accordingly:

D. Temperature Receiving Water Limitation (Section V.A.14). Routine effluent and receiving water monitoring is required in the Monitoring and Reporting Program (Attachment E) and is sufficient to evaluate the impacts of the discharge and compliance with this Order. If the temperature of the effluent at EFF-001 is less than the temperature at RSW-001, but the increase in temperature from RSW-001 to RSW-002 is greater than 5° Fahrenheit the discharge will not be considered out of compliance. Otherwise, if the increase in temperature from RSW-001 to RSW-002 is greater than 5° Fahrenheit and the temperature at EFF-0001 is greater than the temperature at RSW-001 then the discharge is considered out of compliance with the temperature receiving water limitation.

2. **Reopener Provisions for Iron, Manganese, Copper, Nickel, Mercury, Zinc, and pH.**

The Discharger requested adding reopener provisions for iron, manganese, copper, nickel, mercury, zinc, and pH to allow for modified effluent limitations in the event a Total Maximum Daily Load is adopted for any of those constituents that includes waste load allocations for the Park, similar to those in the Park's current permit, Order R5-2017-0086.

RESPONSE: Central Valley Water Board staff do not anticipate Total Maximum Daily Loads being established for iron, manganese, copper, nickel, mercury, zinc, and pH in Humbug Creek over the term of the proposed Order; however, the proposed NPDES permit contains a general reopener provision (WDRs section VI.C.1.a) to reopen the permit if any new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance; and Standard Provision VI.A.2.a, which authorizes a reopener based on new regulations.

3. **Salinity Evaluation and Minimization Plan.**

The Discharger noted for the record that *“the salinity evaluation and minimization plan should account for the potential need for a compliance approach using treatment and / or amendments. Treatment or use of soil amendments may potentially increase electrical conductivity. Trade-offs may be necessary between treatment or amendments to reduce pollutant concentrations and nominal increases in long term average conductivity to achieve effluent limitations. Since the requirement is a BMP and the electrical conductivity thresholds are expressed as triggers, not effluent limits, no changes to the draft order are requested on this item.”*

RESPONSE: Comment noted for the record and no changes to the proposed NPDES Permit were included.

STAFF REVISIONS

1. **Whole Effluent Toxicity**

The Tentative NPDES Permit contained Chronic Whole Effluent Toxicity requirements as per the State Water Resources Control Board's Statewide Toxicity Provisions. Central Valley Water Board staff was recently informed by the United States Environmental Protection Agency that the Statewide Toxicity Provisions will not be approved (and therefore will not take effect) prior to the Central Valley Water Board's February 2023 Board meeting. Central Valley Water Board staff revised the proposed NPDES Permit by reverting back to site-specific Whole Effluent Toxicity limitations and testing requirements similar to the Park's current NPDES Permit, Order R5-2017-0086. Changes are shown below:

Waste Discharge Requirements sections IV.A.1.d and IV.A.1.e have been revised as follows to add/revise the whole effluent toxicity limitations:

- d. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - i. 70%, minimum for any one bioassay; and
 - ii. 90%, median for any three consecutive bioassays.
- e. **Chronic Whole Effluent Toxicity – Effective 13 October 2027.** The effluent chronic toxicity shall not exceed 1 chronic toxicity units (TUc) as 100 over the no-observed-effect concentration (as 100/NOEC) **AND** a percent effect of 25 percent (%) at 100 percent (%) effluent, for any endpoint as the median of up to three consecutive chronic toxicity tests within a six-week period.

Waste Discharge Requirements section IV.A.2.c has been added as follows to add an interim effluent limitation for chronic toxicity:

- c. **Chronic Toxicity.** Effective immediately and until 12 October 2027, the effluent chronic toxicity shall not exceed 16 TUc (as 100/NOEC) **AND** a percent effect of 25 percent at 6.25 percent effluent, for any end point as the median of up to three consecutive chronic toxicity tests within a 6-week period. This interim effluent limitation shall apply in lieu of the corresponding final effluent limitation for chronic whole effluent toxicity as specified in section IV.A.1.e until 12 October 2027.

Waste Discharge Requirements section VI.C.2 has been revised as follows to include Toxicity Reduction Evaluation Requirements:

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

- a. **Toxicity Reduction Evaluation Requirements.** This Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate, effluent toxicity. If the discharge exceeds the chronic toxicity thresholds defined in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE Work Plan and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity.

- i. **Chronic Toxicity Effluent Limitation Exceeded.** When a chronic whole effluent toxicity result during routine monitoring exceeds the chronic toxicity effluent limitation, the Discharger shall proceed as follows:
- (a) **Initial Toxicity Check.** If the result is less than or equal to 1.3 TUC as 100 over the effect concentration that would cause an adverse effect on 25 percent of the organisms (as 100/EC25) **OR** the percent effect is less than 25 percent at 100 percent effluent, check for any operation or sample collection issues and return to routine chronic toxicity monitoring. Otherwise, proceed to step (b).
 - (b) **Evaluate 6-week Median.** The Discharger may take two additional samples within 6 weeks of the initial routine sampling event exceeding the chronic toxicity effluent limitation to evaluate compliance using a 6-week median. If the 6-week median is greater than 1.3 TUC (as 100/EC25) and the percent effect is greater than 25 percent at 100 percent effluent, proceed with subsection (c). Otherwise, the Discharger shall check for any operation or sample collection issues and return to routine chronic toxicity monitoring. See Compliance Determination Section VII.E for procedures for calculating 6-week median.
 - (c) **Toxicity Source Easily Identified.** If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall resume routine chronic toxicity monitoring; If the source of toxicity is not easily identified the Discharger shall conduct a site-specific TRE.
 - (d) **Toxicity Reduction Evaluation.** If the percent effect is greater than 25 percent at 100 percent effluent, as the median of three consecutive chronic toxicity tests within a 6-week period, the Discharger shall submit a TRE Action Plan to the Central Valley Water Board including, at minimum:
 - (1) Any specific actions the Discharger will take to investigate and identify the cause(s) of toxicity;
 - (2) Any specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - (3) An update of the current status of the overall site investigation, assessment of Best Management

Practices (BMPs), and/or implementation of BMPs and treatment or control processes; and

- (4) An up-to-date schedule for these actions.

Waste Discharge Requirements section VI.C.7 has been revised as follows in part to add chronic toxicity to the compliance schedule:

- a. **Compliance schedule for implementation of BMPs in the Pit and final effluent limitations for aluminum, chronic toxicity, iron, manganese, and pH at EFF-001.** This Order requires compliance with the final effluent limitations for aluminum, chronic toxicity, iron, manganese, and pH by 13 October 2027. Implementation of BMPs in the Pit is integral to the control of sediment that is the source of aluminum, iron, manganese, and pH water quality objective exceedances, and turbidity in the discharge at EFF-001. Therefore, the BMP implementation schedule is included as a subset in the overall compliance schedule. Discharger shall prepare technical reports for items i-v below and by the due dates in the Technical Reports Table, Table E-7, in Attachment E, Monitoring and Reporting Program, to ensure compliance with the final effluent limitations for aluminum, chronic toxicity, iron, manganese and pH:

Compliance determination for chronic toxicity has been moved to Waste Discharge Requirements section VII.E and has been revised, as follows:

- E. **Whole Effluent Toxicity Effluent Limitations (Section IV.A.1.e and IV.A.2.c).** To evaluate compliance with the chronic whole effluent toxicity effluent limitation, the median TUC shall be the median of up to three consecutive chronic toxicity bioassays during a six-week period. This includes a routine chronic toxicity monitoring event and two subsequent optional compliance monitoring events. If additional compliance monitoring events are not conducted, the median is equal to the result for routine chronic toxicity monitoring event. If only one additional compliance monitoring event is conducted, the median will be established as the arithmetic mean of the routine monitoring event and compliance monitoring event.

In determining compliance with the final effluent limitation in section IV.A.1.e (**effective 13 October 2027**), where the median chronic toxicity units exceed 1 TUC (as 100/NOEC), the Discharger will be deemed out of compliance with the final chronic toxicity effluent limitation if the median chronic toxicity units for any endpoint also exceed a reporting level of 1.3 TUC (as 100/EC25) AND the percent effect at 100 percent effluent exceeds 25 percent. The percent effect used to evaluate compliance with the final chronic toxicity effluent limitation shall be based on the chronic toxicity bioassay result(s) from the sample(s) used to establish the median

TUc result, as described in the paragraph above. If the median TUc is based on two equal chronic toxicity bioassay results, the percent effect of the sample with the greatest percent effect shall be used to evaluate compliance with the final chronic toxicity effluent limitation.

In determining compliance with the interim effluent limitation in section IV.A.2.c (**effective immediately through 12 October 2027**), where the median chronic toxicity units exceed 16 TUc (as 100/NOEC) for any endpoint, the Discharger will be deemed out of compliance with the interim chronic toxicity effluent limitation if the median chronic toxicity units for any endpoint also exceed a reporting level of 16 TUc (as 100/EC25) AND the percent effect at 6.25 percent effluent for the same endpoint also exceeds 25 percent. The percent effect used to evaluate compliance with the interim chronic toxicity effluent limitation shall be based on the chronic toxicity bioassay result(s) from the sample(s) used to establish the median TUc result, as described above. If the median TUc is based on two equal chronic toxicity bioassay results, the percent effect of the sample with the greatest percent effect shall be used to evaluate compliance with the interim chronic toxicity effluent limitation.

Attachment E, Monitoring and Reporting Program (MRP) section IV.A is revised as follows to include acute toxicity 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 acute toxicity testing requirement:
1. **Monitoring Frequency** – The Discharger shall perform **quarterly** acute toxicity testing, while discharging.
 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 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.

Chronic toxicity testing requirements in the MRP have been moved to MRP section IV.B and have been revised as follows:

- B. Chronic Toxicity Testing.** The Discharger shall meet the chronic toxicity testing requirements:
1. **Monitoring Frequency** – The Discharger shall perform three species chronic toxicity testing, **once per permit term, in 2027**, while discharging at EFF-001
 2. **Sample Types** – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001. The receiving water control shall be a grab sample obtained from Monitoring Location RSW-001, as identified in this Monitoring and Reporting Program.
 3. **Sample Volumes** – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
 4. **Test Species** – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - a. **Cladoceran, water flea**, *Ceriodaphnia dubia* (survival and reproduction test);
 - b. **Fathead minnow**, *Pimephales promelas* (larval survival and growth test); and
 - c. **Green alga**, *Pseudokirchneriella subcapitata* (growth test).
 5. **Methods** – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002.
 6. **Reference Toxicant** – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
 7. **Dilutions** – For routine and compliance chronic toxicity monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-3, below. For TRE monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-3, below, unless an alternative dilution series is detailed in the submitted TRE Action Plan. A receiving water control or laboratory water control may be used as the diluent.

Table E-3. Chronic Toxicity Testing Dilution Series

| Samples | Dilution% | Dilution% | Dilution% | Dilution% | Dilution% | Controls |
|-----------------|------------------|------------------|------------------|------------------|------------------|-----------------|
| %Effluent | 100 | 75 | 50 | 12.5 | 6.25 | 0 |
| % Control Water | 0 | 25 | 50 | 87.5 | 93.75 | 100 |

8. **Test Failure** – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
- a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
 - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in the Method Manual.

MRP sections IV.C, IV.D, and IV.E and have been revised as follows to update the whole effluent toxicity reporting requirements:

- C. WET Testing Notification Requirements.** The Discharger shall notify the Central Valley Water Board within 24-hours after the receipt of test results exceeding the chronic toxicity effluent limitation, or an exceedance of the acute and/or chronic toxicity effluent limitation(s).
- D. 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, whole effluent toxicity monitoring shall be reported as follows:
 1. **Chronic WET Reporting.** Routing and compliance chronic toxicity monitoring results shall be reported to the Central Valley Water Board with the **quarterly** self-monitoring report, and shall contain, at minimum:
 - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC50, 100/EC25, 100/IC25, and 100/IC50, as appropriate.
 - b. The percent effect for each endpoint at the IWC.
 - c. The statistical methods used to calculate endpoints;
 - d. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

- e. The dates of sample collection and initiation of each toxicity test; and
- f. The results compared to the numeric toxicity monitoring trigger.

Additionally, the quarterly self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring type, i.e., routine, compliance, or TRE monitoring.

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the **quarterly** discharger self-monitoring reports and reported as percent survival.
3. **TRE Reporting.** Reports for TREs shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan, or as amended by the Discharger's TRE Action Plan.
4. **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, NOEC, LOEC, 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.
5. **Test of Significant Toxicity (TST).** For both acute and chronic toxicity testing, the toxicity monitoring results shall be reported to the Central Valley Water Board with the quarterly self-monitoring report, and shall contain, at minimum:
 - a. The valid toxicity test results for the Test of Significance Toxicity (TST) statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the Instream Waste Concentration (IWC) for the discharge at 100% effluent.
 - b. The statistical analysis used in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.
 - c. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.

- E. **Most Sensitive Species Screening.** The Discharger shall perform screening to re-evaluate the most sensitive species if there is a significant change in the nature of the discharge. If there are significant changes during the permit term, a rescreening must be performed prior to permit reissuance and results submitted with the Report of Waste Discharge.
1. **Frequency of Testing for Species Sensitivity Screening.** Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing conducted quarterly for 1-year in each quarter in which there is at least 15 days of discharge using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green alga (*Pseudokirchneriella subcapitata*). If the discharge occurs in one quarter for the year, two sets of testing shall be conducted within the same quarter. The tests shall be performed at an IWC of no less than 100 percent effluent.
 2. **Determination of Most Sensitive Species.** If a single test in the species sensitivity screening testing exceeds 1 TUc (as 100/NOEC), then the species used in that test shall be established as the most sensitive species. If there is more than a single test that exceeds 1 TUc (as 100/NOEC), then of the species exceeding 1 TUc (as 100/NOEC) that exhibits the highest percent effect shall be established as the most sensitive species. If none of the tests in the species sensitivity screening exceeds 1 TUc (as 100/NOEC), but at least one of the species exhibits a percent effect greater than 25 percent, then the single species that exhibits the highest percent effect shall be established as the most sensitive species. In all other circumstances, the Central Valley Water Board staff shall have discretion to determine which single species is the most sensitive considering the test results from the species sensitivity screening.

Attachment F, Fact Sheet (Fact Sheet) section IV.C.5 has been revised as follows to add the water quality-based effluent limitation for Whole Effluent Toxicity:

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E section V.). This Order also contains effluent limitations for acute and chronic toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent 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...”.

For priority pollutants, the SIP dictates the procedures for conducting the RPA. Acute toxicity is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Acute whole effluent toxicity is not a priority pollutant. Therefore, due to the site-specific conditions of the discharge, the Central Valley Water Board has used professional judgment in determining the appropriate method for conducting the RPA. 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.*” Accordingly, 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:

70%, minimum for any one bioassay; and
90%, median for any three consecutive bioassays.

- b. **Chronic 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 page section 3.1.20.). The Discharger conducted a 3-species chronic toxicity test in December 2020. *Pseudokirchneriella subcapitata* (growth), *Pimephales promelas* (survival and growth), *Ceriodaphnia dubia* (survival) all passed with a TUC of 1. *Ceriodaphnia dubia* failed the reproduction test with a TUC of 8. This data was used to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan’s narrative toxicity objective.
- i. **RPA.** No dilution has been granted for chronic whole effluent toxicity. Chronic toxicity testing results exceeding 1 chronic toxicity units (TUC) (as 100/NOEC) and a percent effect at 100 percent effluent exceeding 25 percent demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Basin Plan’s narrative toxicity objective. Based on chronic toxicity testing conducted in December 2020, the maximum chronic toxicity result was 8 TUC with a percent effect of 55 percent, therefore, the discharge does have reasonable potential to cause or contribute to an instream exceedance of the Basin Plan’s narrative toxicity objective.
- ii. **WQBELs.** The effluent chronic toxicity shall not exceed 1 chronic toxicity units (as 100/NOEC) AND a percent effect of 25 percent at 100 percent effluent, for any endpoint as the median of up to three consecutive chronic toxicity tests within a 6-week period.

Fact Sheet Section IV.E.2 has been added as follows to include the chronic toxicity compliance schedule and interim limitation rationale:

2. Chronic WET

- a. **Compliance Schedule.** The Discharger has complied with the application requirements in paragraph 4 of the State Water Board’s Compliance Schedule Policy, and the Discharger’s application demonstrates the need for additional time to implement actions to comply with the final effluent limitation for chronic WET. Therefore, a compliance schedule for compliance with the final effluent limitation for chronic WET is established in this Order.

A compliance schedule is necessary because the Discharger must implement actions to comply with the final effluent limitation for chronic WET. The Discharger has made diligent efforts to quantify chronic WET in the discharge and the sources of chronic WET in the waste stream. The Discharger conducted chronic WET monitoring during the term of Order R5-2017-0086. The compliance schedule is as short as possible. An interim performance-based limitation has been included in this Order and was determined as described in section IV.E.2.b, below. The interim effluent limitation for chronic WET is in effect until the final effluent limitation takes effect on 13 October 2027. The interim numeric effluent limitation for chronic WET and source control measures will result in the highest discharge quality that can reasonably be achieved until final compliance is attained.

- b. **Interim Requirements.** The Compliance Schedule Policy requires the Central Valley Water Board to establish interim requirements and dates for their achievement in the NPDES permit. Interim numeric effluent limitations are required for a compliance schedule longer than 1 year. Interim effluent limitations must be based on current treatment plant performance or previous final permit limitations, whichever is more stringent. When feasible, interim limitations must correspond with final permit effluent limitations with respect to averaging bases (e.g., AMEL, MDEL, AWEL, etc.) for effluent limitations for which compliance protection is intended.
 - i. **Monitoring Requirements.** The Discharger shall perform chronic toxicity testing once per permit term in 2027.
 - ii. **Chronic WET Interim Effluent Limitation.** The interim effluent limitation for chronic WET is based on Facility performance. Based on chronic WET testing conducted over the term of Order R5-2017-0086, the maximum observed result was greater than 8 TUc (as 100/NOEC) and a percent effect of 55 percent at 100 percent effluent. The Central Valley Water Board has established an interim effluent limitation for chronic WET of 16 TUc (as 100/NOEC) and a percent effect of 25 percent at 6.25 percent effluent.
 - iii. **Toxicity Reduction Evaluation (TRE) Requirements.** The Special Provision in section VI.C.2.a of the Order requires the Discharger to investigate the causes of and identify corrective actions to reduce or eliminate effluent toxicity. Interim limitations are established when compliance with final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis.

The interim limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved.

Fact Sheet section VI.B.2 has been revised as follows to include Chronic Whole Effluent Toxicity Requirements:

2. Special Studies and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity Requirements.** 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 section 3.1.20) Based on whole effluent chronic toxicity testing performed by the Discharger in December 2020, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan’s narrative toxicity objective.

The Monitoring and Reporting Program of this Order requires chronic WET monitoring to demonstrate compliance with the numeric chronic toxicity effluent limitation. If the discharge exceeds the chronic toxicity effluent limitation this provision requires the Discharger to conduct a site-specific Toxicity Reduction Evaluation (TRE).

Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Central Valley Water Board including, at minimum:

- i. Any specific actions the Discharger will take to investigate and identify the cause(s) of toxicity;
- ii. Any specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
- iii. An update of the current status of the overall site investigation, assessment of Best Management Practices (BMPs), and/or implementation of BMPs and treatment or control processes; and
- iv. An up-to-date schedule for these actions.

Chronic toxicity has been added to paragraphs 2 and 3 of Fact Sheet section VI.B.7, as follows:

[...]The Discharger has complied with the application requirements in paragraph 4 of the Compliance Schedule Policy, and the Discharger’s application demonstrates the need for additional time to implement actions to comply with the new limitations. Therefore, a

compliance schedule for compliance with final effluent limitations for aluminum, chronic toxicity, iron, manganese, and pH is established in this Order.

Implementation of BMPs is integral to the control of sediment that is the source of aluminum, chronic toxicity, iron, manganese, and pH in the discharge at EFF-001. Therefore, the BMP implementation schedule is included as a subset in the overall compliance schedule. The Discharger has made diligent efforts to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and has documented the results of those efforts as summarized below:[...]

Whole effluent toxicity testing requirements rationale in Fact Sheet section VII.C has been revised as follows:

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Quarterly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.
2. **Chronic Toxicity.** Chronic whole effluent toxicity testing is required once per permit term in order to demonstrate compliance with the numeric chronic toxicity effluent limitation.