CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD
27 FEBRUARY 2026 BOARD MEETING

Response to Comments
for
City of Woodland, Water Pollution Control Facility
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 regarding the tentative Waste Discharge Requirements (WDRs), National Pollutant Discharge Elimination System (NPDES) Permit CA0079049 renewal for the City of Woodland (Discharger), Water pollution Control Facility (Facility) discharge to Tule Canal and groundwater.

The tentative NPDES Permit (tentative Order) was issued for a 30-day public comment period on 8 December 2025 with comments due by 7 January 2026. The Central Valley Water Board received public comments regarding the tentative Permit by the due date from the Discharger, Central Valley Clean Water Association (CVCWA), and Jo Anne Kipps. Changes were made to the proposed Order 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.

Central Valley Clean Water Association (CVWCA) Comments

1. Chronic Toxicity Requirements.

CVCWA is requesting the proposed Order be consistent with the Court of Appeal, Fifth Appellate District ruling that the Test for Significant Toxicity (TST) is not an approved method for analyzing Whole Effluent Toxicity (WET) under the federal Clean Water Act and cannot be used in NPDES permitting (Camarillo Sanitary District et al. v. State Water Resources Control Board, Superior Court No. 22CECG02195).

CVCWA contends that the appellate ruling is currently under review by the California Supreme Court; however, the Court of Appeal's ruling has not been stayed. Issuing the Tentative Order as drafted contradicts the Court of Appeal decision, creating confusion and, if upheld by the Supreme Court, requiring the Discharger and the Board to take further action to reopen the permit to remove the effluent limitations as well as supporting language throughout the Tentative Order, including the justification provided on page F-69 regarding "approved methods" under 40 C.F.R. Part 136. CVCWA requests that the tentative order be revised to be consistent with the Court of Appeal ruling.

Response: Staff concur in part. The Fifth Circuit Court of Appeal's decision is currently under review by the California Supreme Court. Pending the Supreme Court's review, the opinion of the Court of Appeal is not binding on the Water Boards. Accordingly, the State Water Resources Control Board, Central Valley Water Board, and other regional water quality control boards are continuing to issue NPDES permits that implement the Statewide Toxicity Provisions, but are including a reopener in case the Supreme Court upholds the Court of Appeal's decision and the State Water Board suspends or revises the aquatic toxicity water quality standards. The following Fact Sheet language has been added to

support the State Water Resources Control Board's decision to implement the TST in the Statewide Toxicity Provisions, where applicable, in NPDES permits issued throughout California. Corrections were also made to section VI.C.2.e, Fact Sheet section VI.B.2.e, and Fact Sheet section VII.D.2 to remove erroneous references to toxicity triggers and replace with effluent limitations. The revised section VI.C.1.g of the proposed Order and Fact Sheet sections III.C.1.c and VI.B.1.e are shown below:

Proposed Order section VI.C.1.g

g. **Whole Effluent Toxicity.** This Order may be reopened for modification to revise the aquatic toxicity provisions if the Supreme Court determines that the test of significant toxicity cannot be used in NPDES permits and the State Water Board suspends or revises the aquatic toxicity water quality standards.

Proposed Order section VI.C.2.e

e. **Toxicity Reduction Evaluation (TRE) Requirements.** The Discharger shall initiate a TRE, as detailed in the Monitoring and Reporting Program (Attachment E, Section V.G), when any combination of two or more effluent limitation exceedances occur within a single toxicity calendar month or within two successive toxicity calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, fish kills, intermittent recurring toxicity) or if there is no effluent available to complete a routine monitoring test or compliance test, the Executive Officer may require a TRE.

Fact Sheet section III.C.1.c

c. **Statewide Toxicity Provisions.** On 1 December 2020, the State Water Board adopted State Policy for Water Quality Control: Toxicity Provisions (Toxicity Provisions) which established statewide numeric water quality objectives for both acute and chronic toxicity, using the TST, and a program of implementation to control toxicity. On 5 October 2021, the State Water Board adopted a resolution confirming that the Toxicity Provisions were adopted as a State Policy for Water Quality Control, for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions establish a uniform regulatory approach to provide consistent protection of aquatic life beneficial uses and protect aquatic habitats and life from the effects of known and unknown toxicants. The Toxicity Provisions were approved by OAL on 25 April 2022, and by U.S. EPA on 1 May 2023.

   On 14 December 2023, the State Water Board applied for U.S. EPA Region IX review and approval of a limited-use alternative test procedure (ATP), for the use of one-effluent concentration when conducting whole effluent toxicity (WET) testing, pursuant to 40 Code of Federal Regulations section 136.5 (28 August 2017). The application is specific to acute or chronic WET tests in Table 1 of the application when using the Test of Significant Toxicity (TST) statistical approach (U.S. EPA, 2010) for analyzing the data. The application is being sought for all dischargers or facilities in the State of California and their associated laboratories. The ATP application is still pending with U.S. EPA.

   The use of the TST has been the subject of litigation. In December 2024, the Second District Court of Appeal upheld the use of the TST in an NPDES

permit in the case Camarillo Sanitary District v. California Regional Water Quality Control Board - Los Angeles Region.

A separate legal challenge to the State Water Board's adoption of the Toxicity Provisions originated in Fresno County Superior Court on 18 July 2022, through a petition for writ of mandate filed by Camarillo Sanitary District, City of Simi Valley, City of Thousand Oaks, Central Valley Clean Water Association, and Clean Water SoCal (formerly known as Southern California Alliance of Publicly Owned Treatment Works) (Petitioners). One of the claims was that the Toxicity Provisions was inconsistent with the Clean Water Act. On 9 October 2023, the superior court denied the petition in its entirety.

On 19 December 2023, three of the Petitioners filed a notice of appeal of the Fresno Superior Court's decision upholding the Toxicity Provisions. On 5 August 2025, the Fifth District Court of Appeal issued a published opinion holding that the TST statistical approach, which is an integral component of the Toxicity Provisions, cannot be utilized in NPDES permitting to evaluate WET data because the TST is not an approved method under 40 Code of Federal Regulations Part 136. The Court of Appeal did not, however, disturb the Toxicity Provisions' use of the TST as a part of its water quality objectives. The State Water Board prevailed on all other claims in the litigation. The Court of Appeal's decision became final on 4 September 2025.

On 15 September 2025, the State Water Board filed a petition for review of the Fifth Circuit Court of Appeal's decision with the California Supreme Court. On 12 November 2025, the California Supreme Court granted review. The issues to be briefed and argued are limited to the issues raised in the State Water Board's petition for review.

Pending the California Supreme Court's review, the opinion of the Fifth Circuit Court of Appeal is not binding on the Water Boards. However, the opinion may be cited, not only for its persuasive value, but also for the limited purpose of establishing the existence of a conflict in authority.

In accordance with Water Code sections 13146 and 13247, the Regional Board must fully implement the water quality objectives and their implementation procedures in the Toxicity Provisions. The numeric water quality objectives for chronic and acute toxicity established by the Toxicity Provisions, which are based on the TST, were approved by U.S. EPA and remain in effect. As such, the numeric water quality objectives continue to serve as the applicable federal water quality standards in California.

The Water Boards must also continue to comply with federal Clean Water Act NPDES regulations for determining reasonable potential and establishing applicable water quality-based effluent limitations (WQBELs). NPDES regulations (40 CFR § 122.44(d)(1)(vii)(A)) require that all WQBELs be derived from and comply with all applicable water quality standards. Moreover, although the Toxicity Provisions left in place narrative water quality objectives for aquatic toxicity in regional water board water quality control plans (basin plans), the Toxicity Provisions did supersede basin plan provisions and portions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)

for implementing narrative water quality objectives. As such, there are currently no basin plan or SIP procedures in effect for implementing narrative water quality objectives to determine reasonable potential as required by 40 CFR § 122.44(d)(1)(ii). As a result, the Regional Board must fully implement all of the Toxicity Provisions.

Fact Sheet section VI.B.1.e

e. **Whole Effluent Toxicity.** This Order may be reopened for modification to revise the aquatic toxicity provisions if the Supreme Court determines that the test of significant toxicity cannot be used in NPDES permits and the State Water Board suspends or revises the aquatic toxicity water quality standards. See Fact Sheet Section III.C.1.c for more information.

Fact Sheet section VI.B.2.e

e. **Toxicity Reduction Evaluation (TRE) Requirements.** Pursuant to the Toxicity Provisions, the Discharger is required to initiate a TRE when any combination of two or more effluent limitation exceedances occur within a single toxicity calendar month or within two successive toxicity calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test or compliance test. MRP Section V.F. provides additional details regarding the TRE.

Fact Sheet section VII.D.2

2. **Toxicity Reduction Evaluation (TRE).** The Monitoring and Reporting Program of this Order requires chronic WET testing to demonstrate compliance with the numeric chronic toxicity effluent limitation or Basin Plan's narrative toxicity objective. The Discharger is required to initiate a TRE when there is any combination of two or more chronic toxicity effluent limitation exceedances within a single calendar month or within two successive calendar months has occurred. In addition, if other information indicates toxicity (e.g., results of additional monitoring, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test, or compliance test.

2. Hydraulic Conductivity Determination.

CVCWA is requesting that the proposed Order not include the determination of hydraulic conductivity as greater than $1x10^{-6}$ centimeters per second (cm/s) and provide justification consistent with Water Code section 13241 regarding why this standard is appropriate and should be included.

CVCWA disagrees with the tentative Order's conclusion that the hydraulic conductivity in the soil beneath all ponds is greater than $1x10^{-6}$ cm/s. CVCWA is, and remains, concerned with the use of a "*hydraulic conductivity standard of $1x10^{-6}$ cm/s*" without justification that describes the source and basis of this value and provides an analysis of Water Code section 13241 factors. CVCWA contends that the Tentative Order contains references to Seepage Studies to determine seepage rates for each pond; however, there is no information supporting the basis for the determination of hydraulic conductivity beneath

each pond. Hydraulic conductivity and seepage rates are not equivalent. CVCWA contends that the Tentative Order does not contain sufficient analysis and discussion justifying the calculation and determination of the applicable hydraulic conductivity. Therefore, CVCWA supports the incorporation of the comments submitted by the City of Woodland regarding the determination of the hydraulic conductivity of their ponds, including the calculations showing that hydraulic conductivity is below $1x10^{-6}$ cm/s.

Response: Staff concur. The hydraulic conductivity of 1×10^{-6} cm/s is better described as a target rather than a standard and that the estimated hydraulic conductivity provided by the Discharger is less than $1x10^{-6}$ cm/s. The proposed Order has removed the reference of a standard for hydraulic conductivity and included the reference to the estimated hydraulic conductivity. The first example of the removal of the term "standard" is shown in the response to Discharger Comment 6. The updated estimated hydraulic conductivity language is included in the response to Discharger Comment 19.

3. Groundwater.

CVCWA requests that Fact Sheet section VII.C.2.b be revised or removed. CVCWA notes that this section should remove the requirement for a "*complete assessment*" of groundwater impacts through monitoring, including "*economic analysis.*" should be revised to remove the reference to reopening the permit for "*incrementally increased*" constituent concentrations in groundwater. Accordingly, CVCWA recommends removing all language in subdivision d except for the last sentence: "*If groundwater quality has been or may be degraded by the discharge, this Order may be reopened, and specific numeric limitations established consistent with the State Anti-Degradation Policy and the Basin Plan.*"

Response: Staff concur. Fact Sheet section VII.C.2 is intended to provide rationale for groundwater monitoring. Fact Sheet section VII.C.2.b from the tentative Order is not related to groundwater monitoring rationale and has been removed from the proposed Order. The subsequent subsections have been reindexed.

Discharger Comments

1. **Table 2. Discharge Point 002 Description.**

   The Discharger requests that the effluent description for Discharge Point 002 be revised to communicate that screened influent, not primary wastewater, is discharged to the pond system. For the Facility, primary wastewater would be wastewater exiting the aerated grit chambers, but influent is diverted to Erskine Pond following the 6 mm plate screens, which are ahead of the grit chambers. Discharge Prohibitions, section III.G., correctly notes that screened influent is discharged to Erskine Pond.

   Response: Staff concur. The updated Table 2 is shown below:

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary treated municipal wastewater	38° 40’ 51” N	121° 38’ 38” W	Tule Canal
002	Screened influent and/or secondary treated municipal wastewater, waste activated sludge stabilization process	--	--	Groundwater

2. **Discharge Prohibition for the Emergency Detention Basin.**

   The Discharger requests that this Discharge Prohibition G in section III be revised by removing the term “*secondary effluent that is not nitrified or denitrified*”. The Discharger notes that the Facility cannot discharge secondary effluent other than following the Facility aeration basins, which provide activated sludge, nitrification, and denitrification treatment and the Discharger cannot determine when they are out of compliance with this prohibition as written in the tentative Order. The Discharger also provided language to add to section VI.C.4.c.vi of the proposed Order to clarify that the Emergency Detention Basin shall be maintained to meet a hydraulic conductivity of $1x10^{-6}$ cm/s or better when the Emergency Detention Basin is constructed.

   Response: Staff concur in part. The intent for the term “*secondary effluent that is not nitrified or denitrified,*” was to prohibit discharge of wastewater not nitrified and denitrified to any pond other than the Emergency Detention Basin. Section VI.C.4.c.vi of the proposed Order applies to the constructed Emergency Detention Basin. The revised sections III.G and VI.C.4.c are shown below:

   Section III.G

   G. Once the Emergency Detention Basin is constructed and operational, discharge of screened influent and/or wastewater from the treatment process that is not nitrified and denitrified to ponds other than the Emergency Detention Basin is prohibited.

   Section VI.C.4.c.vi

   vi. The Discharger shall ensure the Emergency Detention Basin, once constructed, is maintained to meet a hydraulic conductivity of $1x10^{-6}$ cm/s or less and to minimize cracking and infiltration.

3. **Selenium Effluent Limitation.**

   The Discharger requests that the selenium effluent limitations be calculated using selenium data collected from the Facility during the previous three years The Discharger provided a

coefficient of variation (CV) for the Discharger's data from the past three years (October 2022–August 2025) of 0.54. This CV is approximately 50% lower than the CV of 1.1 listed in Attachment G. The CV for the past three years is consistent with the long-term CV of 0.52 for the Discharger's selenium dataset dating back to September 2010. The selenium effluent limitations are now being calculated using U.S. EPA's 2024 selenium criteria for California, which replaced the previous California Toxics Rule (CTR) chronic freshwater aquatic life criterion of 5 µg/L. Hence, the Fact Sheet should be revised to note that the criteria being implemented are not U.S. EPA's National Ambient Water Quality Criteria, but U.S. EPA's 2024 freshwater aquatic life criteria for California that replaced the previous CTR criteria.

Response: Staff concur. The revised sections to Table 4, Fact Sheet Table F-3, Fact Sheet section IV.C.3.c.iv, Fact Sheet Table F-8, Fact Sheet section IV.D.3.b.ii, Fact Sheet section IV.D.5 (also showing changes in response to Jo Anne Kipps Comment 10), Attachment G, and Attachment H are shown below.

Table 4 Effluent Limitations

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Total Selenium	micrograms per liter (µg/L)	2.6	--	4.8

Fact Sheet Table F-3 Historic Effluent Limitations

Parameter	Units	Historic Effluent Limitations	Maximum Effluent Concentrations
Selenium, Total	Micrograms per Liter (µg/L)	AMEL: 4.0 Maximum Daily Effluent Limitation (MDEL): 8.0	Monthly Average: 2.2 Maximum Daily: 2.2

Fact Sheet section IV.C.3.c.iv

iv. **Selenium**

(a) **WQO.** The California Division of Drinking Water and US EPA have a Primary MCL of 50 µg/L for selenium. The CTR criteria for freshwater aquatic life was replaced in 2024 by the U.S. EPA in the Establishment of a Numeric Criterion for Selenium for the State of California (2024 Criteria). U.S. EPA promulgated a chronic (30-day average; criteria continuous concentration or CCC) standard of 1.5 µg/L for lentic (nonflowing/still, ponds/lakes) waters and 3.1 µg/L for lotic (flowing) waters. Tule Canal is considered a lotic water and the 30-day CTR CCC of 3.1 µg/L is applicable.

(b) **RPA Results.** From October 2021 through June 2024, the MEC for total selenium was 7.1 µg/L which exceeds the CTR chronic criterion. Therefore, the SIP requires effluent limits for selenium. Effluent sampling from October 2022 through August 2025 resulted in an MEC of 2.2 µg/L.

(c) **WQBELs.** The Discharger requested Effluent sampling from October 2022 through August 2025 for selenium be used in the calculation of the selenium effluent limitation. Effluent sampling from October 2022 through August 2025 results in the following effluent limitations for

selenium: MDEL = 4.8 µg/L and AMEL = 2.6 µg/L, based on the CTR chronic criterion for the protection of freshwater aquatic life.

(d) **Plant Performance and Attainability.** October 2022 through August 2025, the effluent exceed did not exceed the AMEL of 2.6 µg/L and MDEL of 4.8 µg/L. The Central Valley Water Board concludes that immediate compliance with the selenium effluent limitations is feasible.

Fact Sheet Table F-8

Parameter	Units	AMEL	AWEL	MDEL
Total Selenium	µg/L	2.6	--	4.8

Fact Sheet section IV.D.3

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 the previous Order, with the exception of average weekly effluent limitation for ammonia (total as nitrogen). The effluent limitation for this pollutant is less stringent than that in Order R5-2020-0015. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

a. **CWA section 402(o)(1) and 303(d)(4).** CWA section 402(o)(1) prohibits the establishment of less stringent water quality-based effluent limits "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.

   Tule Canal is considered an attainment water for ammonia (total as nitrogen) because the receiving water is not listed as impaired on the 303(d) list for this constituent. 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. As discussed in section IV.D.4, below, relaxation or removal of the effluent limits complies with federal and state antidegradation requirements. Thus, relaxation of the average weekly effluent limitation for ammonia (total as nitrogen) from Order R5-2020-0015 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 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 which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

i. **Ammonia, Total as Nitrogen.** Effluent monitoring data collected between August 2021 and July 2024 resulted in an average weekly effluent limitation (AWEL) that is less stringent than the AWEL in Order R5-2020-0015. The ammonia, total as nitrogen AWEL is based on the current dataset for ammonia total as nitrogen, pH, and temperature, and updated ammonia total as nitrogen criteria. Calculation of the ammonia limits are detailed in section IV.C.3 of this Fact Sheet.

Thus, relaxation of the AWEL for ammonia, total as nitrogen from Order R5-2020-0015 is in accordance with CWA section 402(o)(2)(B)(i), which allows for less stringent effluent limitations based on information that was not available at the time of permit issuance.

Fact Sheet section IV.D.4, Second Paragraph

This Order relaxes the AWEL for ammonia (total as nitrogen) based on the current dataset for ammonia, pH, and temperature, and updated ammonia criteria. The removal and relaxation of WQBELs for these parameters will not result in an increase in pollutant concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Therefore, the Central Valley Water Board finds that the removal and relaxation of the effluent limitations does not result in an increase in pollutants or any additional degradation of the receiving water. Thus, the removal and relaxation of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

Fact Sheet section IV.D.5

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD_5, TSS, flow, and pH. Technology-based restrictions on BOD_5, TSS, flow, and pH are discussed in sections IV.B.2.a and c of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. For BOD_5, TSS, and pH, both technology-based effluent limitations and water quality-based effluent limitations are applicable. The more stringent of these effluent limitations are implemented by this Order. These limitations are not more stringent than required by the CWA. Water quality-based effluent limitations for BOD_5, TSS, and pH are discussed in sections IV.C.3.d.ii and iii.

As discussed Fact Sheet section IV.F below, this Order requires the discharges to land to be monitored at the ponds rather than the point of discharge into the ponds. Fact Sheet section V.B discusses the rationale for groundwater limitations.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on 18 May 2000. 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 001

Table F-12 Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	Basis
BOD_5	mg/L	AMEL: 10 AWEL: 15	TTC
TSS	mg/L	AMEL: 10 AWEL: 15	TTC
pH	Standard Units	Instantaneous Minimum: 6.5 Instantaneous Maximum: 8.5	BP
Ammonia, Total as Nitrogen	mg/L	AMEL: 1.1 AWEL: 3.9	NAWQC
Selenium, Total	µg/L	AMEL: 2.6 MDEL: 4.8	CTR
Total Coliform Organisms	MPN/ 100mL	7-Day Median:2.2 More than once in a 30-Day Period: 23 Anytime: 240	Title 22
Diazinon and Chlorpyrifos	µg/L	AMEL 1 AWEL 1	BP
Methylmercury	Grams	Grams per Year: 0.43	TMDL

Table F-12 Notes:

1. **TTC** – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
   BP – Based on water quality objectives contained in the Basin Plan.
   CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
   NAWQC – Based on U.S. EPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
   TMDL – Based on the TMDL for salinity and boron in the lower San Joaquin River.
   Title 22 – Based on State Water Board Division of Drinking Water Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).
2. **Methylmercury.** Effective 31 December 2030

Attachment G

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	RP
Total Selenium	µg/L	7.1	--	3.1	20	3.1	--	--	--	50	Yes

Attachment H

Parameter	Units	CMC Criteria	CCC Criteria	B	Effluent CV	CMC Dilution Factor	CCC Dilution Factor	ECA Multiplier$_{acute}$	LTA$_{acute}$	ECA Multiplier$_{chronic}$	LTA$_{chronic}$	AMEL Multiplier$_{95}$	AWEL Multiplier	MDEL Multiplier$_{99}$	AMEL	AWEL	MDEL
Total Selenium	µg/L	20	3.1	--	0.49	--	--	0.38	7.6	0.6	7.8	1.4	2.3	2.6	2.6	--	4.8

4. **Chronic Whole Effluent Toxicity (WET) Effluent Limitations**

   The Discharger notes that the WET effluent limitations are based on the Test of Significant Toxicity (TST) and that California's Fifth Appellate District Court ruled that the TST cannot be implemented in NPDES permit provisions that have been issued pursuant to the Clean Water Act (Camarillo Sanitary District et al. vs. State Water Resources Control Board, Superior Court No. 22CECG02195).

   The California Supreme Court has agreed to review this ruling at the request of the State Water Resources Control Board (State Water Board). If the Fifth Appellate District Court decision is upheld, then the WDRs will need to be reopened to remove provisions throughout the WDRs that are based on the TST.

   Response: See response to CVCWA comment 1

5. **Ponds and Groundwater Information Report.**

   a. The Discharger requests that the information provided in the Ponds and Groundwater Information Report from section VI.C.2.a should be noted as coming from readily available sources. If this is not noted, then one could presume that the Discharger needs to hire a contractor to generate the information with instrumentation or measurements on site, such as deploying instrumentation to measure evaporation at the ponds, which is not possible.

   b. The Discharger contends that no inflow and infiltration directly enter the ponds.

   c. The Discharger contends that since only vascular plants transpire and there are no vascular plants in the ponds, it is not appropriate or necessary to report evapotranspiration for the area and that pond evaporation cannot be readily measured, so it must be estimated from local pan evaporation measurements.

   d. The Discharger contends that the report requires that wells within the vicinity of the Facility must be evaluated without clarifying to what extent or for what purpose. This would only be necessary to determine if groundwater quality issues observed at the Facility also occur in groundwater offsite (i.e., the geographic extent of the impact). Therefore, the Discharger wishes to limit the evaluation of near-facility wells only to instances where this is "necessary." For example, it would be appropriate to utilize the downgradient and neighboring wells at Pacific Coast Producers to determine if manganese at the Discharger's well MW-6 influences water quality offsite. However, the low nitrate levels in the Facility wells would not warrant further evaluation using off-site data since the facility's wells do not show increasing trends or non-compliance. That is, off-site nitrate exceedances would be attributable to non-Facility sources, which the Discharger should have no responsibility to evaluate.

      Response: Staff concur. The information required should be readily available to the Discharger. Inflow and infiltration requirements to the ponds were removed since these sources do not directly enter the ponds. Pan evaporation can be used to estimate pond evaporation and evapotranspiration is not needed in this case. The report requirements were revised to include the groundwater monitoring wells owned by the Discharger or any well information provided by the Discharger. The revised section VI.C.3.a and Fact Sheet section VI.B.2.a is shown below:

      Proposed Order section VI.C.3.a

      a. **Ponds and Groundwater Information Report.** The Discharger shall submit the Ponds and Groundwater Information Report by the date on Table E-12 of

the MRP (Technical Reports Table) and shall include, to the extent feasible from existing information:

i. Information for Ponds 1 through 13 including but not limited to: Pond area, pond working liquid depth, pond invert and berm elevations, pond bottom soil stratigraphy and infiltration rates, and assessor parcel number(s), sludge depth at applicable ponds;

ii. Information for Ponds 1 through 13 including at least the previous 5 years of data and, at minimum:
   (a) Influent flows at current conditions and projected conditions after scheduled improvements (if applicable) (monthly average values);
   (b) Discharge flows to the pond system including, but not limited to: the Erskine Pond, Sludge Stabilization Ponds, and Algae Production Ponds (monthly average values);
   (c) The local 100-year precipitation total, distributed by mean monthly precipitation patterns;
   (d) Pan evaporation and projected pond evaporation rates (monthly average values);
   (e) Projected long-term percolation rates (including consideration of percolation from unlined ponds and the effects of solids plugging); and
   (f) Estimated annual seepage losses;

iii. Information for Discharger installed groundwater monitoring wells, and any other wells provided by the Discharger, including, but not limited to: construction dates, reference elevations, screened intervals, boring logs, groundwater depths, vertical separation between pond inverts, the highest anticipated groundwater, and other available information specifying surface and subsurface soil layer(s) and depths;

iv. An evaluation of the ponds and groundwater monitoring wells in the MRP, and any other wells provided by the Discharger, including, at minimum:
   (a) A summary and list of upgradient/background and downgradient wells;
   (b) A summary of at least the previous five years of pond and groundwater data with a comparison of the upgradient/background and downgradient wells and applicable groundwater limitations and/or Basin Plan groundwater water quality objectives; and
   (c) A summary of any past exceedance of applicable groundwater limitations and/or Basin Plan groundwater water quality objectives at the ponds and/or downgradient groundwater monitoring wells;

v An evaluation of current and future methods used to minimize organic overloading and degradation to groundwater; and

vi. A scaled facility map that shows the Discharger's property line, current and historic prevalent groundwater gradient and flow direction, the receiving waters and any nearby tributaries, and all monitoring locations specified in this Order.

Fact Sheet section VI.B.2.a

a. **Ponds and Groundwater Information Report.** The Discharger submitted the *City of Woodland Antidegradation Analysis and BPTC Evaluation for*

Groundwater Protection on 30 November 2021 (November 2021 Antidegradation Report) which evaluated background/upgradient and downgradient groundwater monitoring wells for compliance with the State Antidegradation Policy. The November 2021 Antidegradation Report provided alternatives to the current waste solids handling at the Sludge Stabilization Ponds. The alternatives included modification of the existing pond system to include dissolved air flotation thickeners (DAFT), construction of a centrifuge dewatering system to concentrate solids and allow transport to a nearby Lystek facility for further processing to Class A biosolids, and construction of a new anaerobic digester with primary clarifiers, a rotary drum thickener, and a belt filter press to process solids to Class B standards.

The November 2021 Antidegradation Report concluded that overall, the existing pond system is a the BPTC for the Discharger. Compliance with groundwater water quality objectives for electrical conductivity, nitrate (total as nitrogen), and total coliform organisms was mentioned as an important factor in the decision to retain or modify the pond system. The Discharger listed other factors related to Discharger's growth, other crucial needs at the Facility, and sustainability goals that will determine the future of the ponds.

The Ponds and Groundwater Information Report requires detailed information not provided in the November 2021 Antidegradation Report. The Ponds and Groundwater Information Report requires information on the Facility's ponds, groundwater wells at and near the Facility, a summary and evaluation of Facility pond and groundwater water quality in the vicinity of the Facility, and a water balance study to be conducted on the pond system. Furthermore, the groundwater evaluation in November 2021 Antidegradation Report was limited to electrical conductivity, nitrate (total as nitrogen) and total coliform organisms. The discharge of water with high BOD to ponds with a pond bottom hydraulic conductivity of greater than $1x10^{-6}$ cm/s could create low oxygen conditions in the groundwater and mobilize the arsenic, manganese, and iron in the soil, therefore the Ponds and Groundwater Information Report requires an evaluation of all the pond and groundwater parameters required to be monitored in the Attachment E of this Order.

6. Emergency Detention Basin Installation Report

The Discharger requests that the "*Final Emergency Detention Basin Installation Report*" in WDR section VI.C.2.c.i be renamed and referred to as an installation "*work plan*" instead of a final installation report, and the description be revised accordingly.

The Discharger cannot complete a final installation report until the Emergency Detention Basin is complete, which, as the Fact Sheet mentions, may take until 2036. The Discharger is currently planning an investigation of Erskine Pond and an alternatives analysis to determine how it will meet the lining requirements. The Discharger can provide a work plan following this analysis that will propose a plan and schedule for constructing a lined basin and proposes submitting it by October 1, 2027 (18 months following permit adoption). The change from a final report to a work plan is consistent with Item 2.c.ii, which refers to an Emergency Detention Basin Installation Work Plan, though the Tentative WDRs does not yet require a work plan. With a change to a work plan due in 2027, the first annual progress report does not need to be submitted until 2028.

Response: Staff concur. A "*work plan*" will provide the information needed since a "*final report*" will not be available until after the expected completion date of the Emergency Detention Basin by the end of the next permit term. The revised section VI.C.2.c, Technical Reports Table, and Fact Sheet section VI.B.2.c are shown below:

WDR section VI.C.2.c

c. **Emergency Detention Basin Installation**

i. **Emergency Detention Basin Installation Work Plan.** The Discharger shall submit an Emergency Detention Basin Installation Work Plan by the date specified in the Technical Reports Table. The basin's engineered surface shall meet a hydraulic conductivity of 1×10^{-6} centimeters per second (cm/s) or less using one of the following:

- Compacted clay liner, with a minimum clay thickness of two feet.
- Portland cement concrete liner, designed to minimize cracking and infiltration.
- Synthetic liner, consisting of a 40 thousandths of an inch (mil) synthetic geomembrane or a 60-mil high-density polyethylene liner installed over a prepared base or a secondary clay or concrete liner.
- Equivalent engineered alternative approved by the Executive Officer.

The Emergency Detention Basin Installation Work Plan shall detail the milestones for installation and startup of the detention basin. The Work Plan shall include construction drawings and detention basin specifications including, hydraulic conductivity, capacity, pump capacity, pump and piping location, depth, operating depth, dimensions, location, etc. The Work Plan shall also include an Operation and Maintenance Plan detailing how the Discharger shall perform basin clean-out activities, maintain design hydraulic conductivity, and conduct necessary repairs.

ii. **Emergency Detention Basin Installation Annual Reports.** The Discharger shall submit Emergency Detention Basin Installation Annual Reports to the Central Valley Water Board by the dates in the Technical Reports Table and shall document progress on the implementation of the Emergency Detention Basin Installation Work Plan. The annual reports shall include a summary of work completed during the reporting period, a description of any deviations from the Emergency Detention Basin Installation Work Plan and the reasons for those deviations, a schedule of pending tasks and expected completion dates, and supporting documentation demonstrating progress.

MRP – Technical Reports Table

Report #	Technical Report	Due Date	CIWQS Report Name
1	Report of Waste Discharge	31 March 2030	ROWD
2	Pond and Groundwater Information Report	31 March 2030	WDR VI.C.2.a
3	Groundwater Well Installation Work Plan	1 October 2027	WDR VI.C.2.b.i
4	Groundwater Well Installation Report	31 March 2030	WDR VI.C.2.b.ii
5	Emergency Detention Basin Installation Work Plan	1 October 2027	WDR VI.C.2.c.i

Report #	Technical Report	Due Date	CIWQS Report Name
6	Emergency Detention Basin Installation Annual Report	1 July 2028	WDR VI.C.2.c.ii
7	Emergency Detention Basin Installation Annual Report	1 July 2029	WDR VI.C.2.c.ii
8	Emergency Detention Basin Installation Annual Report	1 July 2030	WDR VI.C.2.c.ii
9	Sludge Stabilization Ponds Liner Maintenance Report	31 March 2030	WDR VI.C.2.d
10	Flood Protection Certification	1 October 2026	WDR VI.C.2.f
11	Pollution Prevention Plan for Mercury and Methylmercury Annual Progress Reports	1 February 2027	WDR VI.C.3.a
12	Pollution Prevention Plan for Mercury and Methylmercury Annual Progress Reports	1 February 2028	WDR VI.C.3.a
13	Pollution Prevention Plan for Mercury and Methylmercury Annual Progress Reports	1 February 2029	WDR VI.C.3.a
14	Pollution Prevention Plan for Mercury and Methylmercury Annual Progress Reports	1 February 2030	WDR VI.C.3.a
15	Pollution Prevention Plan for Mercury and Methylmercury Annual Progress Reports	1 February 2031	WDR VI.C.3.a
16	Analytical Methods Report	1 June 2026	MRP X.D.2
17	Analytical Methods Report Certification	2 January 2027	MRP IX.E.2.
18	Annual Operations Report	1 February 2027	MRP X.D.2
19	Annual Operations Report	1 February 2028	MRP X.D.2
20	Annual Operations Report	1 February 2029	MRP X.D.2
21	Annual Operations Report	1 February 2030	MRP X.D.2
22	Annual Operations Report	1 February 2031	MRP X.D.2
23	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2026	MRP X.D.4
24	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2027	MRP X.D.4
25	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2028	MRP X.D.4
26	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2029	MRP X.D.4
27	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2030	MRP X.D.4
28	Annual Pretreatment Reports	28 February 2027	MRP X.D.6
29	Annual Pretreatment Reports	28 February 2028	MRP X.D.6
30	Annual Pretreatment Reports	28 February 2029	MRP X.D.6
31	Annual Pretreatment Reports	28 February 2030	MRP X.D.6
32	Annual Pretreatment Reports	28 February 2031	MRP X.D.6

Fact Sheet section VI.B.2.c

c. **Emergency Detention Basin Installation.** The Emergency Detention Basin Installation special reports are designed to protect shallow groundwater from

impacts by the Emergency Detention Basin. The Work Plan includes requirements to provide a detailed schedule required to design and construct an emergency detention basin with a hydraulic conductivity of no more than 1 x 10^{-6} cm/s. Annual reports track progress, document any changes, and outline remaining tasks. The Work Plan requires that the engineered surface is installed as designed, supported by quality assurance tests and an Operation and Maintenance Plan.

7. Sludge Stabilization Pond Performance Test

The Discharger requests that the seepage testing on the Sludge Stabilization Ponds in WDR section VI.C.2.d.ii be limited to only those ponds that can be taken out of service to make them available for testing ahead of the test due date.

The Sludge Stabilization Ponds are used on a rotating 6-year cycle, as described in the Fact Sheet, to provide a sufficiently long detention time to produce Class A biosolids. Sludge Stabilization Ponds in service are either being used for solids loading and digestion, which requires circulation of water through that pond, or for solids drying. Thus, a pond needs to be cleared of biosolids and taken out of service to conduct the seepage testing. The Discharger anticipates that only one Sludge Stabilization Pond, and two at most, may become available within the next four years to complete the performance test before it must be reported on March 31, 2030.

Response: Staff concur. The Sludge Stabilization Ponds were all lined with the same standards. The estimated hydraulic conductivity provided by the Discharger for Pond 11 was less than 1x10^{-6} centimeters per second and is representative of the three Sludge Stabilization Ponds. Section VI.C.2.d.ii of the proposed Order was revised to limit the Sludge Stabilization Pond Performance Test to at minimum one Sludge Stabilization Pond. The revised section VI.C.2.d.ii of the proposed Order is shown below:

d. **Sludge Stabilization Ponds Liner Maintenance Report.** The Sludge Stabilization Ponds Liner Maintenance Report shall be submitted on the date specified in the Technical Reports Table and shall include, at minimum:

   i. Liner characteristics and conditions for each Sludge Stabilization Pond including, but not limited to: liner thickness, hydraulic conductivity in terms of centimeter per second, and leakage rate in terms of gallons per acre per day, and any other technical information that pertains to the integrity of the liner to potentially compromise the infiltration of wastewater into soil and underlying groundwater;

   ii. A performance test for at minimum one of the three Sludge Stabilization Ponds (e.g., seepage/leak test, results from the water balance, liner leak detection testing, hydraulic conductivity testing of soil cores, or other geologic evaluation) during the permit term that evaluates if the ponds are operating with minimal leaking.

   iii. A description of the performance test methodology and/or instrumentation used;

   iv. Test results and conclusions;

   v. A summary of all future improvement projects;

   vi. A summary of maintenance performed during the permit term; and,

vii. Any liner modifications or repairs needed to continue Sludge Stabilization Ponds operations, including a schedule to complete the repair or a date the repairs were completed as well as current Operations and Maintenance projects (including but not limited to liner repairs).

8. Salinity Evaluation and Minimization Plan Triggers

The Discharger requests revisions to section VI.C.3.b to indicate that compliance with the Salinity Evaluation and Minimalization Plan (SEMP) electrical conductivity (EC) triggers of 1,250 µmhos/cm and 2,100 µmhos/cm be determined by using samples collected from monitoring locations EFF-001 and INF-001 respectively.

- Trigger of 1,250 µmhos/cm – This trigger was developed using EC values from the final effluent discharged to Tule Canal (EFF-001), and it applies to both EFF-001 and the secondary effluent discharged to the ponds (LND-003). No treatment processes occur between the secondary clarifiers and the final effluent that will cause EC to be higher (or any different) at LND-003 relative to EFF-001. The Discharger contends that maintaining compliance with this trigger at EFF-001 is protective of the secondary effluent discharge to the ponds and monitoring EC at LND-003 is unnecessary and duplicative.
- Trigger of 2,100 µmhos/cm – This trigger was developed using EC values from the influent, as monitored at INF-001, but this trigger only applies to discharges of screened influent to Erskine Pond at LND-002. Discharges of screened influent to Erskine Pond occur only a few times per year during intense wet weather, making it difficult or impossible to collect a sample at the time an actual diversion occurs. The Discharger notes that Facility staff are tending to operations during intense wet weather and diversions can occur at night when on-site staffing can be limited. Accordingly, the Discharger proposes to comply with this trigger by collecting monthly EC measurements at INF-001, which it can monitor routinely if EC is incorporated into Attachment E, Monitoring and Reporting Program (MRP) Table E-2. Using data from INF-001 will provide more samples throughout the year than would monitoring at LND-002.

Response: Staff concur that EC triggers of 1,250 µmhos/cm and 2,100 µmhos/cm can be determined by using samples collected from monitoring locations EFF-001 and INF-001, respectively. The Discharger is enrolled in the CV-SALTS Salinity Prioritization and Optimization Study (P&O Study). The performance triggers are intended as a tool to ensure current EC concentrations are maintained during Phase 1 of the Salt Control Program. Corresponding revisions were made to the MRP to include EC monitoring at monitoring location INF-001, remove EC monitoring from LND-002 and LND-003 from the MRP, and revise the Fact Sheet rationale. Language to cease flow monitoring at monitoring location INT-001 was mistakenly included in the tentative Order and was corrected in the proposed Order. The revised sections are shown below and are included in the proposed Order as appropriate:

Section VI.C.3.b

b. **Salinity Evaluation and Minimization Plan (SEMP).** The Discharger shall continue to implement a SEMP to identify and address sources of salinity discharged from the Facility. The Discharger submitted a Notice of Intent to comply with the Salt Control Program and selected the Alternative Permitting Approach. Accordingly, the Discharger shall participate in the CV-SALTS Prioritization and Optimization (P&O) Study. Furthermore, an evaluation of

the effectiveness of the SEMP shall be submitted with the ROWD. The evaluation shall include, at minimum, the calendar annual average concentrations of effluent electrical conductivity during the term of the Order. If the average electrical conductivity concentration for any calendar year exceeds a performance-based **trigger of 1,250 µmhos/cm** at Monitoring Location EFF-001, the Discharger shall evaluate possible sources of salinity contributing to the exceedance of the trigger and update the SEMP to include a plan of action to control salinity.

If the average electrical conductivity concentration for any calendar year exceeds a performance-based **trigger of 2,100 µmhos/cm** at Monitoring Location INF-001, the Discharger shall evaluate possible sources of salinity contributing to the exceedance of the trigger and update the SEMP to include a plan of action to control salinity.

MRP section III.A

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the Facility at INF-001 in accordance with Table E-2 and the testing requirements described in section III.A.2 below:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	Million Gallons per Day (MGD)	Meter	Continuous
Biochemical Oxygen Demand (5-day @ 20°Celsius) (BOD_5)	Milligrams per Liter (mg/L)	24-Hour Composite	1/Week
Total Suspended Solids (TSS)	mg/L	24-Hour Composite	1/Week
Electrical Conductivity @ 25° Celsius (Electrical Conductivity)	µmhos/cm	Grab	1/Month

2. **Table E-2 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-2:
   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136; or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.
   b. **24-Hour Composite Samples.** All composite samples shall be collected from a 24-hour flow proportional composite.
   c. **Grab Sample.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.
   d. **Handheld Field Meter.** A handheld field meter may be used for **electrical conductivity** 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 Monitoring and Reporting Program shall be maintained at the Facility.

MRP section VI.A

A. Land Discharge Monitoring Location LND-002, LND-003, and INT-001

1. The Discharger shall monitor discharges of wastewater at LND-002, LND-003, and INT-001 in accordance with Table E-4 and the testing requirements described in section VI.A.2 below:

Table E-4. Land Discharge Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous while discharging to ponds

2. **Table E-4 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-4:
   a. **General.** The Discharger can cease monitoring in accordance with Table E-4 at Monitoring Locations LND-002 once the construction of the lined Emergency Detention Basin is complete.
   b. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.
   c. **CIWQS Data Entry.** The Discharger shall provide the data in the PET tool for uploading into CIWQS.

Fact Sheet section IV.D.4.b

b. **Groundwater.** The Discharger uses one unlined emergency storage pond (a portion of this pond will be converted to a lined emergency detention basin) and nine unlined Algae Production Ponds to contain untreated and secondary treated wastewater, and three clay soil, cement-treated sludge stabilization ponds. Domestic wastewater contains constituents such as total dissolved solids (TDS), specific conductivity, pathogens, nitrates, organics, metals and oxygen demanding substances (BOD). Percolation from the ponds may result in an increase in the concentration of these constituents in groundwater. The State Antidegradation Policy generally prohibits the Central Valley Water Board from authorizing activities that will result in the degradation of high-quality waters unless it has been shown that:
   i. The degradation will not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;
   ii. The degradation will not unreasonably affect present and anticipated future beneficial uses;
   iii. The discharger will employ Best Practicable Treatment or Control (BPTC) to minimize degradation; and
   iv. The degradation is consistent with the maximum benefit to the people of the state.

Section V.B of this Fact Sheet discusses rationale for groundwater limitations and discusses groundwater monitoring results for nitrate, electrical conductivity, and dissolved manganese.

Groundwater at concentrations below the water quality objective for nitrate is considered high-quality water for nitrate. Groundwater water quality data is presented in section V.B of this Fact Sheet. Background groundwater quality for nitrate, total as nitrogen, is generally below the water quality objective of 10 mg/L. From April 2020 through May 2024, background groundwater quality has averaged less than 10 mg/L. Groundwater monitoring wells at and downgradient from the Facility have not exceeded the nitrate (total as nitrogen) water quality objective of 10 mg/L and have averaged lower concentrations than background groundwater quality, thus indicating the facility is not degrading groundwater in terms of nitrate. The Discharger has elected to participate in Pathway A of the Nitrate Control Program. Central Valley Water Board staff are in the process of determining if the Discharger meets the requirements of Pathway A. This Order requires the continued monitoring of nitrate in the groundwater and implementation of groundwater nitrate limitations.

In July 2016, the municipal water supply source for the Discharger was converted from groundwater to surface water. This change in source water reduced salinity in the Facility's influent. From April 2020 through May 2024, groundwater monitoring wells MW-1, MW-2, MW-6, MW-9, MW-10, MW-11, MW-12, and MW-13 were all above the electrical conductivity water quality objective recommended MCL of 900 µmhos/cm. Monitoring Wells MW-2, MW-6, and MW-11, which are normally downgradient, had higher electrical conductivity averages and maximum concentrations than background water quality, indicating groundwater degradation. The Discharger selected to participate in the Prioritization and Optimization Study for the Salt Control Program. To help ensure that the Discharger continues to implement salinity reduction measures, this Order includes an electrical conductivity annual average performance-based trigger of 1,250 µmhos/cm at Monitoring Location EFF-001 and an electrical conductivity annual average performance-based trigger of 2,100 µmhos/cm at monitoring location INF-001. Furthermore, this Order requires the Discharger to comply with the new Salt Control Program (i.e., to participate in the P&O Study and implement the SEMP) and the new Nitrate Control Program. This Order also requires that the Discharger comply with groundwater limitations, monitor the groundwater, and submit a Ponds and Groundwater Information Report.

Groundwater in MW-6 and MW-11 was consistently above the water quality objective for manganese of 50 µg/L, while manganese in well MW-2 was almost always less than 50 mg/L. Monitoring Wells MW-2, MW-6, and MW-11 are typically downgradient of the pond system. The Discharger has not monitored for total or dissolved manganese since 2014; therefore, this Order requires the Discharger to resume manganese monitoring to determine current manganese groundwater concentrations.

Separate WDRs Order R5-2018-0051, for Pacific Coast Producers and City of Woodland Tomato Cannery (Cannery), regulates the discharge via sprinkler

systems of treated Cannery process water to land just to the west of the Facility. The sprinkler systems are approximately 1 mile east of the Facility and its pond system. Order R5-2018-0051 requires monitoring wells upgradient and downgradient wells of the cannery wastewater land discharge. Order R5-2018-0051 requires annual monitoring for dissolved manganese at Well IMW6A, which is located approximately 300 feet east of the Sludge Stabilization Ponds (Pond 10), downgradient of Ponds 6, 7, 8, and 9. From 2018 through 2024 the maximum dissolved manganese concentration at Well IMW6A was 5 µg/L. The Sludge Stabilization Ponds were cement/lime treated and compacted in the summer of 2012. Since monitoring for dissolved manganese has not been conducted at the MW-6 since 2014 and the samples at the Cannery's well IIMW6A, are listed as "… *upgradient of the Cannery's Land Application Area but downgradient to the City of Woodland's Water Pollution Control Facility"* (Order R5-2018-0051, Finding 44, page 11), a determination cannot be made as to whether the groundwater continues to be degraded as shown in the February 2007 through third quarter 2014 sample results. It is currently inconclusive if the Facility's discharge is causing degradation with respect to dissolved manganese.

The Ponds and Groundwater Information Report in section VI.C.2.a requires an evaluation of all the pond and groundwater parameters monitored in the Attachment E of this Order. The Ponds and Groundwater Information Report requires a summary and list of upgradient/background and downgradient wells, a summary of at least the previous 5 years of pond and groundwater data with a comparison of the upgradient/background and downgradient wells and applicable groundwater limitations and/or Basin Plan groundwater water quality objectives, a summary of any past exceedance of applicable groundwater limitations and/or Basin Plan groundwater water quality objectives at the ponds and/or downgradient groundwater monitoring wells, and an evaluation of current and future methods to minimize organic overloading and degradation to groundwater.

The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impacts on water quality will be substantially less. The degradation authorized by this Order will not unreasonably affect present and anticipated beneficial uses of groundwater or result in water quality less than water quality objectives.

Fact Sheet section VI.B.3.b

b. **Salinity Evaluation and Minimization Plan (SEMP).** The Basin Plan includes a Salt Control Program for discharges to groundwater and surface water. The Salt Control Program is a phased approach to address salinity in the Central Valley Region. During Phase I the focus will be on conducting a Prioritization and Optimization (P&O) Study to provide information for subsequent phases of the Salt Control Program. During Phase I, the Salt Control Program includes two compliance pathways for dischargers to choose; a Conservative Salinity Permitting Approach and an Alternative Salinity Permitting Approach. The Discharger submitted a Notice of Intent (NOI) for the Salt Control Program on 18 August 2021 indicating its intent to

meet the Alternative Salinity Permitting Approach. Under the Alternative Permitting Approach, the Basin Plan requires dischargers implement salinity minimization measures to maintain existing salinity levels and participate in the P&O Study. The Discharger's NOI demonstrated adequate participation in the P&O Study and this Order requires continued participation to meeting the requirements of the Alternative Salinity Permitting Approach. This Order also requires continued implementation of the Discharger's SEMP and includes a performance-based salinity trigger to ensure salinity levels do not increase at EFF-001 or INF-001. In accordance with the Basin Plan, these salinity triggers were developed based on facility performance and considers possible temporary increases that may occur due to water conservation and/or drought.

The Discharger requested that the effluent salinity trigger of 1,250 µmhos/cm from Order R5-2020-0015 be retained to better accommodate higher effluent EC in drought years in which low flows in the Sacramento River will require the Discharger to utilize groundwater (from the deeper production aquifer) to supply its drinking water system. This Order retains the EC salinity trigger of 1,250 µmhos/cm from Order R5-2020-0015, applied to monitoring location EFF-001. This protects against EC increases in the final effluent discharged to Tule Canal and secondary effluent discharged to the ponds.

The Discharger requested the influent be taken into account when developing a salinity trigger for the discharge to the Erskine Pond and Algae Production Ponds. The Discharger switched the drinking water source from groundwater to surface water in 2016, reducing the electrical conductivity in the influent from an average of 2,740 µmhos/cm from January 2015 through December 2015 to an average of 1,600 µmhos/cm from January 2017 through July 2020. Influent electrical conductivity samples from 2016 were not used due to the switch in groundwater sources and the water distribution piping adjusting to the new water source. Influent data for electrical conductivity is available until July 2020. To utilize entire calendar years of data, annual averages from 2017 through 2019 were used to calculate the salinity trigger of 2,100 µmhos/cm, applied at monitoring location INF-001. Applying this trigger to INF-001 protects against increases in salinity of screened influent that could be discharged to the ponds.

Fact Sheet section VII.A

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies and sample types for flow, BOD_5, and TSS have been retained from Order R5-2020-0015. Monthly influent electrical conductivity is included in this Order to assess the electrical conductivity concentration of the screened influent discharged to the Erskine Pond.

Fact Sheet section VII.E.5

5. **Land Discharge Monitoring**

   Previous Order R5-2020-0015 required land discharge monitoring at a general location for all ponds at Monitoring Location EFF-002. This Order requires land discharge monitoring at Monitoring Locations INT-001, LND-002, and LND-003 to characterize the discharge to the ponds. This Order requires the following land discharge monitoring to the ponds to characterize the wastewater to these locations in relation to the pond and groundwater concentrations.

Table F-20: Revised Land Discharge Monitoring

Parameter	Units	Previous Sampling Frequency	Minimum Sampling Frequency	Reason for Change
pH	Standard Units	Upon startup and 1/Week while discharging to ponds	--	Note 1 Note 2
BOD_5	mg/L	Upon startup and 1/Week while discharging to ponds	--	Note 1 Note 2
Electrical Conductivity	µmhos/cm	Upon startup and 1/Week while discharging to ponds	--	Note 1 Note 3
Nitrate, Total as N	mg/L	Upon startup and 1/Week while discharging to ponds	--	Note 1 Note 2

Table F-20 Notes:

1. The Discharger can cease monitoring in accordance with Table E-5 at Monitoring Location LND-002 once the construction of the lined Emergency Detention Basin is complete and is operational since this Order includes a prohibition prohibiting discharge of screened influent to any pond/basin other than the lined Emergency Detention Basin.
2. Discharger requested monitoring at the ponds in lieu of monitoring the effluent being discharged to the ponds at previous Monitoring Location EFF-002 (Order R5-2020-0015).
3. Monthly electrical conductivity influent monitoring is substituted for land discharge electrical conductivity monitoring.

9. Attachment B - Figure B-2, Pond System Layout.

The Discharger requests that Figure B-2 in Attachment B be updated with the updated Pond System Layout the Discharger provided that shows waste activated sludge (WAS) only being distributed to Ponds 9, 10, and 11. The Discharger also notes that the page numbering on this page (B-1) should also be changed to Page B-2.

Response: Staff concur. The updated Pond System Layout provided by the Discharger was included in the proposed Order. The page numbers in Attachment B were corrected and are not shown in this Response. Staff also included an additional Pond System Schematic (Figure C-2 from Order R5-2020-0015) to show the operations of the Ponds. The updated Figure B-2 is shown below. The updated Attachment C – Flow Schematics showing an updated Figure C-1 (Per Ms. Kipps Comments 13) and the Pond System Flow Schematic are shown below.

Figure B-2. Pond System Layout

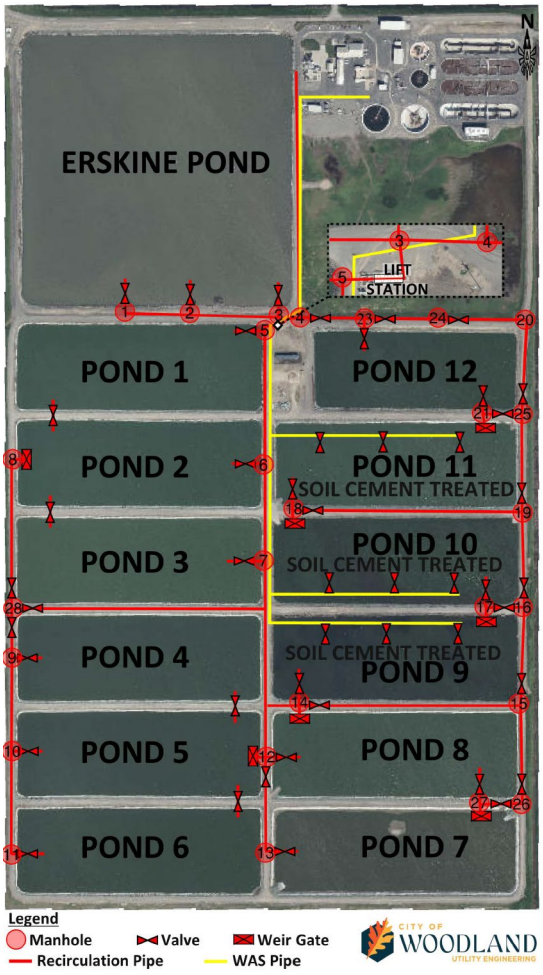
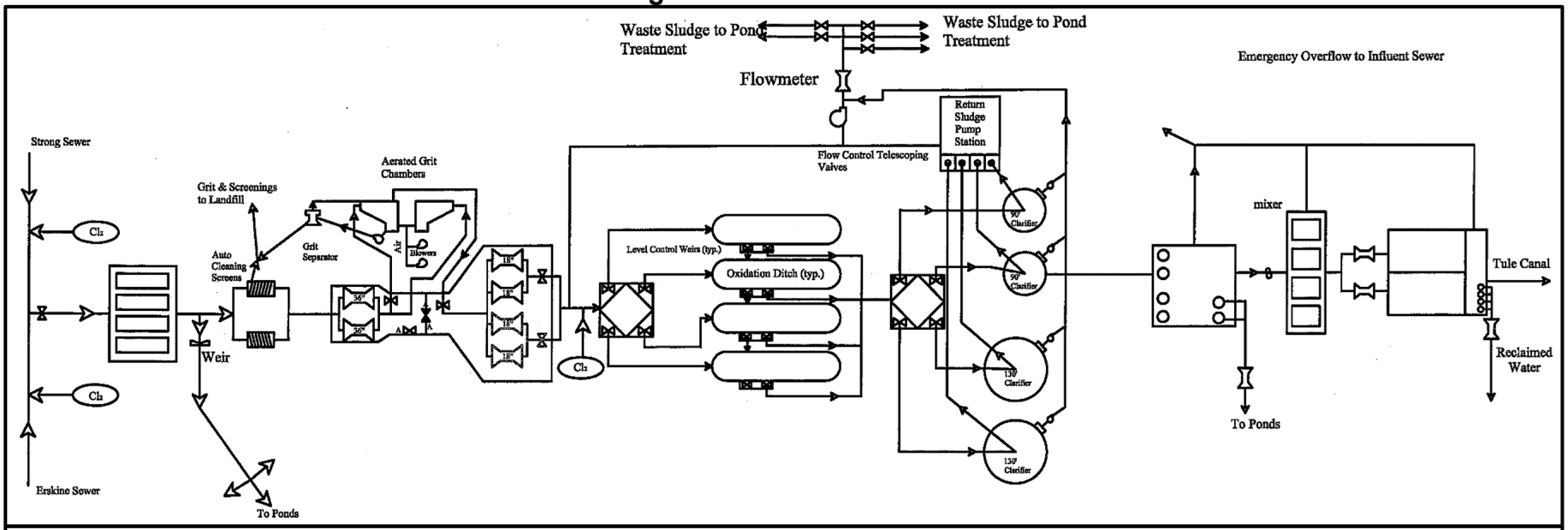
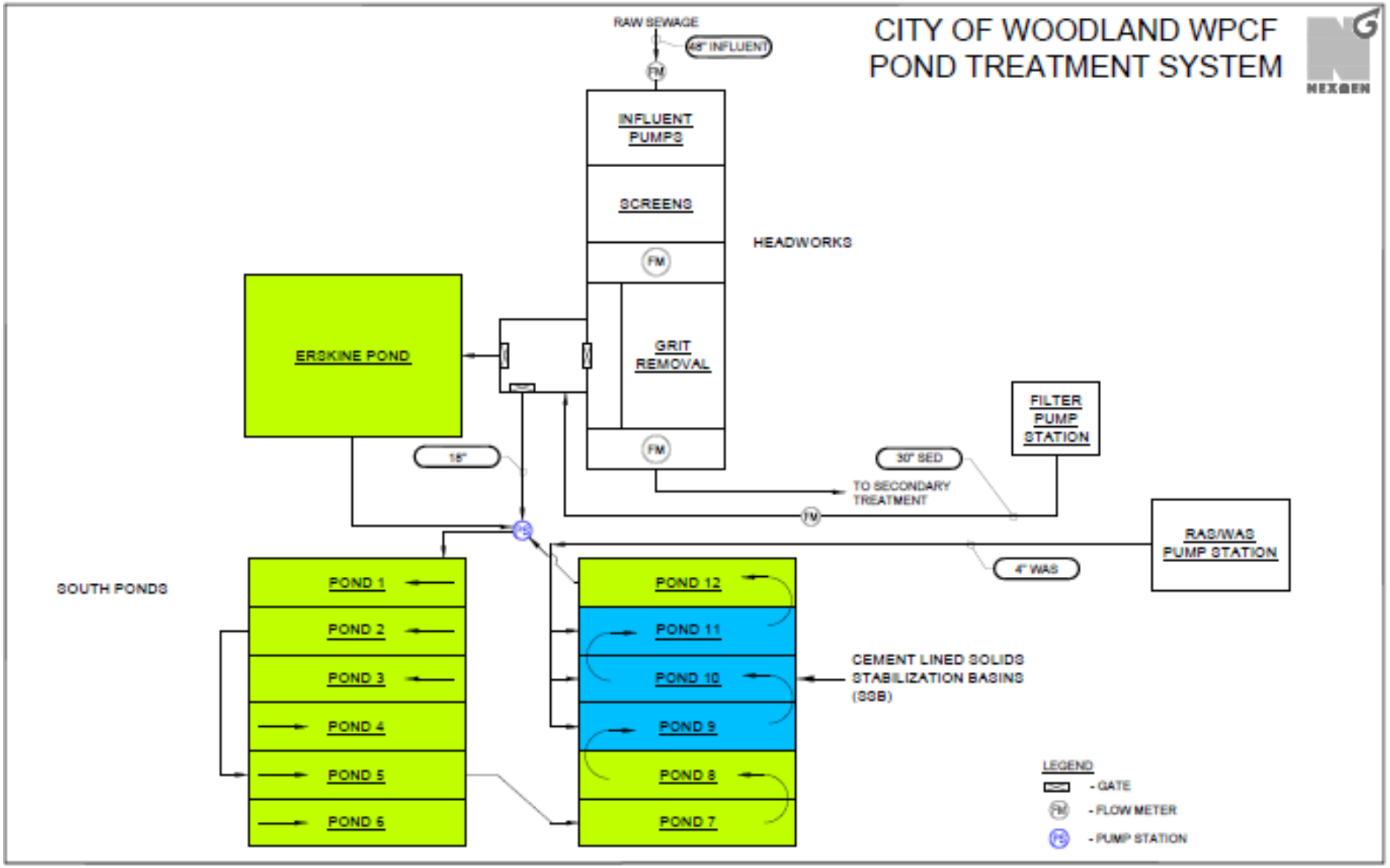


Figure C-1. Flow Schematic



Lift Station	Screens	Flow Measurement and Grit Removal	Splitter Box A	Oxidation Ditches	Splitter Box B	Clarifiers	Tertiary Pump Station	Filter Facility	Ultraviolet Facility

Figure C-2. Pond System Flow Schematic



10. MRP - Land Discharge Monitoring Locations.

The Discharger requests that the description of the land discharge monitoring locations LND-002 and LND-003 and internal monitoring location INT-001 be updated in Table E-1 in Attachment E, Monitoring and Reporting Program (MRP).

The Discharger notes that secondary-treated and screened influent does not exist. The purpose of monitoring location LND-002 is to monitor and document screened-influent flows into Erskine Pond. The Discharger notes that the purpose of monitoring location LND-003 is to monitor the volumes of secondary effluent distributed as a water cap to all of the south ponds (Ponds 1 through 13), including Erskine Pond and notes that it would be more appropriate to call this water secondary "*effluent.*". The Discharger notes that the original description for INT-001 is duplicative of the description of LND-002. The purpose of this location is to monitor volumes of WAS distributed to Ponds 9-11.

Response: Staff concur with revising the descriptions for monitoring locations LND-002, LND-003, and INT-001. The descriptions of Monitoring Locations LND-002, LND-003, and INT-001 were revised to correctly reflect their operations. Revisions descriptions of Monitoring Locations LND-002, LND-003, and INT-001 (revisions to Monitoring Locations ALG-001, ALG-002, and SSP-001 per Discharger Comment 11) to Table E-1 in the MRP are shown below:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Location where a representative sample of the influent into the Facility can be collected after screening and prior to entering the treatment process.
--	SPL-001	Location where a representative sample of the municipal supply water can be obtained.
--	FIL-001	Monitoring of the filter effluent to be measured immediately downstream of the filters prior to the UV disinfection system
--	UVS-001	Location where a representative sample of wastewater can be collected immediately upstream of the ultraviolet light (UV) disinfection system
--	UVS-002	Location where a representative sample of wastewater can be collected immediately downstream of the ultraviolet light (UV) disinfection system
001	EFF-001	Location where a representative sample of the effluent can be collected after all treatment processes and prior to commingling with other waste streams or being discharged to Tule Canal. Latitude: 38° 40' 51" N Longitude: 121° 38' 38" W
002	LND-002	Location where a representative sample of the secondary treated effluent and/or screened influent can be collected prior to discharge to the Erskine Pond/Emergency Detention Basin.
002	LND-003	Location where a representative sample of the secondary effluent can be collected, prior to discharge to the south ponds.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INT-001	Location where flow of the Waste Activated Sludge can be measured prior to discharge to Ponds 9, 10 and/or 11.
--	RSW-001	Approximately 800 feet upstream of Discharge Point 001 in Tule Canal.
--	RSW-002	Approximately 1,800 feet downstream of Discharge Point 001 in Tule Canal
--	RSW-003	In Tule Canal between Monitoring Locations RSW-001 and RSW-002.
--	PND-001	Location where a representative sample of wastewater can be collected from South Pond 1 (Algae Production Pond)
--	PND-002	Location where a representative sample of wastewater can be collected from South Pond 2 (Algae Production Pond)
--	PND-003	Location where a representative sample of wastewater can be collected from South Pond 3 (Algae Production Pond)
--	PND-004	Location where a representative sample of wastewater can be collected from South Pond 4 (Algae Production Pond)
--	PND-005	Location where a representative sample of wastewater can be collected from South Pond 5 (Algae Production Pond)
--	PND-006	Location where a representative sample of wastewater can be collected from South Pond 6 (Algae Production Pond)
--	PND-007	Location where a representative sample of wastewater can be collected from South Pond 7 (Algae Production Pond)
--	PND-008	Location where a representative sample of wastewater can be collected from South Pond 8 (Algae Production Pond)
--	PND-009	Location where a representative sample of wastewater can be collected from South Pond 9 (Sludge Stabilization Pond)
--	PND-010	Location where a representative sample of wastewater can be collected from South Pond 10 (Sludge Stabilization Pond)
--	PND-011	Location where a representative sample of wastewater can be collected from South Pond 11 (Sludge Stabilization Pond)
--	PND-012	Location where a representative sample of wastewater can be collected from South Pond 12 (Algae Production Pond)
--	PND-013	Location where a representative sample of wastewater can be collected from South Pond 13 (Erskine Pond)
--	PND-014	Location where a representative sample of wastewater can be collected from the lined Emergency Detention Basin
--	ALG-001	Location where a representative sample of wastewater in Ponds 1 through Pond 6 can be collected
--	ALG-002	Location where a representative sample of wastewater in Pond 7 and Pond 8 can be collected
--	SSP-001	Location where a representative sample of wastewater in Pond 9, Pond 10, and Pond 11 can be collected
--	MW-01	Groundwater monitoring well (identified as MW-1 in groundwater monitoring reports)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	MW-02	Groundwater monitoring well (identified as MW-2 in groundwater monitoring reports)
--	MW-06	Groundwater monitoring well (identified as MW-6 in groundwater monitoring reports)
--	MW-10	Groundwater monitoring well (identified as MW-10 in groundwater monitoring reports)
--	MW-11	Groundwater monitoring well (identified as MW-11 in groundwater monitoring reports)
--	MW-12	Groundwater monitoring well (identified as MW-12 in groundwater monitoring reports)
--	MW-13	Groundwater monitoring well (identified as MW-13 in groundwater monitoring reports)
--	MW-16	Groundwater monitoring well (identified as MW-16 in groundwater monitoring reports)
--	BIO-001	Location where a representative sample can be obtained of Waste Activated Sludge sent to Ponds 9, 10, and/or 11 (Sludge Drying Beds/Sludge Stabilization Ponds).

11. MRP - Pond Water Quality Monitoring Locations and Corresponding Changes Pond Monitoring.

The Discharger requests the further consolidation of pond locations to collect water quality samples for the term of the WDRs and that monitoring for BOD, nitrate, and Total Kjeldahl Nitrogen be decreased from monthly to quarterly in Table E-1, corresponding changes to Item 2, and Table E-6.

The Discharger collected quarterly nitrate samples from WPCF ponds during the current WDRs term and voluntarily collected quarterly Total Kjeldahl Nitrogen (TKN) pond samples during in December 2024–November 2025 (Figure 1 and Figure 2). The TKN samples were filtered with 1.5-micron TSS filters to remove large particles and algae to better represent the TKN fraction that could leach into groundwater from overlying surface water.

Nitrate in Ponds 1–8, 11, and 13 were similar for the 2020–2024 period, while concentrations in Ponds 9 and 10 were somewhat higher. TKN levels show the same trends as nitrate. Ponds 1–8, 11, and 13 had similar TKN concentrations, while TKN levels in Ponds 9 and 10 were somewhat higher. Pond 12 was not monitored due to low water levels.

Water is continuously circulated through the WPCF ponds and the seepage rates are relatively low—0.18 in/d for Pond 8 (unlined ponds) and 0.07 in/d for Pond 11 (lined ponds) at pond water levels of 4–5 feet. Hence, underlying groundwater is not immediately affected by changing nitrate and TKN levels in the ponds or from pond to pond. The constituents are processed in the ponds, which helps protect groundwater. Accordingly, groundwater TKN and nitrate levels in wells underlying the WPCF (MW-2, MW-6, and MW-11) are low (Figure 3 and Figure 4)—nitrate levels are near non-detect and TKN levels average 0.5 mg/L or less. This is substantially lower than in the overlying ponds (Figure 1 and Figure 2) over the same time period.

Compositing samples is warranted given the similar nitrate and TKN concentrations among

many ponds, and the fact that pond water is circulated, seepage rates are low, and groundwater shows minimal influence from nitrate and TKN. Because of this, collecting samples from a greater number of locations or at a monthly sampling frequency will do relatively little to help understand the effects of the ponds on groundwater.

Considering the data collected by the WPCF to date, the Discharger requests that nitrate, TKN, and BOD monitoring of the ponds be required quarterly (not monthly) at the following locations. As proposed, 5 samples will be collected of the facility's 13 ponds.

- ALG-001. Redefine this as a representative sample of Ponds 1–6 (not just Ponds 1–3).
- ALG-002. Redefine this as a representative sample of Ponds 7 and 8 (not Ponds 4–6).
- SSP-001. Define this new location as a representative sample of the SSPs (Ponds 9–11).
- PND-012. Pond 12 will be monitored separately from the other ponds.
- PND-013. Pond 13 will be monitored separately from the other ponds.

Figure 1. Quantile box plot of WPCF pond nitrate samples (July 2020–June 2024).

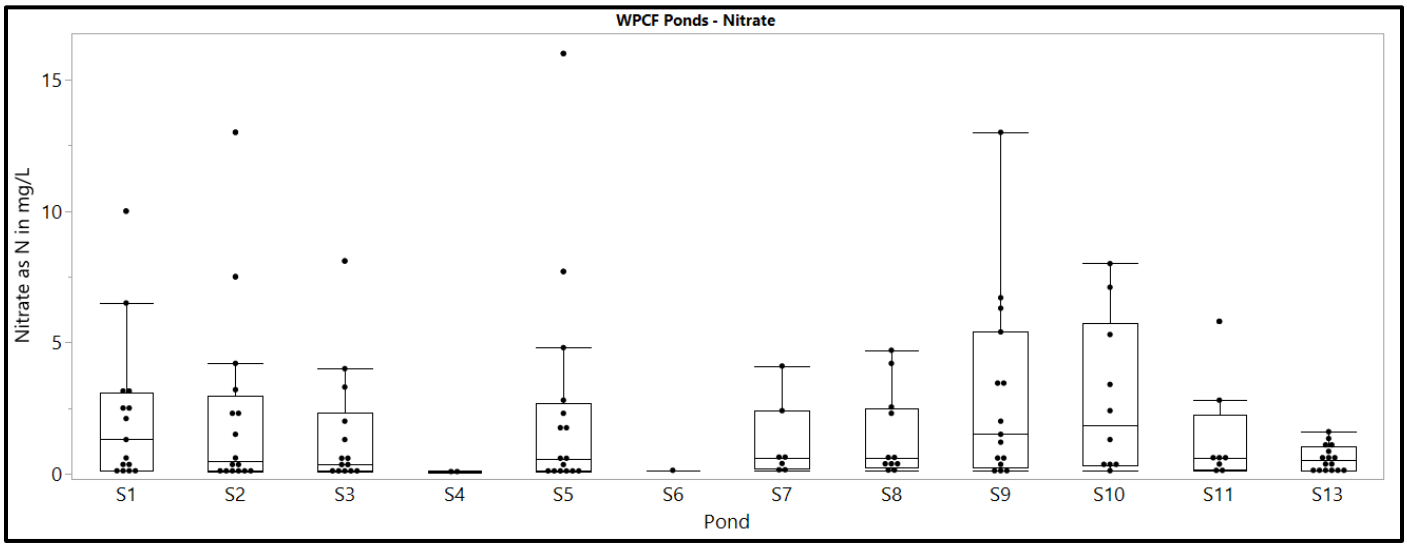


Figure 2. Quantile box plot of WPCF pond Total Kjeldahl Nitrogen (filtered) samples (December 2024–November 2025).

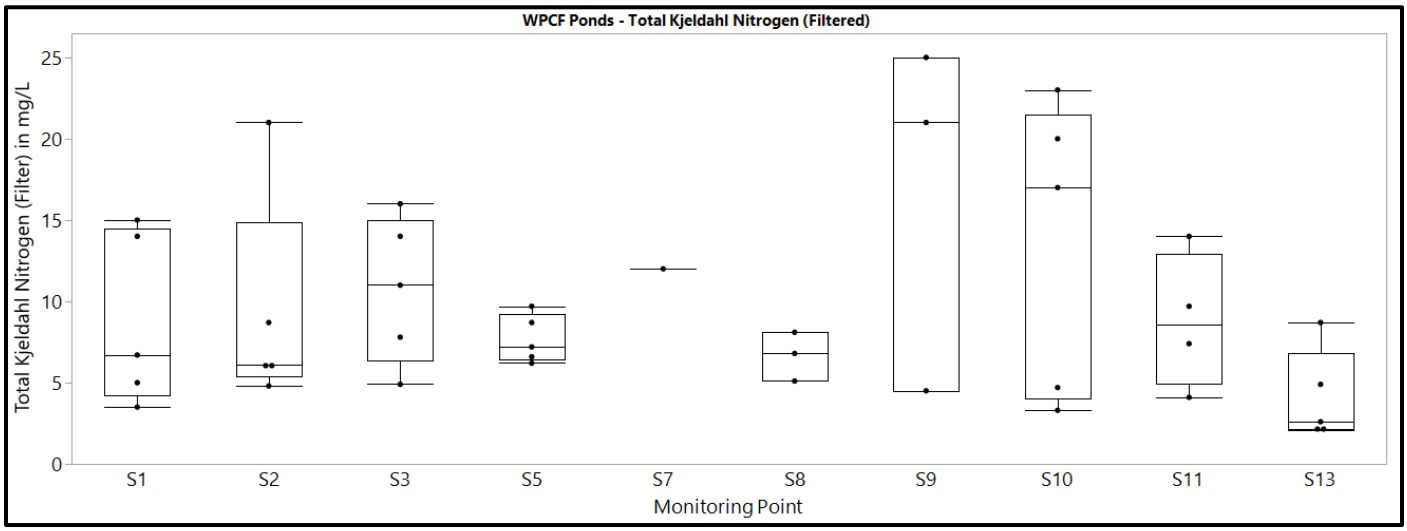


Figure 3. Quantile box plot of WPCF groundwater monitoring well nitrate samples (July 2020–December 2024).

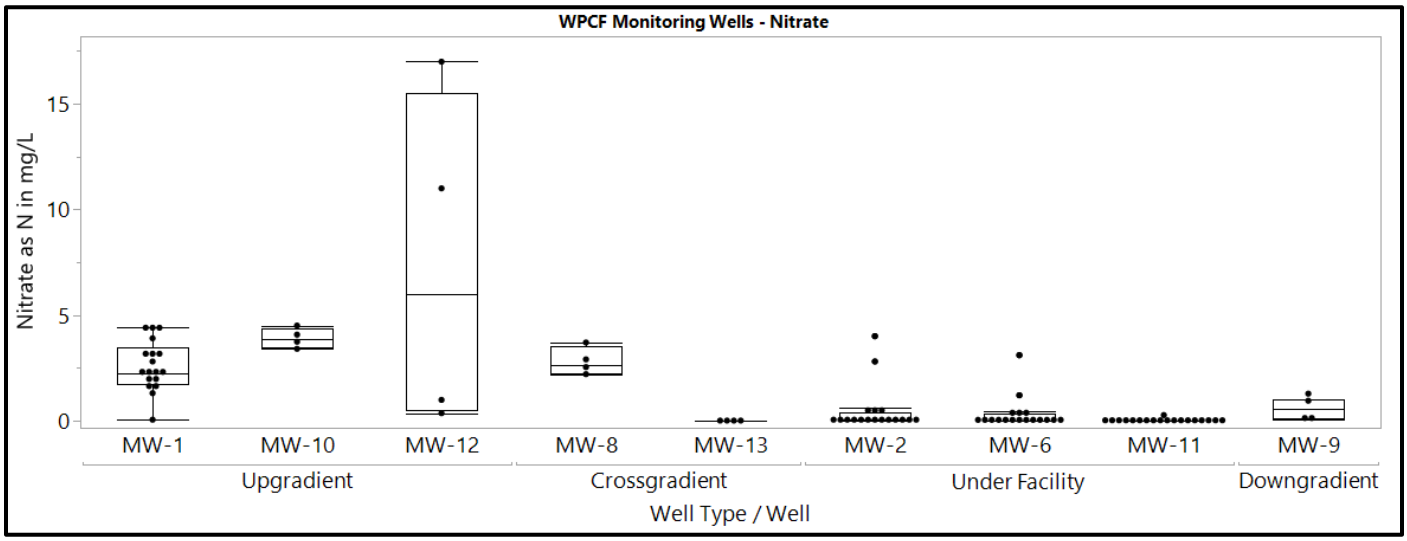
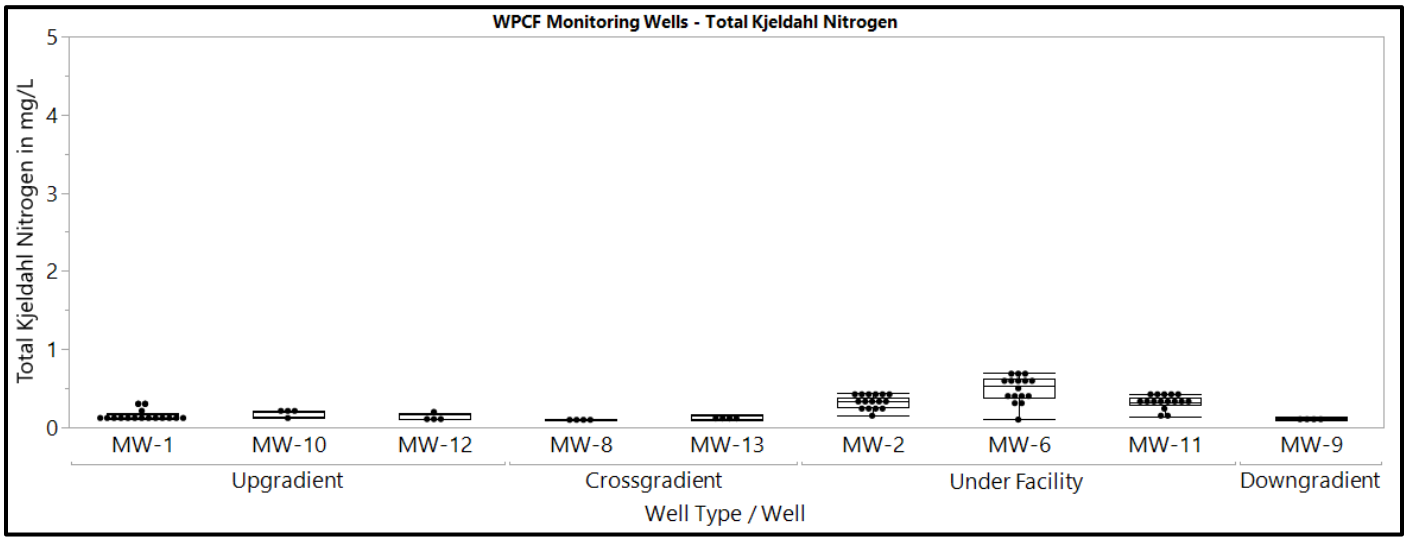


Figure 4. Quantile box plot of WPCF groundwater monitoring well TKN samples (July 2020–May 2024).



Response: Staff concur. Monitoring Location descriptions for ALG-001 and ALG-002 were updated and Monitoring Location SSP-001 was added per the Discharger's comments. Pond monitoring at Table E-6 was reduced to quarterly. The revised Table E-1 is shown in the Response to Discharger Comment 10. The revised MRP section VI.B is shown below:

MRP section VI.B

B. Pond Monitoring

1. The Discharger shall monitor all nine Algae Production Ponds at Monitoring Locations PND-001 through PND-008, and PND-012), the Sludge Stabilization Ponds at Monitoring Locations PND-009 through PND-011, the Erskine Pond at Monitoring Location PND-013, and the lined Emergency Detention Basin at Monitoring Location PND-014 once constructed, when 1 foot or more of any water (e.g. wastewater, rainwater, etc.) is present in the ponds in accordance with Table E-5 and the testing requirements described in section VI.B.3 below:

Table E-5. Pond Conditions

Parameter	Units	Sample Type	Minimum Sampling Frequency
Pond Volume	Million Gallons	Estimate	1/Month
Freeboard	Feet	Measure	1/Month
Observations	--	Observation	1/Month

2. The Discharger shall take representative samples of Ponds 1 through 6 at Monitoring Location ALG-001, representative samples of Ponds 7 and Pond 8 at Monitoring Location ALG-002, samples at Ponds 9 through Pond 11 at Monitoring Location SSP-001, Pond 12 at Monitoring Location PND-012, and Pond 13 at Monitoring Location PND-013, when 1 foot or more of any water (e.g. wastewater, rainwater, etc.) is present in the ponds in accordance with Table E-6 and the testing requirements described in section VI.B.3 below:

Table E-6. Pond Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
BOD_5	mg/L	Grab	1/Quarter
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Month
Total Kjeldahl Nitrogen	mg/L	Grab	1/Quarter
Nitrate, Total as Nitrogen	mg/L	Grab	1/Quarter
Standard Minerals	mg/L	Grab	1/Quarter

3. **Tables E-5 and E-6 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-5 and Table E-6:
   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.
   b. **Dissolved Oxygen.** Samples shall be collected at a depth of one foot from each pond in use, between 7:00 a.m. and 12:00 p.m. (when dissolved oxygen concentrations are typically lowest). If there is insufficient pond depth to accurately measure the dissolved oxygen concentration, the Discharger shall include in its eSMR the pond depth and an explanation why dissolved oxygen monitoring was not performed.
   c. **Freeboard.** Freeboard, as defined in Provision VI.C.4.c.iii, shall be monitored to the nearest tenth of a foot.
   d. **Handheld Field Meter.** A handheld field meter may be used for **dissolved oxygen, electrical conductivity,** and **pH**, 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 Monitoring and Reporting Program shall be maintained at the Facility.

e. **Standard minerals** shall include the following: boron, calcium, iron (total and dissolved), magnesium, potassium, sodium, chloride, manganese (total and dissolved), phosphate, total alkalinity (including alkalinity series), sulfate, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
f. **Standard minerals** shall be sampled quarterly for the first two years after the effective date of this Order but can be reduced to an annual monitoring frequency after the two-year period.
g. **Observations.** Pond-condition observations shall be kept in a logbook at the Facility. Attention shall be given to presence or absence of odors, dead algae, vegetation, weeds, debris, erosion, liner condition, and erosion or other structural failures and levee conditions. Notes regarding these listed pond conditions shall be summarized in the self-monitoring report.
h. **Grab Sample.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.
i. **CIWQS Data Entry.** The Discharger shall provide the data in the PET tool for uploading into CIWQS, except for observation data (water present, discharge to pond, levee condition, odors, and visual observations).

12. MRP - Monitoring Well MW-9.

The Discharger requests that the proposed Order not include monitoring requirements for well MW-9. The Discharger contends that MW-9 was historically included along with upgradient well MW-8 to monitor the influence of the former north ponds, nine ponds located north of the current WPCF that were formerly used for sludge stabilization. The north ponds were fully decommissioned in 2012. Well MW-9 could also be influenced by various other water sources in closer proximity than the Facility ponds—the ditch downstream of the Discharger's stormwater pump station, ponds at the Woodland-Davis Clean Water Agency Regional Water Treatment Facility, and Cache Creek—standing water is continuously present at all these locations. The Fact Sheet does not justify why monitoring at MW-9, given its distance from the Facility, is necessary to discern the Facility's influence on groundwater. Since MW-8 was removed from the tentative Order, the Discharger requests that its corresponding downgradient well (MW-9) be removed.

Response: Staff concur with the removal of groundwater monitoring for monitoring well MW-9. MW-9 is downgradient of MW-8 and MW-8 was removed due to limited usefulness. MW-9 is located a mile north of the Facility and can be influenced by other sources as listed by the Discharger. The removal of MW-9 from Table E-1 is shown in the response to Discharger Comment 10 and the update to Table F-2 is shown in the response to Discharger Comment 19. The revised the groundwater monitoring in MRP section VIII.C was reindexed to MRP section VIII.B due to the removal of visual monitoring at receiving water monitoring location RSW-003, per Discharger Comment 16. MRP section VIII.B (showing entire section to show revised table note h) and Fact Sheet sections V.B (also showing responses to Ms. Kipps Comment 11) and VII.C.2.c are shown below.

MRP section VIII.B

B. Groundwater Monitoring

1. **Monitoring Wells: MW-01, MW-02, MW-06, MW-10, MW-11, MW-12, MW-13, and MW-16.** The Discharger shall monitor the groundwater at monitoring wells MW-01, MW-02, MW-06, MW-10, MW-11, MW-12, MW-13, and MW-16 in accordance with Table E-7 and the testing requirements described in section VIII.B.2 below:

Table E-7. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	± 0.01 Feet	Measurement	1/Quarter
Groundwater Elevation	± 0.01 Feet	Calculated	1/Quarter
Gradient	feet/feet	Calculated	1/Quarter
Gradient Direction	Degrees	Calculated	1/Quarter
pH	Standard Units	Grab	1/Quarter
Dissolved Oxygen	mg/L	Grab	1/Quarter
Electrical Conductivity	µmhos/cm	Grab	1/Quarter
Total Coliform Organisms	mg/L	Grab	1/Quarter
Total Dissolved Solids	mg/L	Grab	1/Quarter
Total Kjeldahl Nitrogen	mg/L	Grab	1/Quarter
Nitrate, Total as Nitrogen	mg/L	Grab	1/Quarter
Total Organic Carbon	mg/L	Grab	1/Quarter
Dissolved Arsenic	µg/L	Grab	1/Quarter
Standard Minerals	mg/L	Grab	1/Quarter

2. **Table E-7 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-7:

   a. **Grab Sample.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.

   b. **Prior to construction and/or beginning a sampling program** of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for approval. Once installed, all new wells shall be added to the monitoring network and shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved U.S. EPA methods.

   c. **Prior to sampling**, the groundwater elevations shall be measured, and the wells shall be purged of at least three well volumes or by using the low-flow method until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet.

   d. **Groundwater gradient/gradient direction.** The groundwater gradient and gradient direction shall be determined from all monitoring wells combined. The groundwater gradient and gradient direction shall be reported with the quarterly self-monitoring report.

   e. **Groundwater elevation** shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well. The

groundwater elevation shall be used to calculate the direction and gradient of groundwater flow, which must be reported.

f. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

g. **Handheld Field Meter.** A handheld field meter may be used for **dissolved oxygen, electrical conductivity,** and **pH**, 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 Monitoring and Reporting Program shall be maintained at the Facility.

h. **Standard minerals** shall include the following: boron, calcium, iron (total and dissolved), magnesium, potassium, sodium, chloride, manganese (total and dissolved), phosphate, total alkalinity (including alkalinity series), sulfate, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

i. **Duration Between Routine Monitoring.** For quarterly (1/Quarter) routine monitoring, samples shall not be conducted within 45 days from the previous sampling event for the same parameter at the same monitoring location.

j. **CIWQS Data Entry.** The Discharger shall provide the data in the PET tool for uploading into CIWQS, except for gradient and gradient direction.

Fact Sheet section V.B

B. Groundwater

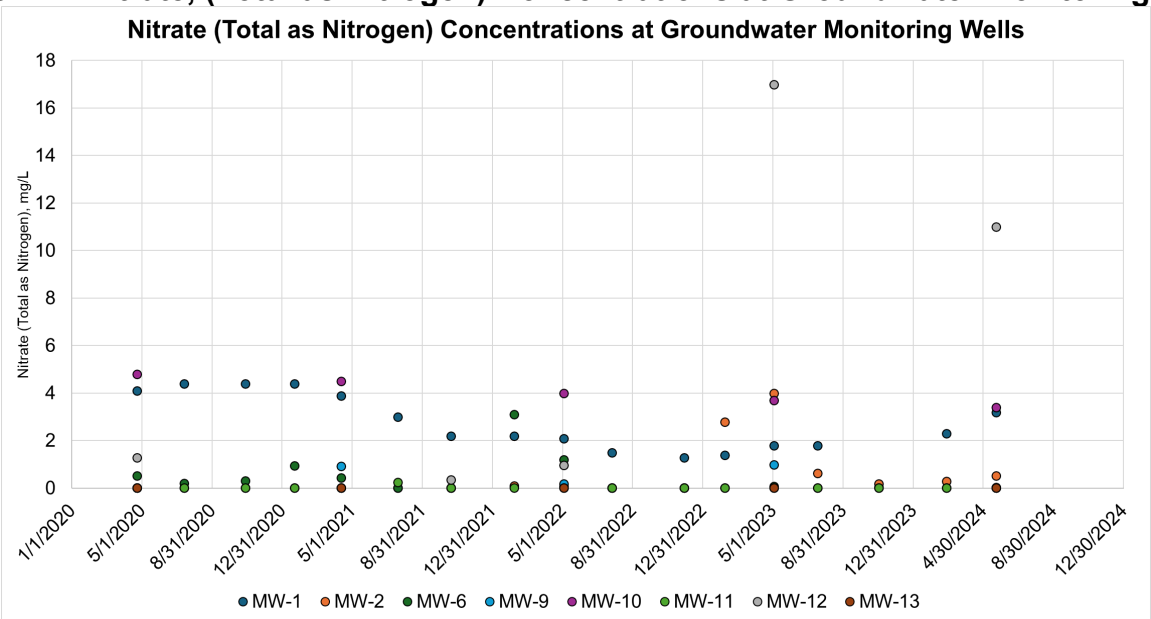
This Order requires continued groundwater monitoring and contains groundwater limitations. The pond bottoms are approximately 10 feet below grade; groundwater is generally encountered at approximately 3 to 20 feet below the ground surface but has not been observed in the ponds. Groundwater generally flows northeast around the Facility. Approximate locations for the monitoring wells are shown in Figure C-2 of Attachment C. The Discharger is electing, and the Central Valley Water Board is requiring, to convert a portion of the Erskine Pond to an engineered emergency detention basin to mitigate potential impacts from screened influent to groundwater. See section II.B.5 of this Fact Sheet for a detailed description of the pond operations and wastewater discharged to these ponds. Monitoring wells around the pond system provide data to evaluate compliance with groundwater quality limitations. Note that MW-9 is not required to be sampled in this Order. MW-9 is located downgradient of MW-8. Sampling requirements at MW-8 were removed due to limited usefulness. Similarly sampling at MW-9 was removed due to this downgradient well’s intended purpose to monitor groundwater for the now decommissioned North Ponds, its distance from the Facility, the slow movement of groundwater in the area, and other non-Facility sources that could potentially influence MW-9. Table F-2 includes the monitoring well location (gradient) relative to the Facility. Groundwater quality data is not available for monitoring well MW-16 since the well was constructed during the last permit cycle and it was not required to be monitored during that time.

1. **Nitrate Total as Nitrogen.** The Discharger has elected to participate in Pathway A of the Nitrate Control Program. Central Valley Water Board staff is in the process of determining if the Discharger meets the requirements of Pathway A. This Order requires the continued monitoring of nitrate in the groundwater for evaluation of compliance with the groundwater limitations. Table F-14 below shows the sampling summaries for nitrate (total as nitrogen) at groundwater monitoring wells from April 2020 through May 2024. Figure F-1 shows the individual sampling events for April 2020 through May 2024 at these monitoring wells. There were no exceedances of 10 mg/L at any of the groundwater monitoring wells, except at upgradient well MW-12.

Table F-14. Groundwater Nitrate Total as Nitrogen Summary

Well	Minimum, mg/L	Average, mg/L	Maximum, mg/L
MW-1	0.043	2.6	4.4
MW-2	0.012	0.51	4.0
MW-6	0.012	0.41	3.1
MW-9	0.012	0.44	1.0
MW-10	3.4	4.1	4.8
MW-11	0.012	0.027	0.26
MW-12	0.35	6.1	17
MW-13	0.012	0.012	0.012

Figure F-1: Nitrate, (Total as Nitrogen) Concentrations at Groundwater Monitoring Wells



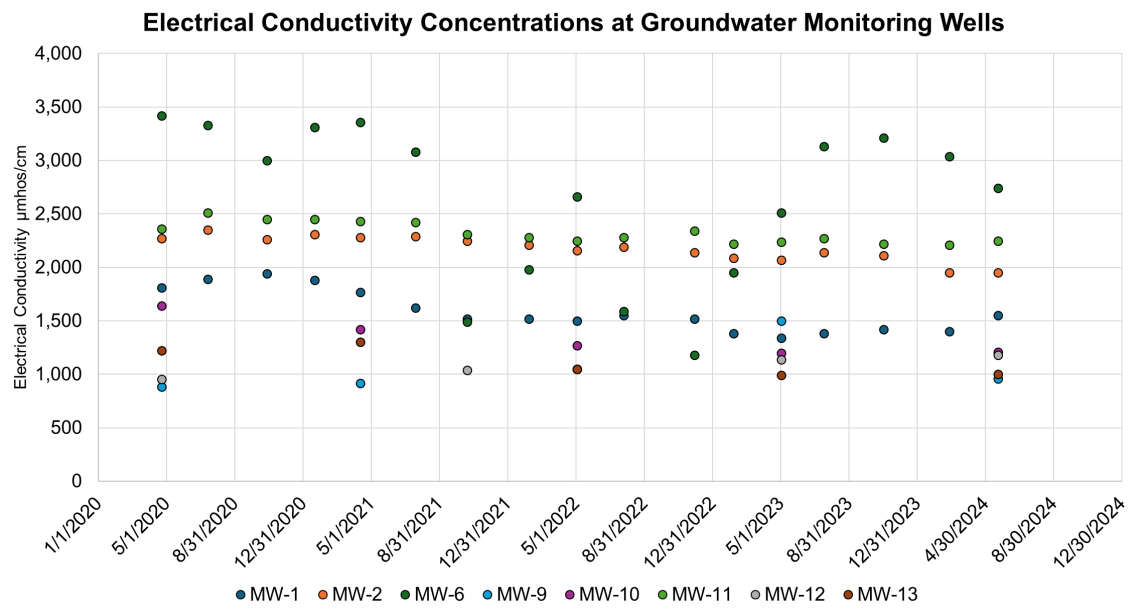
2. **Electrical Conductivity.** The Discharger selected to participate in the Prioritization and Optimization Study for the Salt Control Program. To help ensure continued salinity reduction measures, this Order includes an electrical conductivity effluent performance-based annual average trigger of 1,250 µmhos/cm at Monitoring Location EFF-001(value retained from Order R5-2020-0015) and a performance-based annual average trigger of 2,100 µmhos/cm at Monitoring Location INF-001 (calculated using a safety factor and the maximum annual average influent electrical conductivity concentrations from 2017-2019). If any of these triggers is exceeded,

the Discharger is required to update the Salinity Evaluation and Minimization Plan. Furthermore, this Order requires the Discharger to comply with the new Salinity Control Program (i.e., to participate in the P&O Study). To continue to determine the influence the pond discharges have on groundwater, an evaluation of the ponds and groundwater is required in this Order. Table F-15 below shows the sampling summaries for electrical conductivity at groundwater monitoring wells from April 2020 through May 2024. Figure F-2 shows the individual sampling events for April 2020 through May 2024 at these monitoring wells. All groundwater monitoring wells were above the electrical conductivity water quality objective recommended MCL of 900 µmhos/cm. Monitoring Wells MW-2, MW-6, and MW-11, which are normally downgradient, had higher electrical conductivity averages and maximum concentrations than background water quality, indicating groundwater degradation.

Table F-15. Electrical Conductivity Summary at Groundwater Monitoring Wells

Well	Minimum, µmhos/cm	Average, µmhos/cm	Maximum, µmhos/cm
MW-1	1,340	1,588	1,940
MW-2	1,950	2,178	2,350
MW-6	1,180	2,646	3,420
MW-9	886	1,063	1,500
MW-10	1,200	1,348	1,640
MW-11	2,210	2,323	2,510
MW-12	956	1,073	1,180
MW-13	991	1,112	1,300

Figure F-2: Electrical Conductivity Concentrations at Groundwater Monitoring Wells



The Discharger's pond monitoring data submitted with monthly SMRs indicate that salt is concentrated in the Algae Production Ponds. The Discharger's July 2008 technical report titled "*Hydrogeologic Evaluation Report*", prepared by Eco:Logic (now Stantec) states the following:

> *"Average concentrations of salts in WWTF [Facility] pond samples were generally higher than at background groundwater monitoring locations, providing an*

indication that the percolation of pond water may impact groundwater quality above background conditions, with regards to salt. Similarly, groundwater monitoring locations adjacent to or downgradient of the WWTF [Facility] generally had salts reported at higher concentration than background observation locations."

3. **Dissolved Manganese.** Table F-16 shows the sampling summaries for dissolved manganese at groundwater monitoring wells from February 2007 through the third quarter of 2014, Figure F-3 shows the individual sampling events for this date range at these wells.

   As stated above, the groundwater gradient is generally northeast. Average and maximum concentrations in groundwater monitoring wells MW-6 (located on the eastern edge of Pond 11), MW-9, (located approximately 1 mile north of the most northern edge of the Erskine Pond, usually cross/downgradient from the Facility), and MW-11 (located on the north-west quadrant of Pond 1) were greater the taste and odor secondary MCL of 50 µg/L for dissolved manganese.

   Groundwater monitoring well MW-14, located approximately 2.3 miles south (upgradient) of the Facility, averaged 466 µg/L from February 2007 through June 2013. MW-2 is located approximately 700 feet north of Pond 12, approximately 200 feet east of the Erskine Pond, it is assumed that MW-2 is influenced by the Facility ponds and precipitation. The dissolved manganese concentrations at MW-9 exceeded water quality standards for dissolved manganese but it is not clear that the manganese degradation at well MW-9 is caused by the Facility since there are other sources that may cause or contribute to these exceedances near or at groundwater well MW-9.

   Manganese in the soil has the potential to mobilize if oxygen demanding wastewater reaches groundwater. There was significant degradation for dissolved manganese at wells MW-6 and MW-11 from February 2007 through the third quarter of 2014. The Discharger has not been required to sample dissolved manganese in the groundwater since 2014. However, this Order requires the Discharger to resume groundwater monitoring for manganese.

   WDR Order R5-2018-0051 for Pacific Coast Producers and City of Woodland Tomato Cannery (Cannery) regulates the discharge via sprinkler systems of treated Cannery process water to land just to the west of the Facility. Three clay-lined stormwater/emergency equalization ponds and an 80-mil single high-density polyethylene (HDPE) liner over compacted clay equalization pond are approximately 1 mile northwest from the Sludge Stabilization Ponds. Land application areas are adjacent (east) of the Sludge Stabilization Ponds. Order R5-2018-0051 requires monitoring at upgradient and downgradient wells relative to their land discharge. Monitoring Well IMW6A is located at an area adjacent to the Sludge Stabilization Ponds. WDR Order R5-2018-0051 requires annual monitoring for dissolved manganese at IMW6A and, from 2018 through 2024, has had a maximum concentration of 5 µg/L. The Sludge Stabilization Ponds were cement/lime treated and compacted in the summer of 2012.

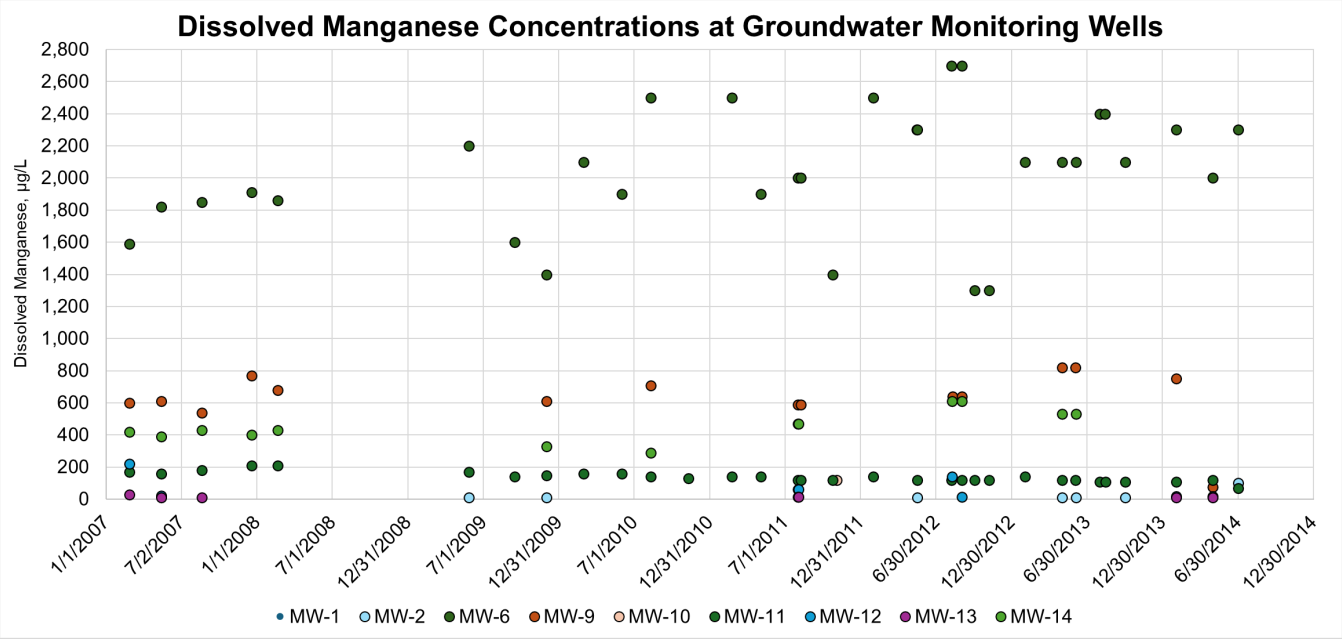
   Since monitoring for dissolved manganese has not been conducted at the groundwater monitoring wells since 2014 and the more recent samples at the

Cannery's well IIMW6A, which is listed as *upgradient of the Cannery's Land Application Area but downgradient to the City of Woodland's Water Pollution Control Facility* (WDR Order R5-2018-0051, Finding 44, page 11) are below 50 µg/L, it cannot currently be determined if the groundwater continues to be degraded as shown in the February 2007 through third quarter 2014 sampling results in MW-6 or the other groundwater wells. Therefore, this Order requires the discharger to initiate manganese sampling at the groundwater monitoring wells listed in the MRP to determine if the elevated manganese concentrations remain and how localized they are. This Order also requires sampling for iron and arsenic, which can also be disassociated from the soil similarly to how manganese is released into groundwater.

Table F-16. Dissolved Manganese Summary at Groundwater Monitoring Wells

Well	Minimum, µg/L	Average, µg/L	Maximum, µg/L
MW-1	ND	4.1	5
MW-2	ND	8.0	100
MW-6	1,300	2080	2,700
MW-9	75	630	820
MW-10	ND	12	120
MW-11	70	135	210
MW-12	5	38	220
MW-13	ND	8.9	30
MW-14	290	455	610

Figure F-3: Dissolved Manganese Concentrations at Groundwater Monitoring Wells



4. This Order requires the Discharger to continue groundwater monitoring to evaluate impacts to groundwater and assure protection of beneficial uses and to assess current and potential impacts at and around the vicinity of the pond system and if the discharges from the pond system to groundwater complies with the Basin Plan. This Order increases the number of constituents sampled and sets the frequency of

groundwater monitoring to quarterly for select monitoring wells and parameters. Pond monitoring has also been included in this Order to better evaluate impacts to groundwater and protection of beneficial uses.

5. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

6. Basin Plan water quality objectives include narrative objectives for toxicity of groundwater, chemical constituents, and tastes and odors. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

7. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

8. This Order requires continued groundwater monitoring and contains groundwater limitations for total coliform organisms. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater, including municipal, domestic, and agricultural uses. Raw domestic wastewater inherently contains human pathogens that threaten human health and life, and constitute a threatened pollution and nuisance under CWC section 13050 if discharged untreated to the receiving water. Total Coliform Organisms have the ability to degrade groundwater quality at this site because of the shallow groundwater in the vicinity of the Algae Production Ponds. The Basin Plan water quality objective for water designated for municipal usage is less than 2.2 MPN/100mL.

   It is therefore appropriate to adopt a numerical groundwater limitation of less than 2.2 MPN/100mL for total coliform organisms to implement the Basin Plan water quality objective to protect the municipal and domestic use of groundwater. To date, total coliform organisms have not been elevated in groundwater monitoring wells at or downgradient to the Facility relative to background groundwater quality, nor do these wells show increasing trends.

9. Groundwater limitations establish that the release of waste constituents from any portion of the Facility shall not cause or contribute to the exceedance of water quality objectives in the receiving water, or an exceedance of background groundwater quality, whichever is greater.

   If the Facility's discharge contains waste at a level greater than a water quality objective but the groundwater receiving the waste remains below the water quality

objective, the limitation would not be violated. However, if the same discharge causes the receiving water to exceed a water quality objective, the groundwater limitation would be violated. Similarly, if the same discharge is above the water quality objective and the receiving water is above the objective, the Facility's discharge would be contributing to an exceedance of the water quality objective and would be violating the receiving water limitation.

In the scenario where the level of waste in the Facility's discharge is below the water quality objective and the receiving water exceeds the water quality objective, the limitation would not be violated. Where natural background conditions exceed the water quality objective, compliance would be evaluated considering the established natural background concentration instead of the water quality objective. Only discharges causing or contributing to the exceedance of the water quality objective or natural background concentration (if background is greater than the water quality objective) in the groundwater would be in violation of the limitation.

Fact Sheet section VII.C.2.c

c. Groundwater monitoring at monitoring well MW-8 was not retained from Order R5-2020-0015. MW-8 is a far distance from the Facility and wells closer to the Facility can be used. The Discharger requested MW-16 be added as a downgradient well to replace MW-6, which the Discharger stated is better used as an upgradient/background well. Staff do not concur with including MW-6 as a background well, being that is adjacent to the Sludge Stabilization Ponds, can be used to monitor the groundwater below these ponds, and has shown groundwater impacts from the ponds. Groundwater at MW-6 was retained to monitor groundwater adjacent to the Sludge Stabilization Ponds and MW-16 was added to the well network. Groundwater monitoring at monitoring well MW-9 was not retained due to this downgradient well's intended purpose to monitor groundwater for the now decommissioned North Ponds, its distance from the Facility, the slow movement of groundwater in the area, and other non-Facility sources that could potentially influence MW-9.

13. MRP - Biosolids Monitoring Location

The Discharger requests that the proposed Order update the description of BIO-001 to accommodate the Discharger's long-standing practice of monitoring its WAS as part of its annual pretreatment program influent, effluent, and sludge monitoring. The Discharger notes that the monitoring at BIO-001 is included in the WDRs solely for the Discharger's implementation of its Industrial Pretreatment Program to help determine if there is pass-through or interference of pollutants. The Discharger's biosolids are produced in a process that culminates over a period of approximately 6 years and finished biosolids are only available once the solids have been digested and dried. The Discharger notes that collecting a sample from the finished biosolids does not help the Discharger determine pass-through or interference on an annual basis, and neither would collecting solids from Ponds 9 -11.

Response: Staff concur, the biosolids shall be samples from finished biosolids. The revised description for Monitoring Location BIO-001 in Table E-1 is shown in the response to Discharger Comment 10. The revised MRP section IX.A is shown below.

A. Biosolids

1. Monitoring Location BIO-001

a. In conformance with the Discharger's Pretreatment Program, a composite sample of sludge shall be collected annually at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants (excluding asbestos).

14. MRP - Land-Discharge EC Monitoring

The Discharger requests that EC monitoring be removed for LND-002 and LND-003 from Table E-4 in the MRP.

Response: Staff concur, see response to Discharger Comment 8

15. MRP - Pond Monitoring for Solids Depth

The Discharger requests that solids depth monitoring be removed from Table E-5 in the MRP. The Discharger knows of no way to safely and reasonably estimate the depth of solids in the algae production ponds since they are used continuously and maintained saturated.

Response: Staff concur. The Ponds and Groundwater Information Report will provide sufficient data pertaining to the ponds and groundwater. Solids Depth monitoring will not provide staff with additional information needed to determine future requirements. Solids depth monitoring from Table 5 was removed and the updated Table E-5 is shown in the response to Discharger Comment 11.

16. MRP - Surface Water Monitoring at RSW-003

The Discharger requests that routine visual monitoring at RSW-003 be removed from the WDRs. The Discharger contends that this is the only routine monitoring required at RSW-003. When the Discharger enrolled to participate in the Delta Regional Monitoring Program, the Central Valley Water Board allowed it to cease receiving water monitoring in lieu of its financial contribution to the program, effective May 1, 2015. Moreover, RSW-003 is routinely inaccessible due to poison oak, flooding, or unsafe and wet road conditions.

Response: Staff concur with the removal of routine visual monitoring at receiving water monitoring location RSW-003. Historical visual monitoring data indicate that the discharge has not impacted the receiving water for these parameters. Furthermore, the Facility utilizes tertiary treatment and ultraviolet disinfection. Tertiary treatment includes stringent limitations and requirements for this facility that in most cases would detect non-compliant discharges prior to a visual observation detecting impacts at the discharge point. Visual monitoring for RSW-003 was removed from MRP section VIII.B, the subsequent sections were reindexed, and Fact Sheet section VII.C.1.a was revised. The revised Fact Sheet section VII.C.1.a is shown below:

Fact Sheet section VII.C.1.a

1. Surface Water

a. Receiving water monitoring is necessary to assess impacts of the discharge on the receiving stream. Receiving surface water monitoring frequencies and sample types from Order R5-2020-0015 at RSW-001, RSW-002, and RSW-003 have not been retained. In lieu of conducting receiving water monitoring, the Discharger has been participating in the Delta Regional Monitoring Program

since May 2015. The upstream receiving water will be sampled during the characterization study.

17. MRP - Groundwater Monitoring for Total Coliform

The Discharger requests that Total Coliform monitoring of groundwater be removed or decreased to once per permit term.

The Discharger notes that the Fact Sheet in the Tentative Order states, "*total coliform organisms have not been elevated in groundwater monitoring wells at or downgradient to the Facility relative to background groundwater quality, nor do these wells show increasing trends.*". The Discharger's 2008 ECO:LOGIC hydrogeologic analysis of the WPCF ponds and groundwater investigated pathogen mobility from the ponds to groundwater and concluded "*that none of the groundwater monitoring wells contained virus at detectable limits, indicating that pathogen mobility in groundwater is low.*" The Discharger also notes that total coliform has a short hold time and eliminating this parameter from sampling can help provide flexibility with delivering samples to the contract analytical laboratory.

Response: Staff do not concur. The current operation of discharging undisinfected wastewater to the pond system is a potential threat to groundwater. Removing or reducing total coliform ground water monitoring to once per permit term would not be sufficient to ensure compliance with the total coliform groundwater limitation.

18. Fact Sheet – Opening Notes

The Discharger requests revisions to Fact Sheet section I.B. Fact Sheet section I.B mistakenly included language to an amendment.

Response: Staff concur with the request to revise Fact Sheet section I.B to remove the amendment language. The revised Fact Sheet section I.B is shown below.

B. The Facility discharges wastewater to an unnamed irrigation channel that discharges to Tule Canal, a water of the United States and tributary to the Yolo Bypass within the Sacramento San Joaquin Delta. The Discharger was previously regulated by Order R5-2020-0015 and National Pollutant Discharge Elimination System (NPDES) Permit CA0077950, which was adopted on 16 April 2020 and expired on 31 May 2025. Attachment B provides maps and photographs of the area around the Facility. Attachment C provides flow schematics of the Facility.

19. Fact Sheet - Pond System Description and Operation

a. The Discharger requests that the description of Ponds 9, 10, and 11 in Attachment F (Fact Sheet) note that the final biosolids could be disposed offsite using additional methods, including land application and that the final disposal location for the Discharger's biosolids will be determined by the contractor selected for off-site disposal. Further, biosolids disposal is subject to California Senate Bill 1383 requirements pertaining to landfill-organics diversion, so landfill disposal may not be the preferred option in the future.

b. The Discharger notes that throughout the Fact Sheet, the seepage rate of Ponds 9, 10 and 11 is discussed in the context of not meeting the Board's 1 x 10^{-6} cm/s hydraulic conductivity standard, but seepage rate and hydraulic conductivity are not equivalent. The seepage rate (also known as specific discharge) is related to saturated hydraulic conductivity by the following equation, which is based on a rearrangement of Darcy's Law (adapted from USDA 2009, p. 10D-131). The Discharger requests revisions to various

sections of the Fact Sheet, specifically to pond and groundwater descriptions and evaluations.

Response: Staff concur with including the updated final solids disposal methods provided by the Discharger in Fact Sheet section II.A.2, with revising the pond and groundwater descriptions and evaluations, and with removing the reference of a "*standard*" for hydraulic conductivity.

Fact Sheet section II.A.2.d provides a narrative of the current pond system description and operation, including the final solids disposal method. The Discharger provided an estimated hydraulic conductivity for Pond 11 that was less than $1x10^{-6}$. The hydraulic conductivity of 1×10^{-6} is a target rather than a standard. Fact Sheet section II.B.5 includes land discharge information, the Discharger provided language to update the pond/land discharge descriptions.

The proposed Order includes the updated narrative of the disposal of the final biosolids, as provided by the Discharger, updated language regarding the estimated hydraulic conductivity for Pond 11, and removal of the reference of reference of a "standard" for hydraulic conductivity, (the first example of the removal of the term "standard" is shown in the response to Discharger Comment 6). The revised Fact Sheet sections II.A.2, II.A.3, and II.B.5 are shown below:

Fact Sheet section II.A.2

2. **<u>Pond System Description and Operation</u>**
   a. **Pond System General Information.** The depth of water in the ponds ranges between 1 foot to 6 feet and the depth to groundwater is, at times, less than 10 feet. The CV-SALTS Nitrate Control Program Notice of Intent (Nitrate Control Program NOI) included results from a December 2022 water balance study conducted by Luhdorff & Scalmanini Consulting Engineers (LSCE) on Ponds 8 and 11 (Water Balance Study) to determine seepage rates for each pond. These ponds were chosen to include one lined pond (compacted, lime/concrete-treated soil) and one unlined pond (compacted native soil).

   The Water Balance Study was conducted over a two-week period from 12 December 2022 to 20 December 2022 for Pond 11 and 20 December 2022 through 26 December 2022 for Pond 8. The Water Balance Study was conducted during times of no precipitation and both ponds were hydraulically isolated, conditions that ensured that any water level changes in these ponds could be attributed to seepage or evaporation only. The Water Balance Study utilized meteorological equipment and transducers to produce data used to estimate evaporation and measure water level changes within Pond 8 and Pond 11.

   Evaporation was subtracted from the water level changes to determine the total amount of water level changes that could be attributed to seepage. Pond 8 was determined to have a seepage rate of 0.18 in/d (5.3×10^{-6} centimeters per second (cm/s)) and Pond 11 had a seepage rate of 0.07 in/d (2.1×10^{-6} cm/s). All lined ponds were assigned the seepage rate for Pond 11 and all unlined ponds were assigned the seepage rate for Pond 8. These seepage rates are specific to a static pond water level of 4-5 feet, which is the approximate depth of water in the ponds at the time of the Seepage Studies.

   b. **Pond 13.** Pond 13 is also referred to as the Erskine Pond and both terms will be used interchangeably throughout this Fact Sheet. The Erskine Pond is a 40-acre

pond with a native clay pond bottom and is not equipped with an engineered liner or soil treatment. The Erskine Pond provides peak and emergency overflow protection, onsite discharge containment during plant shutdowns, and functions as an algae production pond to assist with onsite sludge stabilization. A portion of the facility's secondary effluent is directed to the pond to maintain a water cap conducive to algae production. The pond occasionally contains screened influent from plant diversions and rainwater from precipitation, but a persistent secondary effluent water cap is maintained. Wastewater in the Erskine Pond is not returned to the headworks, and the pond level and odors are maintained with secondary effluent year-round. Wastewater from the Erskine Pond is further distributed to the south ponds.

c. **Pond 1 through Pond 8 and Pond 12.** Pond 1 through Pond 8 and Pond 12 are also referred to as the Algae Production Ponds and both terms will be used interchangeably throughout this Fact Sheet. Ponds 1 through 8 and 12 are approximately 10 acres each (total acreage of the unlined ponds is approximately 139.5 acres) and have native clay bottoms but are not equipped with engineered liners or soil treatment. Percolation rates (specific discharge) for these unlined ponds are approximately 5.3×10^{-6} cm/s measured when the ponds contained 4-5 feet of water, which are derived from the Seepage Studies. Along with the Erskine Pond, the Algae Production Ponds serve multiple purposes, including occasional use for peak and emergency overflow protection, and for onsite discharge containment during plant shutdowns. These ponds are primarily used for algae production to assist with onsite sludge stabilization. As discussed in section II.A.4 of this Fact Sheet, algae produced in Ponds 1-8 (and WAS) is discharged into the three lined Sludge Stabilization Ponds to convert the WAS to biosolids.

   Wastewater is distributed to these ponds via the pond pump station which may contain wastewater from the Erskine Pond and/or other points in the treatment process. The system allows wastewater to circulate among the ponds to maintain the water cap. Generally, water is directed into the Erskine Pond and then pumped into Ponds 1, 2, and/or 3, subsequently moving into Ponds 4, 5, and/or 6, followed by Ponds 7, 8, and 12 if necessary. Individual ponds can be taken out of service using valves and gates to enable bypassing specific ponds when needed. After reaching Pond 12, water is redirected to the pump station for recirculation and cannot be returned to headworks or any other portion of the wastewater treatment system. Instead, a shallow water cap consisting of wastewater and rainwater is maintained to promote aerobic algae production. Water is lost through evaporation and percolation and replaced with wastewater. Oxygenated, algae-laden water is distributed to the Sludge Stabilization Ponds (Ponds 9, 10, and 11) to sustain the aerobic layer required for sludge stabilization.

   The Algae Production Ponds may contain water year-round, have low water levels, or be dry. Due to evaporation and operational processes, salt concentrations tend to increase starting in Pond 1 and increasing in each subsequent pond, typically reaching a maximum concentration in Pond 8.

d. **Ponds 9, 10, and 11.** Ponds 9, 10 and 11 are also referred to as the Sludge Stabilization Ponds and both terms will be used interchangeably throughout this Fact Sheet. Each sludge stabilization pond is approximately 10 acres (approximately 34.2 acres in total for all three Sludge Stabilization Ponds) and are soil-cement lined with a combination of native clay, lime, and cement to reduce percolation rates beyond the natural percolation rates. The liner depth in Pond 11 is 12 inches and the liner depth for Ponds 9 and 10 is 18 inches.

   The percolation rate for Pond 11 is approximately 2.06×10^{-6} cm/s which is derived from the Seepage Study in 2022, conducted at a pond water depth of 4-5 feet. This seepage rate is a function of hydraulic head (pond water level), liner thickness, and hydraulic conductivity. Using Darcy's law, the seepage rate, a 4-foot water depth, and liner depth of 1 foot, the estimated hydraulic conductivity of the Pond 11 cement-soil liner is no greater than 4.1×10^{-7} cm/s, which is less than the hydraulic conductivity of 1×10^{-6} cm/s.

   The Sludge Stabilization Ponds function as sludge drying beds or facultative lagoons. The three ponds are used in rotation so that one of the ponds is in use as a facultative sludge lagoon receiving sludge and water while the other two ponds are in various stages of drying and sludge removal. Facultative lagoons allow solids to separate by density, with anaerobic digestion occurring in the sludge layer and aerobic activity near the surface. Intermediate zones support facultative organisms that oxidize organics and anaerobic byproducts. The Discharger has adopted a system of loading one Sludge Stabilization Pond with sludge for two to three years, allowing that pond to rest/digest for two years, and hiring a contractor the following summer to dry the material in place, test for compliance with the EPA 503 sludge disposal regulations (to determine future suitability for land application and for landfill regulations), and landfill disposal, land application, or other disposal off site. The contractor determines the final disposal location for the City's biosolids.

e. **Emergency Detention Basin.** The Discharger is preparing to assess alternatives, design, secure funding, permit and construct improvements to the Erskine Pond that will convert it or portions of it into an emergency detention basin and pump station located adjacent to the plant headworks. The emergency detention basin is expected to be in operation by 2036 and will receive excess sewage flows occurring during larger rain events and bypasses during finite emergency events. The wastewater would be pumped back to the headworks after the event concludes. Secondary effluent would continue to be directed into the South Ponds and would be in full compliance with groundwater limitations.

f. **Former North Ponds.** The former City of Woodland North Ponds (North Ponds) contained nine ponds that were used for sludge stabilization. In the summer of 2012, the North Ponds were further dewatered, and pond bottoms were scrapped to construct a pad for the Woodland-Davis Clean Water Agency Regional Water Treatment Facility, in the area formerly occupied by North Ponds 1 and 2.

The Discharger submitted closure notification of the North Ponds to the Central Valley Water Board on 30 January 2012. Central Valley Water Board staff reviewed the 30 January 2012 closure notification and the groundwater data applicable to the North Ponds system and determined the pond closure clean-up activities were acceptable and the monitoring data indicated no degradation to the underlying groundwater. The Central Valley Water Board determined that the North Ponds were properly closed in a 12 April 2012 Approval of Closure Letter (April 2012 Approval Letter) to the Discharger. The April 2012 Approval Letter also indicated that further changes to the North Ponds site do not require notification of the Central Valley Water Board since the NPDES permits for the Facility no longer include the use of the North Ponds.

3. **Groundwater Monitoring Wells.** The groundwater monitoring network consists of 9 active groundwater monitoring wells. The depth to groundwater ranges from 5.6 to 16 feet below ground surface (bgs), with the direction of flow generally northeast depending on seasonal changes, irrigation, and groundwater pumping. The table below shows the wells in the groundwater monitoring network in addition to former wells in the groundwater monitoring network. The Discharger's July 2008 technical report titled "Hydrogeologic Evaluation Report", prepared by Eco:Logic (now Stantec) identified that first-encountered shallow groundwater near the Facility occurs as a continuously perched aquifer. This was indicated by the presence of non-saturated conditions below the perched aquifer at depths up to more than 115 feet bgs. The California Department of Water Resources Online System for Well Completion Reports does not identify any wells classified as domestic within an area of 2 miles downgradient of the Facility ponds, which was documented in the Discharger's Nitrate Control Program NOI.

Table F-2 Facility Groundwater Well Information

Well Name	Status	Depth of Screened Interval	Top of Casing Elevations	Well Diameter	Well Depth	Depth to GW	Gradient and Approximate Location
MW-1	Active	NR	36.07	4	28.5	12	Upgradient. Approximately 1,000 feet south of Pond 6 at the southwest corner of Discharger's property
MW-2	Active	NR	32.66	4	34.6	8.1	Downgradient. Approximately 200 feet east of Erskine Pond
MW-3	Note 2	--	--	--	--	--	--
MW-4	Note 2	--	--	--	--	--	--
MW-5	Note 2	--	--	--	--	--	--

Well Name	Status	Depth of Screened Interval	Top of Casing Elevations	Well Diameter	Well Depth	Depth to GW	Gradient and Approximate Location
MW-6	Active	NR	37.09	4	35.1	12	Downgradient. Approximately 100 feet east of Pond 11
MW-7	Note 2	--	--	--	--	--	--
MW-8	Note 2	--	--	--	--	--	--
MW-9	Note 2	15.7-30.7	35.49	2	30.7	16	Crossgradient. Approximately 1 mile north of Facility
MW-10	Active	14-24	37.53	2	24	13	Crossgradient. Approximately 0.5 miles west of Erskine Pond
MW-11	Active	24-39	39.14	2	55	14	Downgradient, Approximately 100 feet south of Erskine Pond and Pond 1
MW-12	Active	12-27	39.68	2	45	15	Upgradient. Approximately 1 mile south-southwest of Pond 6
MW-13	Active	24-44	31.35	2	45	5.6	Crossgradient. Approximately 0.6 mile southeast of Pond 7
MW-14	Note 2	--	--	--	--	--	--
MW-15	Note 2	--	--	--	--	--	--
MW-16	Active	25-35	--	8	35	--	Cross and/or downgradient. Approximately 100 feet southeast of Pond 7

Table F-2 Notes:

1. **Units.** Depth of screened interval, well depth, and depth to groundwater are in units of feet below ground surface. Top of casing elevation is in units of feet above mean sea level. Well diameter is in units of inches.
2. **Status.** Groundwater monitoring wells MW-3, MW-5, and MW-7 are inactive and destroyed. Groundwater monitoring wells MW-4, MW-14, and MW-15 are inactive and inaccessible. Groundwater monitoring well MW-8 is inactive due to its limited usefulness and groundwater monitoring well MW-9 is inactive due it being intended as a downgradient well to MW-8.

Fact Sheet Section II.B.5

5. **Discharge to Land.** Wastewater in the Erskine Pond, Algae Production Ponds, and Sludge Stabilization Ponds cannot be returned to the headworks and the hydraulic

conductivity in the soil beneath Pond 1 through Pond 8, Pond 12, and Ponds 13 is greater than $1x10^{-6}$ cm/s; therefore discharge to these ponds is considered a discharge to groundwater via Discharge Point 002. The discharges to land are detailed below:

a. **Discharge of Screened Influent to Land.** Periodically, screened influent, which contains elevated concentrations of BOD_5, total coliform organisms, and ammonia (oxidizes to nitrite then to nitrate), is discharged to the unlined Erskine Pond where it is mixed with secondary effluent. Wastewater in the Erskine Pond can be discharged to the nine unlined Algae Production Ponds and cannot be returned to the Facility headworks. Groundwater movement in the Facility area is known to be slow due to clay-dominated soils in the area that retard downward movement of groundwater into the deeper production aquifer (e.g., rice is grown in flooded paddies on the southeast border of the Facility). A shallow, perched groundwater/aquitard exists beneath the ponds. No domestic wells are known to be located within two miles downgradient of the facility.

   A portion of the Erskine Pond will be converted to an engineered emergency detention basin which will be able to receive peak flows and return the flows back to the Facility headworks for treatment. The threat to groundwater will be significantly reduced once the engineered emergency detention basin is in operation. This Order requires the engineered emergency detention basin be constructed and maintained to meet a hydraulic conductivity of 1×10^{-6} cm/s or better. The engineered emergency detention basin will be able to return screened influent (and other non-compliant wastewater) back to the Facility headworks for treatment rather than allowing the screened influent to percolate into the groundwater.

b. **Discharge of Secondary Treated Wastewater to Land.** Year-round, Ponds 1 through 8 and Pond 12 (Algae Production Ponds) receive nitrified-denitrified secondary effluent to maintain the water level and promote algae production for use in the Sludge Stabilization Ponds (Ponds 9 through 11) and denitrified secondary effluent used as a water cap to support algal respiration, in lieu of mechanical aeration. Secondary effluent is used to dilute the raw wastewater and control odors of the screened influent in the Erskine Pond. Historically, the Discharger has minimized secondary wastewater diverted to the Algae Production Ponds to sufficiently maintain the ponds for algae production, not for wastewater disposal. Most influent is tertiary treated and discharged to surface water or used as recycled water. The Algae Production Ponds operate to facilitate digestion of waste activated sludge and typically contain commingled wastewater and/or rainwater year-round (depth of water in the ponds ranges between 1 to 7 feet).

c. **Discharge of Waste Activated Sludge to Land.** Waste activated sludge and water from the Algae Production Ponds is discharged to ponds 9, 10, and 11 (Sludge Stabilization Ponds). These ponds were engineered with a cement-lime, compacted clay liner to a depth of 18 inches. The seepage rate (a function of hydraulic head, material thickness, and hydraulic conductivity) of Pond 11 was determined to be 2.06×10^{-6} cm/s at a 3-foot water depth, which results in an estimated hydraulic conductivity of 6.9×10^{-7} cm/s for the 18-inch deep liner.

Fact Sheet Section II.E

E. Planned Change

The Discharger is planning to construct an emergency detention basin that will meet a hydraulic conductivity of 1 x 10^{-6} centimeters per second. The emergency detention basin will enable the Discharger to store peak flows during storm events, as well as during maintenance or construction activities. The project also includes upgrading the headworks by adding a new pump station. These projects are currently planned to be completed by 1 April 2036. Additionally, the Discharger is exploring the potential for land application of treated sludge on neighboring property.

20. Miscellaneous Comments

a. The Discharger provided an edit to MRP section IX.E.4.h to clarify that the reporting level for be a maximum of 0.05 nanograms per liter (ng/L) for methyl mercury and 0.5 ng/L for total mercury.

> h. **Total Mercury and Methylmercury.** Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and1631 (Revision E), respectively, with a maximum reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

Jo Anne Kipps Comments.

1. **Special Studies, Technical Reports and Additional Monitoring Requirements**

   a. Ms. Kipps requests a clarification of the "*Inflow and Infiltration to Ponds 1 through 13*" from WDR VI.C.2.a, (Ponds and Groundwater Information Report).

   b. Ms. Kipps requests subsection iv in section VI.C.2.d (Sludge Stabilization Ponds Liner Maintenance Report) in the proposed Order to read: "*If Identification of liner modifications or repairs are needed to continue Sludge Stabilization Ponds operations.*".

   c. Ms. Kipps requests the Sludge Stabilization Ponds Liner Maintenance Report in the proposed Order move subsection viii (Test results and conclusions) after subsection iii (A description of the performance test methodology and/or instrumentation used).

   Response: Staff concur in part. The Discharger noted that inflow and infiltration are not directly discharged to the pond system. The mention of inflow and infiltration from the Pond and Groundwater Information Report was removed. Section VI.C.2.d was revised as requested. The revised section VI.C.2.a is shown in the response to Discharger Comment 5. The revised section VI.C.2.d is shown in the response to Discharger Comment 7:

2. **Construction, Operation and Maintenance Specifications – Flood Protection**

   Ms. Kipps notes that the tentative order's WDR VI.C.4.e states, "All treatment facilities, including ponds, shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.". Ms. Kipps notes that in her previous two letters, she commented that the previous two versions of the tentative order (1) did not disclose that the Facility is within the 100-year floodplain, according to maps issued by the Federal Emergency Management Agency (FEMA), and (2) did not provide information on the elevations of flood-protection berms surrounding the Facility, including its ponds. Ms. Kipps notes that the tentative order still does not disclose this information or address the flood risk to the Facility and its ponds.

   Ms. Kipps requests the proposed Order disclose that the Facility is within the 100-year floodplain according to FEMA maps and explain what flood protection measures the Discharger has implemented or plans to implement to ensure consistent compliance with WDR VI.C.4.e (Flood Protection). Ms. Kipps further requests that the proposed Order include a special provision requiring the Discharger to submit a technical report detailing the floodplain designation status of the Facility and its ponds and identifying measures implemented or planned to ensure compliance with WDR VI.C.4.e (e.g., Provision M.2.h in R5-2025-0059 for City of Modesto, Regional Water Recycling Facility – Sutter Campus and Regional Water Recycling Facility – Jennings Campus, Stanislaus County).

   Response: Staff concur . The Discharger is required to comply with the Flood Protection provision in section VI.C.4.e, which requires that all treatment facilities, including ponds, shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency. A Flood Protection Certification was included in the proposed Order to ensure the Facility and ponds are engineered for a 100-year storm event. The revised section VI.C.2.f and Fact Sheet sections VI.B.2.f and VI.B.4.d are shown below. The revised Technical Reports Table showing the Flood Protection Certification is shown in the response to Discharger Comment 6.

Section VI.C.2.f

f. **Flood Protection Certification.** The Flood Protection Certification shall certify that the ponds are engineered to meet the 100-year flood and shall be submitted by the date on the Technical Reports Table.

Fact Sheet section VI.B.2.f

f. **Flood Protection Certification.** The Facility is located within a 100-year floodplain, according to maps issued by the Federal Emergency Management Agency (FEMA). The Flood Protection Certification shall detail the floodplain designation status of the Facility and its ponds and describe measures implemented or planned to ensure compliance with section VI.C.4.e of this Order.

Fact Sheet section VI.B.4.d

d. **Flood Protection.** The Facility is located within a 100-year floodplain, according to maps issued by FEMA. This Order requires that all treatment facilities, including ponds, shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

3. MRP - Table E-1. Monitoring Station Locations

a. Ms. Kipps requests that proposed Order update the Monitoring Location Description for ALG-001 and 002 in MRP Table E-1 to indicate that Monitoring Location ALG-001 is composed of composite samples of equal volumes of representative samples of wastewater in Ponds 1, 2, and 3 and Ponds 4, 5, and 6, respectively. Ms. Kipps notes that Monitoring Locations ALG-001 and ALG-002 are a composite samples of representative samples of wastewater from cited algae production ponds

b. Ms. Kipps notes that Sludge Stabilization Ponds PND-009, PND-010, and PND-011 are incorrectly identified as "*Algae Production Ponds*" and requests they be corrected to "*Sludge Stabilization Ponds*".

Response: Staff concur in part. Monitoring Locations ALG-001 and ALG-002 are locations that are designed to be representative of their respective Algae Production Ponds. Recent samples of the Algae Production Ponds show consistent nitrate and TKN concentrations for each set of ponds and wastewater is continually cycled through the Algae Production Ponds, resulting in a natural compositing effect; therefore, additional effort to collect a composite sample from each pond is not necessary. Additional rationale discussing why these monitoring locations are representative is provided in detail in Discharger Comment 11. The requested changes were not made to monitoring locations ALG-001 and ALG-002 in the proposed Order. Staff revised the descriptions to Ponds 9 through 11 in Table E-1 and the changes are shown in the response to Discharger Comment 10.

4. MRP VI.B - Pond Monitoring

a. Ms. Kipps requests that MRP Section VI.B.1 in the proposed Order remove the reference to groundwater as it appears the Discharger does not add groundwater to the ponds. Ms. Kipps notes that MRP Section B.1 in the tentative Order indicates pond water consists of "*wastewater, groundwater, rainwater, etc.*" and also notes that the previous version of the tentative order indicates that the Discharger may add groundwater to the ponds, however the tentative order does not disclose this.

b. Ms. Kipps requests the proposed Order include dissolved oxygen monitoring in MRP Table

E-5 rather than Table E-6 to obtain dissolved oxygen values for each pond in active use. Ms. Kipps notes that it would appear appropriate to require dissolved oxygen monitoring for each individual pond (not by composite samples).

c. Ms. Kipps requests that the proposed Order requires submittal of information on pond invert (bottom) elevations and method(s) used for determining pond solids depths in MRP section B.3.i. Ms. Kipps notes that MRP section B.3.i in the tentative Order refers to monitoring solids depth in algae production ponds. It does not require the Discharger to submit information identifying the pond invert elevation of algae production ponds or describing the method(s) used to monitor solids depth.

Response: Staff concur in part. The reference to groundwater was erroneously included in the tentative Order and is removed in the proposed Order. The revised MRP section B.1 is shown in the response to Discharger Comment 11. Table E-5 is intended for the conditions in individual ponds; however, for the reasons discussed in Kipps Comment 3 and Discharger Comment 11, the continual flow between ponds makes the samples from ALG-001 and ALG-002 representative of the conditions in their respective set of ponds. Therefore, dissolved oxygen monitoring has been retained in Table E-6. Solids Depth monitoring is discussed in Discharger Comment 15.

5. MRP – Technical Reports Table

a Ms. Kipps requests that the Technical Reports Table in the proposed Order indicate a due date of 1 October 2027 for Report 3, Groundwater Monitoring Well Installation Work Plan, and a due date of 31 March 2030 for Report 4, Groundwater Monitoring Well Installation Report.

b. Ms. Kipps requests the proposed Order update the Groundwater Monitoring Well Installation Work Plan to include a technical evaluation of the adequacy of the current groundwater monitoring well network to characterize shallow groundwater upgradient and downgradient from the Facility's ponds for evaluating whether the discharge complies with groundwater limitations.

c. Ms. Kipps contends that the Report 10 *Emergency Detention Basin Installation Annual Report* in the Technical Reports Table is not necessary and requests it be removed in the proposed Order.

Response: Staff concur in part. The dates for the Groundwater Monitoring Well Installation Work Plan and the Groundwater Monitoring Well Installation Report were corrected in the proposed Order, and the revised Technical Reports Table is shown in the response to Discharger Comment 6.

A requirement to include a technical evaluation of the monitoring well network to characterize shallow groundwater upgradient and downgradient of the Facility was not included in the Groundwater Monitoring Well Installation Work Plan of the proposed Order since the Ponds and Groundwater Information Report already provides information related to this request. Report 10 from the tentative Order was retained due to the Emergency Detention Basin Installation Report being changed from a "*final report*" to a "*work plan*" and the work plan being due 1 October 2027.

6. Fact Sheet - Description of Wastewater and Biosolids Treatment and Controls

a. Ms. Kipps requests subsection b in Fact Sheet section II.A.2 (Pond System Description and Operation) in the proposed Order be corrected to remove the double use of "*screened*

influent".

b. Ms. Kipps requests that the proposed Order consistently characterized groundwater flow direction. Ms. Kipps notes that Fact Sheet section II.A.3 (Groundwater Monitoring Wells), 2nd sentence of the tentative Order reads: "*The depth to groundwater ranges from 5.6 to 16 feet below ground surface (bgs), with the direction of flow generally east-northeast depending on seasonal changes, irrigation, and groundwater pumping.*" Elsewhere, Fact Sheet V.B., 1st paragraph, 3rd sentence of the tentative Order reads: "*Groundwater generally flows northeast around the Facility.*" And, elsewhere Fact Sheet V.B.3 regarding Dissolved Manganese, 1st paragraph, 1st sentence of the tentative Order reads: "*As stated above, the groundwater gradient is generally north-northeast.*" Ms. Kipps additionally notes that gradient is not synonymous with flow direction.

c. Ms. Kipps requests that Fact Sheet Table F-2 in the proposed Order confirm the column header for well depth to indicate units are feet below ground surface (ft bgs). Ms. Kipps notes that Table F-2 in the tentative Order includes a column for Well Depth and indicates values presented as feet above mean sea level

d. Ms. Kipps request that the proposed Order include information within the permit text (e.g., as another table presenting Facility Groundwater Monitoring Well Information such as that below). Presentation of the suggested table below eliminates the need to include locational information for active wells in discussions on groundwater quality for nitrate, electrical conductivity, and dissolved manganese. Ms. Kipps notes that Attachment B, Figure B-3, depicts the locations of eight of nine active network wells and identifies each as either typically downgradient or typically upgradient. Since the tentative order characterizes groundwater flow direction as east-northeast, northeast, and north-northeast, MW-9 and MW-13 are cross-gradient wells.

Response: Staff concur and removed the double reference to "*screened influent*" in Fact Sheet section II.A.2.b, corrected the units for well depth to "feet below ground surface", included the location and flow directions to Table F-2 (but locations relative to the Cannery were not included), and corrected the groundwater flow direction to only refer to a "northeast" direction.

Fact Sheet sections II.A.3 and Fact Sheet section V.B.3 (second paragraph) were revised to only refer to a "northeast" direction and Table F-2 was updated to include gradient and approximate location of the ground water wells. The revised Fact Sheet section II.A.2 and Fact Sheet section II.A.3 are shown in Discharger Comment 19. The revisions to Fact Sheet section V.B.3 are shown in the response to Discharger Comment 12.

7. Fact Sheet - Discharge Points and Receiving Waters - Discharge to Land

Ms. Kipps requests that Fact Sheet section II.B.5.a in the proposed Order read: "*Groundwater movement in the Facility is known to be slow….*".

Ms. Kipps notes that Fact Sheet section II.B.5.a of the tentative Order pertains to Discharge of Screened Influent to Land. 3rd sentence reads: "*Groundwater gradients and movement in this zone is known to be slow due to clay-dominated soils in the area that retard downward movement of groundwater into the deeper production aquifer (e.g., rice is grown in flooded paddies on the southeast border of the Facility)*.

Response: Staff concur, Fact Sheet section II.B.5.a was revised to clarify the section. The changes to Fact Sheet section II.B.5 are shown in the response to Discharger Comment 19

8. Fact Sheet – Planned Changes

Ms. Kipps requests that Fact Sheet II.E (Planned Changes) in the proposed Order be clarified as the tentative Order indicates that the Discharger plans to complete the construction of an emergency detention basin by 1 April 2036. Yet, the tentative order requires the Discharger to submit a Final Emergency Detention Basin Installation Report by 30 March 2030.

Response: Staff concur. As indicated in the response to Discharger Comment 6, the "Final Emergency Detention Basin Installation Report" was revised to the "*Emergency Detention Basin Installation Work Plan*" with a due date of 1 October 2027. Section VI.C.2.c of the proposed Order and the Technical Reports Table in the MRP of the proposed Order were updated and are shown in the response to Discharger Comment 6.

9. Fact Sheet – Groundwater Antidegradation Policies

Ms. Kipps requests that Fact Sheet section IV.D.4.b in the proposed Order:

a. Identify the location of the cannery facility regulated by WDRs Order R5-2018-0051 (Cannery) wastewater land application area as being east of the Facility and its ponds.
b. Identify Cannery Monitoring Well IMW6A as being downgradient from Facility Ponds 6, 7, 8, and 9 and add clarifying language as to where the cannery groundwater wells are up/downgradient to; and
c. Clarify language that the electrical conductivity concentrations in downgradient wells are higher when compared to background wells indicating degradation.

Response: Staff concur. The land application area is east of the Facility. Updated language to identify Cannery Monitoring Well IMW6A as being downgradient from Facility Ponds 6, 7, 8, and 9 was added to the narrative of the location of Cannery well IMW6A. Clarifying language regarding the location of other cannery groundwater wells (i.e., up or downgradient information) is also included in this section. Language in Fact Sheet IV.D.4.b was not consistent with Fact Sheet section V.B.2. The revised Fact Sheet section IV.D.4.b is shown in the response to Discharger Comment 8.

10. Fact Sheet – Stringency of Requirements for Individual Pollutants.

Ms. Kipps requests that Fact Sheet IV.D.5 of the proposed Order indicate that there is not a nitrate effluent limitation for wastewater discharged to land (ponds).

Response: Staff concur. The tentative Order incorrectly referenced a land discharge specification for nitrate for discharge to the ponds. The revised second paragraph to Fact Sheet section IV.D.5 is shown in the response to Discharger Comment 5.

11. Fact Sheet – Rationale for Groundwater Limitations

a Ms. Kipps requests that Fact Sheet section V.B.1 (Nitrate Groundwater Limitations Rationale) of the proposed Order read "*This Order requires the continued monitoring of nitrate in the groundwater for evaluation of compliance with groundwater limitations*". Ms. Kipps also notes that Fact Sheet V.B.1 regards Groundwater Nitrate Total as Nitrogen.

b Ms. Kipps requests that Fact Sheet section V.B.1, Table F-14 *Groundwater Nitrate Total as Nitrogen Summary*, be revised to identify (e.g., via footnotes) each active well as upgradient, downgradient, or cross-gradient, and to include data for MW-16 (or explain why this information is not available). Ms. Kipps notes that The revised preliminary draft included language: "*However, low nitrate concentrations compared to background indicates*

anoxic conditions, which can cause groundwater to be degraded for iron, manganese, and arsenic" and notes that the tentative order does not include this sentence. Ms. Kipps requests the proposed Order include the above-cited sentence from the revised preliminary draft at the end of Fact Sheet V.B.1.

c Ms. Kipps requests that Fact Sheet section V.B.3 (Dissolved Manganese Groundwater Limitations), Table F-16, be revised to include data from MW-16 or explanation of why this information is not available, disclose that MW-2 is within a Facility storm water detention basin, and mention that the relatively low concentrations of dissolved manganese in MW-2 may be attributable to the dilution effects of percolating Facility storm water. Ms. Kipps also notes that the punctuation errors in Fact Sheet section V.B.3 be corrected in the proposed Order.

d. Ms. Kipps contends that the statement "*In the scenario where the level of waste in the Facility's discharge is below the water quality objective and the receiving water exceeds the water quality objective, the limitation would not be violated.*" in Fact Sheet section V.B.9 in the tentative Order is not entirely correct, as discharges containing concentrations of dissolved forms of iron, manganese, and arsenic below water quality objectives (WQOs) can cause the concentrations of these constituents in groundwater to exceed WQOs due to organic overloading. Also, the pond seepage discharge may cause groundwater to contain other decomposition byproducts, namely alkalinity and hardness (contributors to salinity), in concentrations exceeding that in the discharge itself.

Response: Staff concur in part, and the revised Fact Sheet section V.B is shown in the Response to Discharger Comment 12.

a. The requested language to the first paragraph to Fact Sheet section V.B.1 clarifies that groundwater monitoring will evaluate compliance with the groundwater limitations.

b. Information of the monitoring wells location (gradient) relative to the Facility is helpful and was included in the revised Table F-2. Since it is not proven that the groundwater is anoxic, the sentence from the preliminary draft Order was not included in the tentative Order and has not been included in the proposed Order.

c. Language was added to the beginning of Fact Sheet section V.B to clarify why groundwater quality data are not available for groundwater monitoring well MW-16. MW-2 is not within a designated stormwater basin but language in Fact sheet section V.B.3 was updated to correct punctuation and to clarify that monitoring well MW-2 is assumed to be influenced by the Facility Ponds and precipitation.

d. Staff do not concur with revising Fact Sheet section V.B.9 to include identification of organic loading to determine compliance with groundwater limitations. The last sentence in Fact Sheet section V.B.9 states that "*Only discharges causing or contributing to the exceedance of the water quality objective or natural background concentration (if background is greater than the water quality objective) in the groundwater would be in violation of the limitation.*", which would consider potential organic overloading. Neither, total alkalinity or total hardness have applicable water quality objectives. Furthermore, the proposed Order includes groundwater monitoring for total alkalinity (as part of the standard minerals monitoring) and total hardness and data gathered in the proposed Order will aid in determining if decomposition byproducts are being increased.

12. Hydraulic Conductivity

a Ms. Kipps requests that the proposed Order include units of “centimeters per second” for when referencing hydraulic conductivity.

b Ms. Kipps requests the proposed Order explain what is meant by “required hydraulic conductivity standards”.

c. Ms. Kipps notes that the tentative order appropriately establishes a hydraulic conductivity standard of $1x10^{-6}$ centimeters per second for the Emergency Detention Basin liner, but unfortunately not also for the Sludge Stabilization Ponds. These ponds impound WAS, a high-strength waste characterized by constituent concentrations that are orders of magnitude greater than that in impounded screened influent..”. Fact Sheet VI.B.2.d pertains to the Sludge Stabilization Ponds Liner Maintenance Report.

Response: Staff concur in part.

a. There were areas in the tentative Order that did not specify the units when referencing hydraulic conductivity. Staff has included the units of centimeters per second when referencing hydraulic conductivity throughout the proposed Order.

b. The hydraulic conductivity of 1×10^{-6} centimeters per second is better described as a target rather than a standard. The proposed Order has removed the reference of a standard for hydraulic conductivity. The first example of the removal of the term “standard” is shown in the response to Discharger Comment 6.

c. Comment is noted. The discharger provided estimated hydraulic conductivity values for Pond 11 that would meet the target of 1×10^{-6} centimeters per second which was included per the response to Discharger Comment 19.

13. Design Flow

Ms. Kipps requests that the proposed Order explain why the Flow Schematic indicates the Facility’s design flow as 5.6 MGD. Attachment C indicates the Facility design process flow rate is 5.6 million gallons per day (MGD), yet elsewhere (Fact Sheet Table F-1 Facility Information) the tentative order indicates the design flow is 10.4 MGD.

Response: Staff concur. The flow shown on the flow schematic (Figure C-1) was not the design flow. The proposed Order permits a discharge flow of 10.4 Million Gallons per Day (MGD). The reference of 5.6 MGD was removed from Figure C-1. The names of the processes were also added to Figure C-1. The updated Figure C-1 is shown in the response to Discharger Comment 9.

14. Accessor Parcel Number

Ms. Kipps requests that the proposed Order include that the Discharger property containing the Facility and ponds consists of one accessor parcel number (APN), 042-580-034-000. Ms. Kipps notes that WDR VI.C.2.a requires the Discharger to submit a Pond and Groundwater Information Report by 31 March 2030, the same deadline for the Report of Waste Discharge for NPDES Permit renewal. The Pond and Groundwater Information Report requires identification of the APNs for the Discharger’s property encompassing the treatment works and ponds.

Response: Staff concur. The APN identifies the Facility property line. The APN was added to Table F-1. The revised Table F-1 is shown below:

Table F-1 Facility Information

Waste Discharge ID:	5A570105001
CIWQS Facility Place ID:	272960
Discharger	City of Woodland
Name of Facility:	Water Pollution Control Facility
Facility Address:	42929 County Road 24
Facility City, State Zip:	Woodland, CA 95776
Accessor Parcel Number:	042-580-034-000
Facility County:	Yolo
Facility Contact, Title and Phone Number:	Shane Carsen, Chief Plant Operator (530) 661-2054
Authorized Person to Sign and Submit Reports:	Craig Locke, Director of Public Works (530) 661-5899
Mailing Address:	655 North Pioneer Way Woodland, CA 95776
Billing Address:	Same as Mailing Address
Type of Facility:	Publicly Owned Treatment Works
Major or Minor Facility:	Major
Threat to Water Quality:	1
Complexity:	A
Pretreatment Program:	Yes
Recycling Requirements:	State Water Board WQ 2016-0068-DDW
Facility Permitted Flow:	10.4 Million Gallons per Day (MGD)
Facility Design Flow:	10.4 MGD
Watershed:	Lower Sacramento
Receiving Water:	Tule Canal, Groundwater (GW)
Receiving Water Type:	Inland Surface Water (in Yolo Bypass), Groundwater

15. Fact Sheet - Title 27 Exemption Status.

Ms. Kipps comments that with the resumption of groundwater monitoring for iron and manganese, and initiation of groundwater monitoring for arsenic and total organic carbon, it will soon be evident whether the pond seepage discharge is causing groundwater to contain manganese (and possibly iron and arsenic) in concentrations exceeding background and WQOs. If so, then it would appear that the pond seepage discharge no longer qualifies for an exemption from Title 27 prescriptive containment standards. The Tentative Order's technical submittals regarding Facility ponds and groundwater will provide information for the next permit cycle to address this issue.

Response: Comment is noted and no changes are included in the proposed Order. The proposed Order requires groundwater monitoring that will determine if the pond seepage discharge is causing groundwater manganese (and possibly iron and arsenic) concentrations to exceed background concentrations and/or WQOs.

Staff Revisions.

1. Editorial Changes

Below are clarifying staff edits to the proposed Order. Other minor editorial changes were made in the proposed Order and are not included below:

Section III.F

F. **Sludge.** Sewage sludge shall not be stored (i.e., placed on land on which the sewage sludge remains) for more than two years. This does not include the placement of sewage sludge on land for treatment, defined as *the treatment of sewage sludge for final use or disposal, including, but not limited to, thickening, stabilization, and dewatering of sewage sludge.*

Fact Sheet section III.E.1

E. Other Plans, Polices, and Regulations

1. **Title 27.** The discharge authorized herein, and the treatment and storage facilities associated with the discharge, of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of CCR, title 27 (Title 27), section 20005 et seq., pursuant to Title 27 section 20090(a)based on the following:

Fact Sheet section IV.A.3

3. **Prohibition III.C (No controllable condition shall create a nuisance**). This prohibition implements Water Code section 13263, subdivision (a), which requires that WDRs take into consideration, among other things, “the need to prevent nuisance,” as that term is defined in Water Code section 13050.