Central Valley Regional Water Quality Control Board
20 June 2025 Board Meeting

Response to Written Comments on
Tentative Waste Discharge Requirements for
City of Stockton
Wastewater Recovery Center
San Joaquin County

At a public hearing scheduled for 20 June 2025, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of tentative Waste Discharge Requirements (NPDES No. CA0079138) for the City of Stockton (Discharger), Wastewater Recovery Center (Facility). This document contains responses to written comments received from interested persons and parties in response to the tentative Order. Written comments from interested parties were required to be received by the Central Valley Water Board by 19 February 2025 in order to receive full consideration. Comments were received prior to the deadline from:

1. Discharger (received 19 February 2025)
2. Central Valley Clean Water Association (CVCWA) (received 19 February 2025)
3. Jo Anne Kipps (received 19 February 2025)

Written comments from the above interested parties are summarized below, followed by the response of Central Valley Water Board staff. Additional minor comments were submitted by the Discharger on 19 May 2025 and 20 May 2025, which were considered, and responses to those comments are included here as well.

DISCHARGER COMMENTS

The Discharger submitted editorial changes which included correcting citations and typographical errors, all of which were accepted by Central Valley Water Board staff.

DISCHARGER COMMENT #1 – Compliance Determination for Percent Removal and Coliform Median

Revise compliance determination section VII.B and VII.G to clarify that samples from both Monitoring Locations EFF-001A and EFF-001B should be used to calculate the total coliform 7-day median and to calculate the monthly percent removal for total suspended solids (TSS) and biochemical oxygen demand (BOD).

RESPONSE:

Central Valley Water Board staff concur and have made the following changes to the tentative Order:

Last sentence of Waste Discharge Requirements (WDR) section VII.B:

> Compliance with effluent limitations required in Waste Discharge Requirements section IV.A.1.g for percent removal shall be calculated using the arithmetic mean of BOD_5 and TSS in effluent samples collected from Monitoring Locations EFF-001A and EFF-001B over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

WDR section VII.G:

> **G. Total Coliform Organisms Effluent Limitations (section IV.A.1.j).** For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results (from Monitoring Locations EFF-001A and EFF-001B) from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance.

DISCHARGER COMMENT #2 – Compliance Determination for Average Effluent Limitations

The Discharger comments that compliance determination section VII.K requires the Discharger to calculate and report the same average value at Monitoring Location EFF-001A and EFF-001B for comparison to a period-average effluent limitation which is duplicative and could result in effluent limitation violations at Discharge Point 001A and 001B for the same average. Revise section VII.K to add clarifying language such that when the same average is reported at Monitoring Locations EFF-001A and EFF-001B, it would result in only one violation.

RESPONSE:

Central Valley Water Board staff concur and have made the following revision to WDR section VII.K of the tentative Order:

K. Average Effluent Limitations. Compliance with effluent limitations for constituents based on weekly, monthly, and annual averages shall be determined based on the calculated arithmetic mean (or median as described in section VII.J.3 above for priority pollutants) using all samples within the monitoring period from Monitoring Locations EFF-001A and/or EFF-001B (depending on which discharge point(s) were in use during the monitoring period) and reported as specified in MRP section X.B.7.a.

If discharges occurred from both Discharge Points 001A and 001B within the monitoring period for the constituent, sampling results from both Monitoring Locations EFF-001A and EFF-001B shall be used to calculate the average for the constituent. If the calculated average for a constituent exceeds the average effluent limitation for that constituent, only one violation (not two) of the average effluent limitation shall be assessed for that monitoring period. If discharges occurred from only one discharge point (Discharge Point 001A or 001B) within the monitoring period for the constituent, the average shall be calculated using the individual samples from Monitoring Location EFF-001A or EFF-001B depending on which discharge point was in operation at the time of sampling.

DISCHARGER COMMENT #3 – Priority Pollutants and Chronic Whole Effluent Toxicity Rows in Table E-3

Remove the rows for “Priority Pollutants and Other Constituents of Concern” and “Whole Effluent Toxicity” from Table E-3 Effluent Monitoring since there are separate sections that describe the monitoring requirements for these constituents that conflict with the monitoring requirements for intermittent discharges contained in Attachment E section IV.A.3.

RESPONSE:

Central Valley Water Board staff concur and have removed “Priority Pollutants and Other Constituents of Concern” and “Whole Effluent Toxicity” from Table E-3 along with the corresponding testing requirement contained in Attachment E section IV.A.2.k for whole effluent toxicity and subsequent subsections have been renumbered.

DISCHARGER COMMENT #4 – Intermittent Discharge Monitoring

Revise Attachment E section IV.A.3 - Intermittent Discharge to accommodate the Discharger’s monitoring capabilities while ensuring that there is at least one sample taken at Monitoring Location EFF-001A and EFF-001B if discharge switches between Discharge Point 001A and 001B within the monitoring period and the monitoring frequency listed in Table E-3 is met. The Discharger also comments that temporary cessation of discharge due to maintenance or diversions could be considered an intermittent discharge as written and should not be included in the requirement.

RESPONSE:

Central Valley Water Board staff concur that the goal of the Intermittent Discharge section is to ensure that at least one sample is taken at Monitoring Location EFF-001A and EFF-001B if both Discharge Point 001A and 001B are used within the monitoring period for a constituent while meeting the monitoring frequency listed in Table E-3 between both monitoring locations and that temporary cessations due to emergency or maintenance situations should not be included in the definition of "intermittent". The following revision has been made to Attachment E section IV.A.3 of the tentative Order:

3. **Intermittent Discharge.** If the discharge occurs at both Discharge Locations 001A and 001B during a single monitoring period (weekly, monthly, quarterly, or annually), the Discharger shall monitor and record for all applicable constituents listed in Table E-3 at least once during the monitoring period at each monitoring location (EFF-001A and EFF-001B). The monitoring frequency for that parameter in Table E-3 applies to the combined number of samples from EFF-001A and EFF-001B within that monitoring period. The total number of sampling events combined between Monitoring Locations EFF-001A and EFF-001B shall be equal to or greater than the applicable monitoring frequency listed in Table E-3 for each constituent, but in no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule at each Monitoring Location EFF-001A or EFF-001B individually.

DISCHARGER COMMENT #5 – Toxicity Calendar Month

Modify the definition of toxicity calendar month to start on the day the routine test initiates rather than the first day of the month.

RESPONSE:

Central Valley Water Board staff concur. The State Policy for Water Quality Control: Toxicity Provisions (Toxicity Provisions, page 20) state, "For dischargers that are required to conduct ROUTINE MONITORING at a less than monthly frequency, the CALENDAR MONTH begins from the initiation of the ROUTINE MONITORING test". The tentative Order requires quarterly routine chronic toxicity monitoring, so the Discharger's comment is consistent with the Toxicity Provisions. The following edit has been made to Attachment E section V.A.1 of the tentative Order:

1. **Toxicity Calendar Month.** The toxicity calendar month is defined as the period of time beginning on the day of the initiation of the routine toxicity monitoring to

the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month.

DISCHARGER COMMENT #6 – Chronic Whole Effluent Toxicity Testing Notification Requirements

Remove the chronic whole effluent toxicity testing notification requirement for notification upon a test resulting in a "Fail". Additionally, revise the notification requirement from notification as soon as the Discharger learns of an exceedance but no later than 24 hours after receipt of the monitoring results to notification within two business days after receipt of the final laboratory report.

RESPONSE:

Central Valley Water Board Staff partially concur. The Toxicity Provisions do not require notification upon a test resulting in a "Fail", but the Toxicity Provisions state, "NON-STORM WATER NPDES DISCHARGERS shall notify the PERMITTING AUTHORITY of a violation of a toxicity MDEL or MMEL as soon as the discharger learns of the violation, but no later than 24 hours of the discharger receiving the monitoring results" (Toxicity Provisions, page 33). The following edit has been made to Attachment E section V.D of the tentative Order:

D. WET Testing Notification Requirements. The Discharger shall notify the Central Valley Water Board of test results exceeding the chronic toxicity MDEL or exceeding the chronic toxicity MMEL as soon as the Discharger learns of the exceedance, but no later than 24-hours after receipt of the monitoring results.

DISCHARGER COMMENT #7 – Most Sensitive Species Screening

Modify the requirements to conduct and submit a Most Sensitive Species Screening since the Discharger completed a screening in 2020 and Attachment E section V.F states that a screening is only required once every 15 years.

RESPONSE:

Central Valley Water Board staff partially concur. Toxicity Provisions also allow the permitting authority to require a screening sooner than once every 15 years "…if the effluent used in the last SPECIES SENSITIVITY SCREENING is no longer representative of the effluent" (pg. 14). The 2020 screening was performed at Discharger Point 001A, but the Discharger will be decommissioning Discharger Point 001A and fully transitioning to Discharger Point 001B. The secondary and tertiary treatment processes of treatment ponds and wetlands, nitrifying biotowers, dissolved air

flotation, dual media filters, and chlorine disinfection used for discharges at Discharge Point 001A are significantly different than the treatment processes of aeration basins, secondary clarifiers, disk filters, and Ultraviolet disinfection used for discharges at Discharger Point 001B. The 2020 screening is representative of the effluent until Discharge Point 001A is decommissioned or if there are no changes to the characteristics of the effluent. Therefore, an updated Species Sensitivity Screening is not needed until the effluent used in the last species sensitivity screening is no longer representative of the effluent or it has been 15 years since the 2020 screening, whichever comes first.

The following revisions have been made to the tentative Order to clarify this requirement:

Attachment E section V.F:

> **F. Most Sensitive Species Screening.** The Discharger shall perform subsequent species sensitivity screening to re-evaluate the most sensitive species. **The species sensitivity screening shall be conducted as follows at least once every fifteen years or if the effluent used in the last species sensitivity screening is no longer representative of the effluent and the results of the most recent species sensitivity screening shall be submitted with the Report of Waste Discharge**.

Attachment E section X.D.4.f:

> f. **Most Sensitive Species Screening.** The Discharger shall conduct a species sensitivity screening as described in MRP section V.F and include the results of the most recent species sensitivity screening with the ROWD.

First paragraph of Attachment F section VII.D.5:

> 5. **Sensitive Species Screening.** Under the Toxicity Provisions, the Discharger shall perform subsequent sensitivity screening to re-evaluate the most sensitive species if the effluent used in the species sensitivity screening is no longer representative of the effluent or if a species sensitivity screening has not been performed in the last fifteen years. Subsequent species sensitivity screening may also be required prior to every order issuance, renewal or reopening, if reopening to address aquatic toxicity. Pursuant to Section V.F of the MRP, the Discharger is required to perform species sensitivity screening at least once every fifteen years or if the effluent used in the last species sensitivity screening is no longer representative of the effluent and submit the results of the most recent species sensitivity screening with **the Report of**

Waste Discharge. Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing four consecutive calendar quarters using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green algae (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 100 percent effluent and one control.

DISCHARGER COMMENT #8 – Receiving Water Flow Direction Monitoring

Specify that receiving water monitoring for flow direction shall be reported in the cover letter of the self-monitoring reports (SMRs) since the California Integrated Water Quality System (CIWQS) does not accommodate reporting of flow direction.

RESPONSE:

Central Valley Water Board staff clarify that CIWQS can accommodate flow direction input; however, since the receiving water monitoring locations have not been designated as upstream or downstream due to the tidal nature of the receiving water, it is acceptable to report the flow direction in the cover letters of the SMRs to fulfil this reporting requirement. The following edit has been made to Attachment E section VIII.A.2.d of the tentative Order:

d. **Flow direction** monitoring is only required at Monitoring Locations RSW-002 or RSW-002A and shall be reported in the cover letter of the SMR.

DISCHARGER COMMENT #9 – Ultraviolet Light Disinfection System Flow Monitoring

Remove flow monitoring at the Ultraviolet disinfection system since flow is already monitored at Monitoring Location EFF-001B.

RESPONSE:

Central Valley Water Board staff concur and have removed flow monitoring from Table E-6 Filtration System and UV Disinfection System Monitoring Requirements. The second paragraph of Attachment F section VII.E.2 of the tentative Order has also been revised as follows:

UV system monitoring and reporting are required to ensure that the UV system is operated to adequately inactivate pathogens in the wastewater. UV disinfection system monitoring is imposed to achieve equivalency to requirements established by the DDW, and the NWRI, Guidelines. UV disinfection system monitoring frequencies

and sample types have been retained from Order R5-2020-0007-01, except for flow which is already monitored at Monitoring Location EFF-001B.

DISCHARGER COMMENT #10 – Pyrethroid Pesticides Monitoring

The Discharger requested several changes to the pyrethroid pesticides monitoring requirements including:

a. Revise the monitoring period from June 2027 through May 2028 to July 2027 through June 2028 to align with the start of the third calendar quarter to match the quarterly monitoring frequency.

b. Modify the pyrethroids monitoring requirements to allow for monitoring within the same calendar quarters as the effluent and receiving water characterization monitoring instead of concurrently to allow for lab coordination flexibility.

c. Modify the pyrethroid monitoring requirement to only require monitoring at Discharge Point 001A if there is at least 15 days of planned discharge within the calendar quarter to match the monitoring requirements allowed in Attachment E section V.B.2 for chronic toxicity testing requirements.

d. Require receiving water monitoring only once per quarter instead of concurrently at both effluent Monitoring Locations EFF-001A and EFF-001B. Preference should be given to monitoring at Discharge Point 001B as Discharge Point 001A is phased out and decommissioned.

RESPONSE:

Central Valley Water Board staff have the following responses to Discharger Comment 10a through 10d below:

a. Central Valley Water Board staff concur and have revised the pyrethroid pesticides monitoring period to July 2027 through June 2028 to align with the start of the third calendar quarter (1 July).

b. Central Valley Water Board staff concur and have revised the first paragraph of Attachment E section IX.D.1 of the tentative Order as follows:

> **Water Column Chemistry Monitoring Requirements.** The Discharger shall conduct effluent and receiving water baseline monitoring in accordance with Table E-8. **Quarterly** monitoring shall be conducted for **one year beginning in July 2027** within the same quarters as the Effluent and Receiving Water Characterization Monitoring. The Discharger shall also submit a minimum of

one quality assurance/quality control (QA/QC) sample during the year to be analyzed for the constituents listed in Table E-8.

c. Central Valley Water Board staff do not concur. The requirement for testing to be conducted in each quarter in which there is expected to be at least 15 days of discharge is specified in the Toxicity Provisions for chronic whole effluent toxicity. This monitoring approach is not appropriate for pyrethroid pesticides monitoring. Pyrethroid pesticides monitoring is non-routine baseline monitoring that is only conducted for one year to determine if a pyrethroid management plan is needed. In order to fully assess whether a management plan is necessary, effluent monitoring is needed at both Discharge Point 001A and 001B. Thus, the monitoring approach specified in the Toxicity Provisions has not been applied to the pyrethroid pesticides monitoring.

d. Central Valley Water Board staff concur. Though the majority of discharges will occur at Discharge Point 001B and could be more representative, discharges from Discharge Point 001A still need to be analyzed for pyrethroids. Thus, Central Valley Water Board staff concur with only requiring quarterly downstream receiving water column chemistry monitoring contained in Attachment E section IX.D.1 when discharging from Discharge Point 001B. Quarterly effluent water column chemistry monitoring is still required if discharges occur from Discharge Point 001A within the quarterly monitoring period. Downstream receiving water monitoring sampled when discharging from Discharge Point 001B shall be used to calculate the freely dissolved concentration of a pyrethroid pesticide at both Discharge Points 001A and 001B. However, if water column chemistry monitoring of the effluent exceeds any pyrethroid pesticides numeric trigger for Discharge Point 001A, the Discharger shall begin quarterly downstream receiving water monitoring concurrently with the effluent water column chemistry monitoring for Discharge Point 001A.

Central Valley Water Board staff also concur with only requiring quarterly downstream receiving water toxicity monitoring contained in Attachment E section IX.D.2 when discharging from Discharge Point 001B, since discharges from both Discharge Point 001B and 001A occur within a short distance of each other to the same receiving water body. However, if water column toxicity monitoring of the effluent exceeds any pyrethroid pesticides numeric trigger for Discharge Point 001A, the Discharger shall begin quarterly downstream receiving water toxicity monitoring concurrently with the effluent water column chemistry monitoring for Discharge Point 001A.

The following revisions have been made to the tentative Order to clarify this requirement.

Second paragraph of Attachment E section IX.D.1:

> The effluent monitoring shall be conducted at Monitoring Location EFF-001A and EFF-001B. Effluent monitoring is not required at Monitoring Location EFF-001A if discharges did not occur from Discharge Point 001A within the quarterly monitoring period or once Discharge Point 001A is fully decommissioned. The receiving water monitoring shall be conducted at downstream receiving water Monitoring Location RSW-002 or RSW-002A, depending on which receiving water monitoring location is considered "downstream" at the time of sampling. Downstream receiving water monitoring is only required when discharging from Discharge Point 001B; however, if effluent sampling at Discharge Point 001A exceeds the pyrethroid pesticides numeric trigger, the Discharger shall also sample the downstream receiving water when discharging from Discharge Point 001A. The results of such monitoring be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. The Discharger shall use one of the Environmental Laboratory Accreditation Program (ELAP)-accredited laboratories with analytical methods that have been approved by the Central Valley Water Board's Executive Officer for use in assessing compliance with the Basin Plan. A current list of ELAP-approved laboratories and points of contact can be found on the Central Valley Water Board's Pyrethroid Pesticides TMDL and Basin Plan Amendment Webpage, (https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/central_valley_pesticides/pyrethroid_tmdl_bpa/index.html).

Last paragraph of Attachment E section IX.D.2:

> **Quarterly monitoring shall be conducted for one year** concurrent with the Pyrethroid Pesticides Water Column Chemistry Monitoring above. Downstream receiving water monitoring shall be conducted at Monitoring Location RSW-002 or RSW-002A depending on which receiving water monitoring location is considered "downstream" at the time of sampling when discharging to the San Joaquin River and the results of such monitoring be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. Downstream receiving water monitoring is only required when discharging from Discharge Point 001B; however, if effluent sampling at Discharge Point 001A exceeds the acute and/or chronic pyrethroid numeric triggers, the Discharger shall also sample the downstream receiving water when discharging from Discharge

Point 001A. Monitoring can either be conducted by the Discharger or can be done as part of a group monitoring effort. If the Discharger chooses to participate in a group monitoring effort, the timing of the monitoring can be modified by the Executive Officer.

DISCHARGER COMMENT #11 – Effluent and Receiving Water Characterization Monitoring

The Discharger requests the same changes as Discharger Comment 10a and 10c above for the effluent and receiving water characterization monitoring requirements.

RESPONSE:

Central Valley Water Board staff partially concur and have the same responses for the effluent and receiving water characterization monitoring requirements. Please see the responses to Discharger Comment 10a and 10c above. If Discharge Point 001A is still intermittently active at the time characterization sampling is required per Attachment E, Section IX.E, effluent and receiving water characterization samples are required at both discharge points in order to conduct a reasonable potential analysis and determine the need for effluent limitations, consistent with other NPDES permits for intermittent dischargers.

DISCHARGER COMMENT #12 – Technical Reports Table E-12

The Discharger requests a couple changes to the Technical Reports Table E-12 including:

a. Remove report 30 for Pretreatment Program Local Limits Evaluation and report 34 for the Most Sensitive Species Screening since Attachment E section X.D.4 states that these reports shall be submitted with the Report of Waste Discharge and are not stand alone reports.

b. Remove the due dates for reports 31, 32, and 33 related to the Pyrethroid Management Plan since the due dates are dependent on the results of the monitoring.

RESPONSE:

Central Valley Water Board staff have the following responses to Discharger Comment 12a and 12b below:

a. Central Valley Water Board staff concur and have removed report 30 for Pretreatment Program Local Limits Evaluation and report 34 for the Most Sensitive Species Screening from Table E-12 Technical Reports and removed the corresponding Table E-12 Note 3 from the tentative Order and have renumbered the reports accordingly. WDR section VI.C.5.a.v of the tentative Order has also been revised as follows:

    v. **Local Limits Evaluation.** In accordance with 40 C.F.R. section 122.44(j)(2)(ii) the Discharger shall provide a written technical evaluation of the need to revise the local limits under 40 C.F.R. section 403.5(c)(1) with the ROWD.

b. Central Valley Water Board staff concur and have removed the due dates for reports 31, 32, and 33 and have revised Table E-12 Note 2 as follows:

    2. See Waste Discharge Requirements section VI.C.3.c for the Pyrethroid Management Plan, its mid-term progress report, and its end-term progress report due dates for the Pyrethroid Management Plan, if one is required.

DISCHARGER COMMENT #13 – Total Coliform Organisms 7-day Median

Revise WDR section VII.G to incorporate language on how to determine the 7-day median for total coliform with non-detect (ND) or detected but not quantified (DNQ) data.

RESPONSE:

Central Valley Water Board staff concur and have added language to the end of WDR section VII.G as follows:

The median shall be calculated in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any).

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the

lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

DISCHARGER COMMENT #14 – Flow Meter Calibration

Revise Attachment E section I.D to exclude flow meters that require less than annual calibrations as directed by the manufacturer from the annual calibration requirement.

RESPONSE:

Central Valley Water Board staff concur and have revised Attachment E section I.D as follows:

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or as directed by the manufacturer, to ensure continued accuracy of the devices.

DISCHARGER COMMENT #15 – Pretreatment Program Annual Monitoring

Revise Attachment E section X.C.5.a [SIC] to only require one annual effluent monitoring sample at Discharge Point 001A or Discharge Point 001B, but not at both locations.

RESPONSE:

Central Valley Water Board staff concur. The United States Environmental Protection Agency (U.S. EPA) recommends a discharger establish, at minimum, one point to sample effluent for determining interference, pass-through, adverse impacts to sludge quality, and local limits evaluation to fulfill pretreatment requirements. Since the Discharger only discharges out of one discharge point at a time, effluent monitoring at either Discharge Point 001A or 001B can be used to fulfill these requirements depending on which discharge point is in use at the time of sampling. Attachment E section X.D.5.a of the tentative Order has been revised as follows:

A summary of analytical results from representative sampling of the POTW's influent and effluent for those pollutants U.S. EPA has identified under section 307(a) of the

CWA which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan. The sample types for each priority pollutant constituent shall be consistent with the sample types specified in Table E-10 (Effluent and Receiving Water Characterization Monitoring). The Discharger is not required to sample and analyze for asbestos. The annual effluent monitoring shall be sampled at either Monitoring Location EFF-001A or EFF-001B, depending on which discharge location is in use at the time of sampling. The Discharger shall submit the results of the annual priority pollutant scan electronically to the Central Valley Water Board using the State Water Board's CIWQS Program Website.

CENTRAL VALLEY CLEAN WATER ASSOCIATION (CVCWA) COMMENTS

CVCWA COMMENT #1 – Total Dissolved Solids Groundwater Limitations

Remove the total dissolved solids (TDS) groundwater limitation and remove the rationale for establishing the TDS groundwater limit contained in Attachment F section V.B.3 for consistency with the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) Salt Control Program Basin Plan Amendment since the Discharger participates in the Prioritization and Optimization Study (P&O Study) which requires the suspension of TDS groundwater limitations until the next phase of the Salinity Control Program is developed and the Basin Plan is amended.

RESPONSE:

Central Valley Water Board staff agree and have removed the TDS groundwater limitation from the tentative Order. Similarly, staff have removed the EC groundwater limitation since participation in the P&O Study constitutes compliance with all salt parameter groundwater limits.

The following edits have been made to the tentative Order for the removal of the TDS and EC groundwater limits. In addition, for consistency with other recently adopted NPDES permits, the groundwater limitations section has been revised as follows:

WDR section V.B:

B. Groundwater Limitations

Release of waste constituents from any portion of the Facility shall not cause groundwater to contain any of the following constituents greater than listed below and in Table 5 or greater than natural background quality, whichever is greater.

1. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity, provided the Discharger complies with Provision VI.C.3.b.

2. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses, (e.g., by creating off-tastes and/or odor, producing detrimental physiological responses in human, plant, animal, or aquatic life [i.e., toxicity]).

Table 1. Groundwater Limitations

Parameter	Units	Limitation
Total Coliform Organisms	MPN/100 mL	2.2 as 7-day median

Compliance with these limitations shall be determined based on comparison of the downgradient well concentrations to background groundwater quality using historical monitoring data, using approved statistical methods.

Last paragraph of Attachment F section IV.D.3.b:

A report, *Background Groundwater Quality Characterization Technical Report for the City of Stockton Regional Wastewater Control Facility* (Condor, 2013) was prepared in response to previous Order R5-2008- 0154 and shows that nitrate and salinity have degraded groundwater quality when compared to background. This Order carries forward groundwater limitations from previous Order R5-2020-0007-01 to assure protection of beneficial uses of groundwater, with the exception of the groundwater limitations for total dissolved solids and electrical conductivity. For additional information see section V.B of this Fact Sheet.

Attachment F section V.B.3:

3. The Discharger has selected the Alternative Permitting Approach of the Salinity Control Program which states, “Under Phase I of the Salt Control Program, permittees that are in compliance with the conditions for the Alternative Permitting Approach are in compliance with their salinity limits. For the purposes of this Program, salinity and its constituents include, and are limited to, the following: electrical conductivity, total dissolved solids, chloride, sulfate” (pg. 84). The Discharger has been in compliance with the Alternative Permitting Approach; thus, the total dissolved solids and electrical conductivity groundwater limitations have not been retained from Order R5-2020-0007-01.

JO ANNE KIPPS COMMENTS

KIPPS COMMENT #1 – Pond Discharge Points

Establish a new Discharge Point 002 for the discharge of secondary treated effluent, agricultural drainage, and intercepted groundwater to the treatment pond system once Discharge Point 001A is decommissioned after which the treatment ponds will be used for emergency storage. Additionally, include the latitudinal and longitudinal coordinates or a description of the location(s) of where the east bank secondary treated wastewater enters the west bank treatment facilities.

RESPONSE:

Central Valley Water Board staff do not concur. Any discharge of secondary treated effluent, agricultural drainage, and intercepted groundwater to the treatment pond system will be discharged from Discharge Point 001A. Shallow groundwater under the ponds is largely captured by an on-site interceptor ditch and the system results in minimal off-site movement of groundwater. The facilities needed to return flows back to the headworks during emergency storage use will be constructed before Discharge Point 001A is decommissioned. Thus, it is not necessary to establish a new discharge point. However, the tentative Order has been revised to clarify this information. Furthermore, descriptions of where the east bank secondary treated wastewater enters the west bank treatment facilities have been included in the facility description in Attachment F section II.A.

The following sections of the tentative Order have been revised as follows.

Attachment F section II.A:

A. Description of Wastewater and Biosolids Treatment and Controls

1. **Existing Facility.** The Discharger has substantially completed upgrades to the treatment system on the east of the San Joaquin River, which includes screening, grit removal, raw sewage pumps, and primary sedimentation, where settling is enhanced. After wastewater passes through the primary clarifiers, it is pumped to the aeration basins for nitrification/de-nitrification, and further routed to secondary clarifiers. Effluent from the secondary clarifiers is pumped to the new tertiary treatment facilities on the east side of the San Joaquin River, or it can be pumped beneath the San Joaquin River to the facultative pond system and chlorination facilities on the west side of the San Joaquin River.

Stormwater runoff is routed to the headworks for treatment.

Additional secondary treatment and water storage is available in the facultative ponds. Additional treatment is also available through engineered treatment wetlands on the west side of the San Joaquin River. Treatment through the facultative ponds and/or constructed wetlands are optional flow paths dependent on a variety of operational factors. Flows to the ponds and wetlands include flows pumped from the east bank facilities, stormwater runoff, intercepted groundwater from the interceptor ditch located on the southern and western boundaries of the ponds and wetlands system to minimize off-site groundwater flow, and agricultural drainage that enters the interceptor ditch from a neighboring property via a pipe. Optional flows enter the recirculation channel that surround most of the perimeter of the facultative ponds and wetlands system for flow equalization before entering the ponds and wetlands. Water from the interceptor ditch is pumped into the circulation channel and then flows into the ponds or wetlands. Effluent from the facultative ponds, constructed wetlands, or diversion structures (as applicable) is routed to the Facility's west side tertiary treatment system.

Tertiary treatment on the west side of the San Joaquin River consists of a nitrifying biotower for ammonia removal, followed by dissolved air floatation units, where removal efficiencies are enhanced through chemical addition. Following the dissolved air floatation units, wastewater is routed through dual media tertiary filters and disinfected using chlorination/dechlorination prior to discharge to the San Joaquin River at Discharge Point 001A. The tertiary treatment process at the Facility is less efficient during colder months, as longer detention times in the facultative ponds and constructed wetlands results in cooler wastewater inflow to the nitrifying biotowers.

Tertiary treatment on the east side of the San Joaquin River consists of disk filters and UV disinfection prior to discharge to the San Joaquin River at Discharge Point 001B. Once the Facility modifications are fully complete, tertiary treatment will only occur via the filtration and UV disinfection system with discharges at Discharge Point 001B, and tertiary treatment on the west side of the river and discharges from Discharge Point 001A will cease.

Within the section of the Facility on the east side of the San Joaquin River, solids from the primary and secondary sedimentation processes are either routed to gravity thickeners, gravity belt thickeners, or pumped to the anaerobic digesters directly. Following anaerobic digestion, sludge is routed to a holding tank. Digested solids are further conditioned and dewatered using a centrifuge or belt filter presses. Dewatered solids are hauled off-site by a private contractor and routinely recycled on agricultural lands as a source of nutrients and soil amendment. In an emergency, solids can be used as daily cover for solid waste at a landfill. The Facility produces approximately 5,412 dry metric tons of dried biosolids annually. Transportation and disposal/reuse of the biosolids is regulated by U.S. EPA under 40 C.F.R. part 503.

Attachment F section II.E:

E. Planned Changes

The Discharger is in the process of completing a Facility Modifications Project of upgrades to increase the reliability of the liquid and solids treatment processes, improve reliability in treating existing and projected flows, reduce energy costs and provide reliable renewable energy alternative, and reduce nitrate plus nitrite concentrations in the final effluent. The Discharger is in the process of completing final adjustments as a part of the Facility Modifications Project. The upgrades do not involve an expansion of the current Facility's treatment capacity.

The Discharger plans to build return flow facilities from the ponds and wetlands on the west side of the San Joaquin River to the upgraded facility on the east side of the San Joaquin River for retreatment. There is no timeline for construction and the Discharger is currently investigating the feasibility of alternatives. The Discharger will continue to discharge from Discharge Point 001A until return facilities are constructed upon which the Discharger will fully transition to Discharge Point 001B and Discharge Point 001A will be decommissioned and no longer used. Once the Facility Modifications Project is complete and return infrastructure for wet-weather storage is created, the treatment ponds and wetlands will be used for emergency storage. The ponds and wetlands will be minimally used for emergency storage and the ponds and wetlands have the following capacities: 93 million gallons (MG) in Pond 1, 204 MG in Pond 2, 220 MG in Pond 3, and 130 MG in the Wetlands.

KIPPS COMMENT #2 – Groundwater Limitations

Make revisions to the tentative Order related to the groundwater limitations including:

a. Moving the descriptions for the groundwater limitations contained in WDR sections V.B.1.a and V.B.1.b to Attachment F section V.B that describes the rationale for establishing the groundwater limitations.

b. Establishing groundwater monitoring for total coliform organisms (TCO).

c. Establishing new numerical limitations for dissolved iron and dissolved manganese of 0.3 mg/L and 0.05 mg/L, respectively, based on the water quality objectives for iron and manganese for protection of groundwater beneficial uses since historical monitoring showed detections of these constituents above the water quality objectives in the groundwater.

RESPONSE:

Central Valley Water Board staff have the following responses to Kipps Comments 2a through 2c below:

a. Central Valley Water Board staff concur and have moved WDR sections V.B.1.a and V.B.1.b to Attachment F section V.B. Since these sections pertain to salinity parameters, alternative rationale has been provided in the revisions to Attachment F section V.B.3 to address CVCWA comment #1, above.

b. Central Valley Water Board staff partially concur. TCO groundwater monitoring was not included in previous Order R5-2020-0007-01 based on the results of the *Background Groundwater Quality Characterization Technical Report* (Background Report) prepared by Condor Earth Technologies, Inc. (Condor) in March 2013 for the Discharger that analyzed approximately 13,000 data values for 28 parameters from groundwater samples collected in 68 soil borings and 22 monitoring wells over nine years at the Facility. The Background Report provided TCO measurements at 21 wells for up to nine years (37 quarterly monitoring events, 2004-2012). Additional measurements were made at various wells through 2021. The Background Report also provided data from upgradient and downgradient direct-push groundwater samples (24 parameters, 68 samples, 34 borings) collected to determine if significant impact resulted from the operation of the ponds and wetlands. The Background Report identified that coliform is present in background groundwater, but downgradient monitoring wells show no coliform from the WWRC discharges. In fact, coliform occurred most commonly at upgradient well MW-15. The Background Report determined that the shallow

groundwater under the ponds is largely captured by the on-site interceptor ditch and the system results in minimal off-site movement of groundwater. Therefore, once per term TCO groundwater monitoring has been added to the tentative Order to periodically evaluate the groundwater to assure protection of beneficial uses.

The following revisions have been made to the tentative Order.

Attachment E Table E-5:

Table E-5. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	±0.01 feet	Measurement	2/Year
Groundwater Elevation	±0.01 feet	Calculated	2/Year
Gradient	feet/feet	Calculated	2/Year
Gradient Direction	degrees	Calculated	2/Year
Arsenic, Dissolved	µg/L	Grab	1/Term
Electrical Conductivity @ 25°C	µmhos/cm	Grab	2/Year
Iron, Dissolved	µg/L	Grab	1/Term
pH	standard units	Grab	2/Year
Manganese, Dissolved	µg/L	Grab	1/Term
Nitrate Nitrogen, Total (as N)	mg/L	Grab	2/Year
Total Coliform Organisms	MPN/100 mL	Grab	1/Term

Attachment E section VIII.B.2:

f. **Once per term** groundwater monitoring samples shall be reported in the semi-annual SMRs.

Attachment E Table E-11:

Table E-11. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
3/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
1/Month	Permit effective date	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Quarter	Permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February of following year
1/Year	Permit effective date	1 January through 31 December	1 February of following year
2/Year & 1/Term	Permit effective date	1 January through 30 June 1 July through 31 December	1 August 1 February of following year

Attachment F section VII.C.2.d:

d. Groundwater monitoring frequencies and parameters have been retained from Order R5-2020-0007-01, except as noted in Table F-16 below.

Attachment F Table F-16:

Table F-16. Summary of Monitoring Changes

Parameter, Units	Type of Monitoring	Prior Sample Frequency	Revised Sample Frequency	Reason for Change
Dissolved Organic Carbon	Effluent	1/Month	1/Quarter	Consistency with similar dischargers
Dissolved Organic Carbon	Receiving Water	1/Month	1/Quarter	Consistency with similar dischargers
Ammonia Nitrogen, Total (as N)	Receiving Water	1/Month	Remove	Due to participation in Delta RMP and routine effluent monitoring for ammonia
Arsenic, Dissolved	Groundwater	--	1/Term	Periodic evaluation of groundwater impacts
Iron, Dissolved	Groundwater	--	1/Term	Periodic evaluation of groundwater impacts
Manganese, Dissolved	Groundwater	--	1/Term	Periodic evaluation of groundwater impacts

Parameter, Units	Type of Monitoring	Prior Sample Frequency	Revised Sample Frequency	Reason for Change
Total Coliform Organisms	Groundwater	--	1/Term	Periodic evaluation of groundwater impacts

c. Central Valley Water Board staff do not concur. The Background Report included at least 10 samples of both iron and manganese in each of the 21 monitoring wells from 2009 through 2012. Though these elements are present in the Facility wells (highly variable concentrations), they pose no threat to existing or anticipated downstream uses and little threat of nuisance. Iron and manganese are present throughout the geologic materials under and around the ponds and are subject to equilibrium solubility changes with oxidation states, bacterial activity and other processes in the Delta environment. Shallow groundwater under the ponds is largely captured by the on-site interceptor ditch and the system results in minimal off-site movement of groundwater, including any manganese or iron leached from sediments under the ponds into shallow groundwater. Former technical reports adequately demonstrate locations where iron and manganese consistently exceed secondary Maximum Contaminant Levels (MCLs). All of them are within the groundwater interceptor system's capture zone or downgradient from surface water in the San Joaquin River, and there are no changes in operations that would accelerate or change groundwater transport since that analysis.

Groundwater flow containing dissolved iron and manganese and continuing downgradient of the facility is evacuated and re-aerated at irrigation drainage canals within a few thousand feet of the WWRC boundary, without any intervening users. The Background Report shows that the iron and manganese concentrations at downgradient wells (MW-13, MW-14, MW-16, MW-17) are substantially lower than on-site. Data from farthest downgradient well MW-16 demonstrates groundwater quality is fully recovered from any potential iron and manganese degradation at the facility. Limitations based on secondary MCLs would require response to intermittent and transient exceedances with no consequence for downstream users.

According to the State Water Resources Control Board's Groundwater Ambient Monitoring and Assessment Program (GAMA) database, most non-domestic and non-municipal wells within the region exhibit iron and manganese concentrations greater than the secondary MCLs, thus confirming that elevated iron and manganese are present in elevated quantities in shallow groundwater. Within the

past 10 years, the nearest domestic wells with iron or manganese measurements in the GAMA database exceeding the secondary MCLs were at least 4 miles away from the Facility. Iron and manganese are known to naturally occur in high concentrations in local soils surrounding the Facility and are known to be mobilized to shallow groundwater by a variety of natural and anthropogenic influences. The Facility operations and available data from the Background Report demonstrates that Facility's discharges to groundwater are not a major contributor compared to off-site sources and no nearby drinking water wells have been impacted.

Secondary MCLs for iron and manganese protect against aesthetic and technical impacts, such as objectionable tastes, odors, or colors, laundry staining, corrosion, or formation of mineral deposits, not against toxic effects to human health. Given the prevalence of elevated iron and manganese in Delta groundwater, regional domestic and municipal users must already treat their groundwater to remove these elements or utilize deeper supply wells with lower concentrations. However, Primary and Secondary MCLs established in Title 22 of the California Code of Regulations apply to the groundwater for protection of the groundwater beneficial uses and have been added to the groundwater limitations. Revisions to the groundwater limitations contained in WDR section V.B of the tentative Order are included in the response to CVCWA Comment 1. Additionally, once per term dissolved iron and manganese groundwater monitoring has been added to the tentative Order to periodically evaluate the groundwater to assure protection of beneficial uses. Revisions have been made to Attachment E Table E-5 and Attachment F Table F-16 to add dissolved iron and manganese groundwater monitoring to the tentative Order as shown in the response to Kipps Comment 2b above.

KIPPS COMMENT #3 – Flood Protection

Add new Construction, Operation, and Maintenance Requirements for Flood Protection to ensure the entire Facility is sufficiently designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency and describe the flood protection measures currently in place at the Facility.

RESPONSE:

Central Valley Water Board staff do not concur. The referenced language is currently included in the tentative Order in WDR section VI.C.4.c.i and applies to the treatment ponds. The ponds and wetlands are monitored and operated by the Discharger and have never overflowed due to inundation, including during record-setting rainfall in

2021/2022. The Facility's other treatment units have been upgraded at the cost of $224 million and designed by professionally licensed civil engineers. The upgraded facilities are designed to provide treatment for incoming wet weather and average dry weather flows, thereby protecting against inundation and washout. Flood protection in the area is provided by levees along the San Joaquin River that are maintained by and under the jurisdiction of the local Reclamation District, not the Discharger. The San Joaquin County Office of Emergency Services provides management for floods in the area. Therefore, a new Construction, Operation, and Maintenance Requirement for Flood Protection is not necessary since the Facility is already sufficiently designed, constructed, operated, and maintained to prevent inundation or washout.

KIPPS COMMENT #4 – Treatment Pond Decommissioning

Establish a new five-year compliance schedule to complete cleanup and decommissioning activities in the oxidation ponds, engineered wetlands, and recirculation channel once the Discharger has ceased using these facilities for treatment schedule including:

1. Removal of dried and residual sludge.

2. Conditions for prevention of objectionable odors and stagnant water conductive to mosquito breeding.

RESPONSE:

Central Valley Water Board staff do not concur. The Facility Modification Project includes keeping the ponds, wetlands, and recirculation infrastructure for emergency storage once return facilities are constructed to the new east bank treatment system. The ponds and wetlands have been operated for decades without odor complaints, despite Pond 1 having been out of service since November 2016. The San Joaquin County Mosquito and Vector Control District provides routine surveillance of mosquitos at the Facility and regularly coordinates and will continue to coordinate with the Discharger to address issues. A decommissioning plan and compliance schedule is unnecessary at this time since the ponds and wetlands will still be utilized for emergency storage and operated to prevent odors, stagnant waters, and mosquito breeding. Furthermore, once return facilities are constructed, all emergency storage flows, agricultural drainage, stormwater runoff, and intercepted groundwater flows collected in the ponds and wetlands will be redirected to the east side facilities for treatment to prevent groundwater percolation and degradation. In the future, any planned changes would undergo a California Environmental Quality Act review and the public and Central Valley Water Board would be notified of the changes and have the

opportunity to comment. Once the Discharger ceases using these facilities, a decommissioning plan and maintenance measures will be reconsidered.

KIPPS COMMENT #5 – Attachment B Maps

Include the Accessor Parcel Numbers (APN) and acreage of each Discharger-owned parcel containing wastewater treatment operations and confirm whether the Discharger still owns APN 16334009 contained within the Facility boundary shown in Figure B-1 or update the Facility Boundary to only include APN areas owned by the Discharger.

RESPONSE:

Central Valley Water Board staff do not concur with adding the APNs and acreage to the tentative Order; however, staff have confirmed that the property in question (APN 16334009) is owned by the Discharger and is within the Facility property boundary. Staff further confirmed that the Discharger owns all properties on which the Facility is located and that the boundary in Figure B-1 is correct.

KIPPS COMMENT #6 – Attachment C Flow Schematic

Revise the facility description in Attachment F section I.B to describe that stormwater flow to the headworks and intercepted groundwater and agricultural drainage to the treatment ponds flows are not included in the flow schematic.

RESPONSE:

Central Valley Water Board staff concur. However, instead of revising Attachment F section I.B of the tentative Order, the following note has been added to the Attachment C Flow Schematic as shown below:

> Note: The flow schematic depicts the flow of wastewater from the sewer collection system through the treatment system. Please see Attachment F section II.A for descriptions of stormwater, agricultural drainage, and intercepted groundwater flows not included in this flow schematic.

KIPPS COMMENT #7 – Groundwater Monitoring Wells

Revise groundwater Monitoring Location RGW-001 to include all operable groundwater wells and establish a new receiving water monitoring location for the Department of Water Resources' (DWR) California Data Exchange Center gauging station along the San Joaquin River near Garwood Bridge (SJG) that the Discharger currently uses for river stage elevation to determine groundwater flow direction and gradient.

RESPONSE:

Central Valley Water Board staff do not concur. The Background Report provided data from 21 wells monitored for a 9-year period (37 quarterly monitoring events; 2004–2012) and additional samples from direct-push groundwater samples (24 parameters, 68 samples, 34 borings). The full suite of well monitoring continued through 1 August 2014, at which point previous Order R5-2014-0070 became effective and semi-annual water quality monitoring continued through March 2020 at 7 wells for parameters of concern (salinity, nitrate, TKN, Total Coliform, etc.) and at 6 wells for physical parameters (depth, elevation, etc.). The current Order R5-2020-0007 determined that monitoring was only necessary at two wells (MW-7 and MW-10) to track natural attenuation of nitrate and TDS at these locations. The Background Report demonstrated that there is relatively minimal off-site flow of shallow groundwater from the ponds and wetlands because the groundwater interceptor system along the downgradient boundary collects most of the shallow groundwater from the pond system. Hence, shallow groundwater at MW-10 is not moving off-site. Well MW-7 is outside of the interceptor system, but there were no significant water quality impacts noted there in the Background Report, suggesting there is little to no degradation at the top of the wetlands. This is most likely due to river infiltration and dilution. Therefore, reinstating the Facility's entire monitoring well network and expanding the list of constituents is unnecessary.

Overall, this large amount of data collected and reported in the Background Report demonstrated that the Facility was not adversely impacting downgradient groundwater. The historical groundwater analysis is sufficient and reinstating past monitoring requirements (or adding new parameters) is unnecessary, given the recent upgrades to the Facility. Treatment facilities on the east side of the San Joaquin River are constructed of reinforced concrete and the former sludge lagoons were excavated to their invert elevations and backfilled with soil.

The Discharger's semi-annual monitoring reports have been adequate because all information has been provided to support groundwater gradient calculations. The Discharger's hydrogeologist, Condor, takes additional groundwater elevation measurements at DWR gauging station SJG to confirm the gradient magnitude and direction to supplement requirements of the Order. Off-site dormant wells that have been monitored for groundwater elevation are prone to being damaged by private property owners, so additional monitoring will not be required in the tentative Order at those wells. However, the testing requirement in Attachment E section VIII.B.2.c has been revised noting the use of monitoring station SJG to supplement monitoring requirements in the tentative Order:

c. **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. In addition to measurements taken at RGW-001, groundwater elevation data may be reported for additional wells or inferred DWR Monitoring Station SJG to assist determining the groundwater gradient.

KIPPS COMMENT #8 – Standard Minerals Monitoring

Include semi-annual effluent monitoring for standard minerals to assess the extent to which underlying groundwater is influenced by percolated effluent.

RESPONSE:

Central Valley Water Board staff do not concur. The Background Report provides many sample results for standard minerals in pond water and in groundwater, including data presented in Piper Diagrams, following decades of pond and wetland use. Pond water is subject to evaporation and percolates to shallow groundwater under the ponds, as would be expected, but the Background Report identified that percolating pond water is captured by the interceptor system and downgradient wells are minimally influenced by the pond system. Further monitoring of standard minerals is unnecessary because the hydrogeology of the site is known. See responses to previous Kipps Comments for hydrogeology and groundwater monitoring information.

KIPPS COMMENT #9 – Groundwater Monitoring Requirements

Revise the groundwater monitoring requirements including:

a. Adding semiannual sampling for total dissolved solids, standard minerals (boron, calcium, magnesium, potassium, sodium, sulfate, phosphorus, total alkalinity (including alkalinity series), hardness, and include verification that the analysis is complete (i.e., cation/anion balance)), dissolved iron, dissolved manganese, dissolved arsenic, and total organic carbon in all operable wells.

b. Adding the following monitoring requirements:

    1. The Discharger shall also report on days when depth-to-groundwater measurements are taken in the river stage in feet above mean sea level of the San Joaquin River at Garwood Bridge (SJG) gauging station.

2. The Discharger shall provide river stage and groundwater monitoring data in the PET tool for uploading into CIWQS.

RESPONSE:

Central Valley Water Board staff have the following responses to Kipps Comment 9a and 9b below:

a. Central Valley Water Board staff partially concur. Groundwater monitoring has been added for total coliform, arsenic, manganese, and iron based on the responses to Kipps Comments 2b and 2c above. It is demonstrated in past required reports that a groundwater depression occurs under the facility and gradients are inward except possibly at the northwest corner where sufficient previous evidence indicates surface water recharge from the San Joaquin River mitigates off-site water quality impacts from treatment. The groundwater interceptor drains and ditches capture water impacted by the ponds and directs it through the treatment works until it is treated and discharged at monitored and permitted discharge points. Groundwater quality protection is adequate in this hydrogeologic setting. See previous responses to Kipps Comments for additional explanation of why the groundwater monitoring requirements do not need to be expanded to all listed constituents in all operable wells.

b. Central Valley Water Board staff do not concur. The Discharger takes additional groundwater elevation measurements at SJG to confirm gradient magnitude and direction at the time of sampling the groundwater at Monitoring Location RGW-001. Therefore, the additional monitoring requirement is not required. Additionally, use of the PET tool is not a requirement for uploading groundwater data in CIWQS and will not be required at this time. The groundwater monitoring results and parameters are available in the Discharger's semi-annual groundwater reports.

KIPPS COMMENT #10 – Biosolids Production Rate

Confirm the current annual biosolids production rate.

RESPONSE:

Central Valley Water Board staff confirmed that the current annual biosolids production rate is 5,412 annual dry metric tons. The last paragraph of Attachment F section II.A.1 of the tentative Order has been revised to include the current biosolids production rate. Revisions to Attachment F section II.A are included in the response to Kipps Comment #1 above.

KIPPS COMMENT #11 – Anticipated Emergency Storage Use

Revise the tentative Order to include information on the storage capacity of each pond and the engineered wetlands and the design storage capacity required for the Facility to temporarily store wastewater in emergency situations.

Alternatively, add a technical report justifying emergency maintenance storage requirements, identifying the storage capacities of each pond and the engineered wetland, and describing the operation when used for emergency or maintenance storage.

RESPONSE:

Central Valley Water Board staff have confirmed that once return facilities have been constructed, the ponds and wetlands will be minimally used for emergency storage and the ponds and wetlands have the following capacities: Pond 1 – 93 million gallons (MG), Pond 2 – 204 MG, Pond 3 – 220 MG, and Wetlands – 130 MG. A technical report for emergency storage use is not necessary; however, the storage capacities of the ponds and wetlands have been added to Attachment F section II.E of the tentative Order. Revisions to Attachment F section II.E are included in the response to Kipps Comment #1 above.

KIPPS COMMENT #12 – Discharges to the Ponds and Wetlands

Add a prohibition to the tentative Order to prohibit discharges to the treatment ponds and engineered wetlands once Discharge Point 001A is decommissioned until return flow facilities are constructed.

RESPONSE:

Central Valley Water Board staff do not concur. Discharge Point 001A will not be decommissioned until return flow facilities are constructed, so a discharge prohibition is not necessary at this time.

KIPPS COMMENT #13 – Groundwater Interception and Agricultural Drainage

Questions related to the groundwater interceptor system and the agricultural drainage discharged to the treatment ponds including:

a. Does the Discharger intend to continue discharging groundwater to Pond 3 and/or agricultural drainage into the ponds?

b. How is agricultural drainage discharged to the ponds, to Pond 2, or the Recirculation Channel?

c. Will the Discharger have to maintain these discharges to maintain groundwater levels in the Facility area at a certain depth?

d. How is that going to work when there is no return flow facility in place?

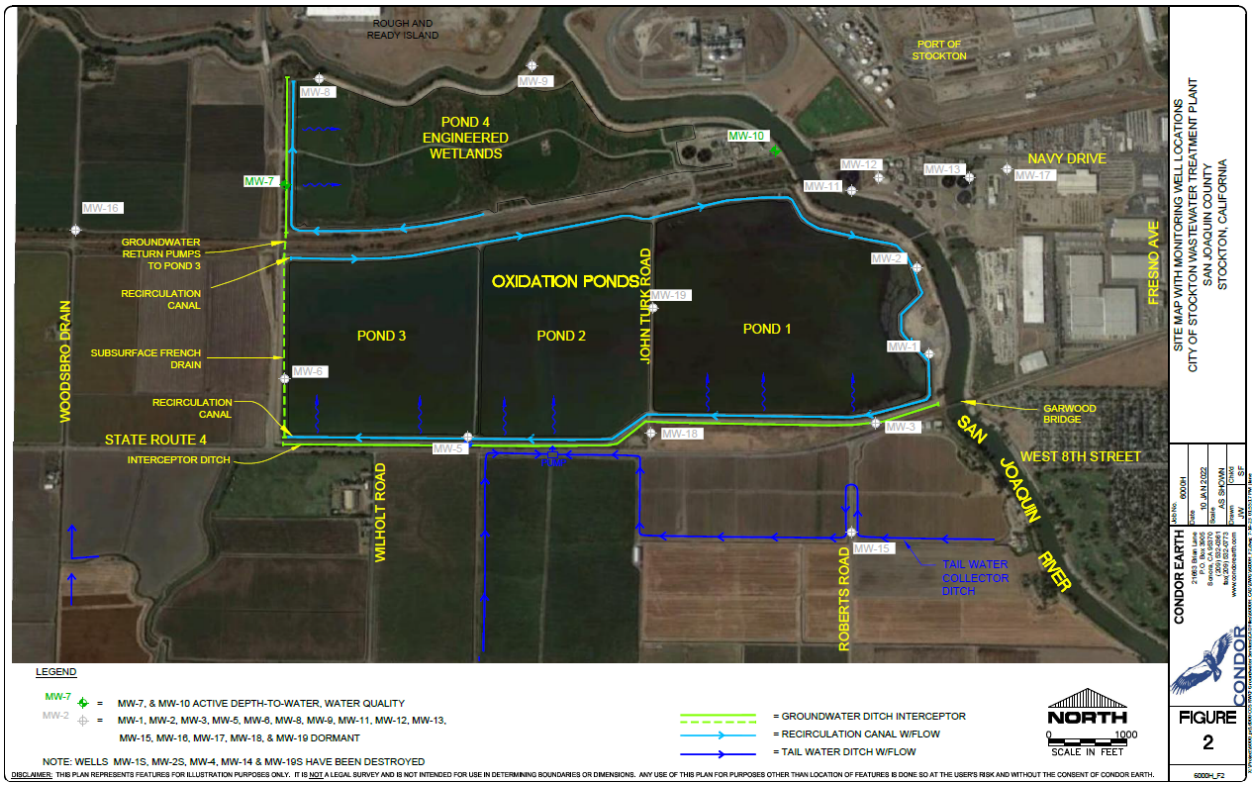
e. Is there any information available to characterize the volumes of intercepted groundwater and agricultural drainage discharged annually to the ponds?

RESPONSE:

Central Valley Water Board staff have provided the following answers to questions 13a through 13e below:

a. The Discharger will continue discharging water collected in the groundwater interceptor ditch and French drain into Pond 3. Note that the Discharger would like to stop the agricultural neighbor from discharging into the pond system and is exploring what hurdles must be overcome to do so.

b. Drainage from the agricultural neighbor enters the interceptor ditch via a pipe. Water from the interceptor ditch is pumped into the recirculation channel, which flows into the ponds. The following groundwater well map has been added to Attachment B that shows the location of where agricultural tail water drainage enters the interceptor ditch.



c. The Discharger will continue to maintain and operate the interceptor ditch and French drain so that agricultural drainage discharge and groundwater from the ponds is captured and prevented from moving off-site, not to maintain groundwater levels at a certain depth.

d. The Discharger will continue to operate the west bank treatment facilities and discharges to Discharger Point 001A until return facilities to the east bank facilities and Discharge Point 001B are constructed and operable. At that point, Discharge Point 001A will no longer be used and the return facilities will reroute any agricultural drainage, intercepted groundwater, and emergency storage flows to the east bank facilities for treatment and discharge.

e. There is no information available to characterize the volumes of intercepted groundwater and agricultural drainage discharged annually to the ponds.

KIPPS COMMENT #14 – Sludge Handling

Questions related to the sludge handling practices at the Facility including:

a. Do all current biosolids storage practices comply with WDR section VI.C.5.b?

b. What substances are stockpiled in the former sludge lagoons?

c. Were both sludge lagoons cleaned out to their as-built invert elevations?

d. Was a soil profile sampling investigation performed to characterize the impact of lagoon leachate on underlying soils? If so, did it assess whether waste constituents in the leachate have accumulated in soil in a mass or concentration that pose a threat to groundwater?

RESPONSE:

Central Valley Water Board staff have provided the following answers to questions 14a through 14e below:

a. All current biosolids storage practices, as described in the Facility description in the response to Kipps Comment #1 above, comply with WDR section VI.C.5.b.

b. During the past five years, the basins were partially backfilled with native soil. Google Earth images back to 2020 show these piles of native soil.

c. The Discharger identified that in 2014 the two sludge lagoons were decommissioned, all sludge was removed, and the basins were excavated to the invert elevations. The image below is from 2014 and shows the lagoons after this work was completed.

d. The basin materials were not subject to soil profile sampling.

Figure 1. Former sludge lagoons after decommissioning in 2014.

KIPPS COMMENT #15 – Sludge Lagoons

Revise the tentative Order to describe the work performed to clean out the sludge lagoons and investigate the underlying soil to assess whether accumulations of waste constituents threaten to violate groundwater limitations.

Disclose the material stockpile in the former sludge lagoons since 2022 and report staff's determination of whether this practice complies with WDR section VI.C.5.b Sludge/Biosolids Treatment or Discharge Specifications.

Add a new Special Studies, Technical Reports and Additional Monitoring Requirement for:

1. Removing materials currently stockpiled in the former sludge lagoons for proper offsite use and/or disposal.

2. If not already done, excavating the sludge lagoons to their as-built invert elevations and, after appropriate testing is performed, disposing of the excavated material in accordance with state and federal requirements.

3. If not already done, proposing then performing an approved soil sampling workplan to assess the extent to which sludge-derived waste constituents have accumulated in the soil column and pose an ongoing threat to groundwater.

RESPONSE:

Central Valley Water Board staff do not concur. The Discharger notified the Board that they would decommission the lagoons in 2013, completed the decommissioning in 2014, and the Central Valley Water Board's expectations have been satisfied. See response to Kipps Comment #14 for more information regarding the stockpile in the former sludge lagoons since 2022 and how the decommissioning and current conditions of the former sludge lagoons comply with WDR section VI.C.5.b of the tentative Order. A Special Studies, Technical Reports and Additional Monitoring Requirement is not necessary. The tentative Order has not been revised because the former sludge lagoons were decommissioned in 2014 and are no longer relevant to the current sludge handling operations described in Attachment F section II.A.

KIPPS COMMENT #16 – Groundwater Monitoring Wells

Revise Attachment F section IV.D.4 to state that depth-to-water measurements are periodically taken in all dormant groundwater wells and describe the use of river stage data from the SJG gauging station to determine groundwater flow direction and gradient consistent with the information contained in the Discharger's 2024 Second Semiannual Groundwater Monitoring Report.

RESPONSE:

Central Valley Water Board staff concur and have revised Attachment F section IV.D.4 as follows:

4. Groundwater Quality

A report, *Background Groundwater Quality Characterization Technical Report City of Stockton Regional Wastewater Control Facility* (Condor, 2013), was prepared for the City of Stockton to characterize background groundwater quality conditions within influence of the Facility's discharge. Condor evaluated approximately 13,000 data values, sampled over a 9-year monitoring period. The dataset was comprised of several types of samples. Groundwater grab

samples from direct push sampling in adjacent areas of equal size and similar land use, repeated independent samples from a network of 21 monitoring wells, sampled quarterly or semi-annually, surface water and effluent samples. Data included typical groundwater parameters and stable isotope ratios.

Background and Hydrologic Conditions. The Facility is located in the San Joaquin Delta, along the San Joaquin River (SJR) north of State Route 4, with Rough and Ready Island located to the north, an industrial area across the SJR to the northeast and east, and agricultural lands located to the south and west (Attachment B). Approximately 600 acres of oxidation ponds and wetlands, at mean sea level, are adjacent to the SJR and Burns Cutoff. Daily tides and pumping to the California Aqueduct at Clifton Court Forebay both contribute to water level fluctuation and flow reversals in the SJR. The minimum river stage is above the ground surface elevation of the surrounding farmland.

In general, areas of poor water quality with high salinity exist throughout the Delta subbasin. TDS values range from 210 to 7,800 mg/L and average about 1,190 mg/L, and elevated chloride and nitrate levels occur in several areas within the Delta subbasin (California's Groundwater, Bulletin 118, 20 January 2006).

Hydrogeology. The hydrogeology of the Facility and surrounding area is described in detail in the Report of *Groundwater Conditions in the Vicinity of the Stockton Regional Wastewater Facility* (Condor, 2006). In summary, the Facility is located on the SJR flood plain and is a natural regional groundwater discharge area. Agricultural practices require pumping from adjacent drains and ditches thereby lowering groundwater. Geologic well borings show the Facility is underlain by approximately 25 feet of silty clay, silt and clay. *"Groundwater occurs within discrete discontinuous layers of sandy channel deposits and moves in response to low gradients controlled by drainage canals and pumping. Many isolated pockets of stagnant groundwater are expected to occur around and under the Facility ponds and constructed wetlands. The hydrogeologic flow conditions around the Site are relatively static. Gradients are low, and aquifers are of low transmissivity and storage. Potential recharge areas are inferred from surface water elevations in the SJR and the ponds. Stable isotopes suggest that precipitation is a larger contributor to groundwater recharge than the river, and a flat well hydrograph at MW-14 shows locally poor hydraulic connection to surface water in the river occurs."* (Condor, 2013)

There exists a groundwater interceptor system on the southern and western perimeters of the oxidation ponds that flattens the groundwater gradient around the facility. Outward groundwater flow is captured and pumped back to the ponds. Agricultural drainage water from the southern neighbor is also pumped to the groundwater interceptor ditch and thence to the ponds for treatment and discharge. The groundwater elevations outside the interceptor system are below sea level, except within in the SJR levees. Groundwater gradient outside the facility is completely controlled by agricultural drainage ditches used to drain fields. Groundwater is removed through a network of straight-line ditches and discharged to the river at the Woods Irrigation Company (WIC) Pump Station west of the site. Groundwater conditions are very stable with a controlled flat gradient west of the SJR, and a slightly steeper gradient on the east side of the river defined by river elevations and a pumping depression farther to the east.

Groundwater Monitoring Network and Chemistry. There are 17 monitoring wells surrounding the Facility and SJR, which are shown in Attachment B. Grab samples are taken semi-annually. The groundwater monitoring network includes two active wells monitored for groundwater level and quality (MW-7 and MW-10) and 15 dormant wells with sampling equipment removed and no monitoring is performed but periodic depth-to-water measurements are taken to confirm operable conditions of the wells (MW-1, MW-2, MW-3, MW-5, MW-6, MW-8, MW-9, MW-11, MW-12, MW-13, MW-15, MW-16, MW-17, MW-18, and MW-19). Condor monitors some dormant wells or obtains data from the Department of Water Resources' California Data Exchange Center gauging station along the San Joaquin River near Garwood Bridge (SJG)to confirm depth to groundwater as necessary to help discern the groundwater gradient.

In 15 years of sampling the compliance wells, there have been insignificant changes to water quality. The hydrogeologic regime at the site is known to be very stable. Condor recommended only a minimal monitoring network is needed on the downstream side of the oxidation ponds outside the groundwater interceptor system at MW-7. Monitoring for nitrate at MW-10 is anticipated to continue for two spring semiannual samples after decommissioning of the tertiary treatment facilities or until groundwater returns below the Water Quality Objective of 10 mg/L. All other wells interior to the groundwater containment system or upgradient of the facility (e.g. MW-15, MW-18) will remain dormant.

Since Order R5-2020-0007-01 became effective on 1 April 2020, there was no longer any discharges to land on the east side of the SJR. Sludge on the east side of the San Joaquin River is stored on concrete pads. The Facility is nearing completion of its modifications project and all wells on the east side of the Facility are anticipated to remain dormant. MW-14 was removed during recent construction.

Background Values. Non-parametric statistical review of each monitored constituent was conducted to perform the background groundwater characterization. Due to high spatial variability in the broader area, there is no single monitoring point or well that represents background quality and the dataset did not follow a standard statistical distribution. Water quality as indicated by the analytical results shows levels of EC and TDS within expected background ranges but exceeding typical conservative water quality objectives in monitoring wells MW-1, MW-2, MW-3, MW-4 (destroyed), MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, and MW-18. Analytical results also indicated that concentrations of nitrate in monitoring wells MW-10, MW-13, and MW-15 (background, off-site, and adjacent to the Facility), and concentrations of total coliform in every monitoring well have exceeded the Basin Plan water quality objectives. Coliform detections show no clear patterns of contamination from facility discharges. Most consistent coliform detections occurred in a former background well MW-15.

Groundwater Limits. This Order requires the continued monitoring of the groundwater monitoring network, not in its entirety, to monitor the impact of the discharge. This Order also requires monitoring of the pond water to determine whether degradation of the groundwater for certain constituents from percolation of the treated domestic wastewater stored in the unlined facultative ponds is consistent with maximum benefit to the people of California, and thus, complies with Antidegradation Policy.

KIPPS COMMENT #17 – Groundwater Monitoring Well MW-13

Disclose information on the “leak at the foul air duct near…MW-13” described in WDR section VI.C.7.b of Order R5-2014-0070-03 that contributed to the elevated nitrate and possibly manganese in MW-13 and MW-17 described in the tentative Order.

RESPONSE:

Central Valley Water Board staff clarify that the foul air duct leak and repair occurred in 2004 and is no longer relevant to the tentative Order. At that time, water from the biotowers was entering a foul-air duct used to draw air from the headworks and circulate it through the biotowers to remove odor-causing substances. The foul air duct was redirected to a new air scrubber and away from the biotowers. During the recent Modifications Project, the biotowers were removed and the area was paved over for the construction of a new warehouse facility, disc filters, and UV system. Nitrate in the groundwater increased in MW-13 following the foul air duct leak but nitrate has been low level to non-detect since 2008. There was no indication of manganese impacts to groundwater by the foul air duct leak. Please see the response to Kipps Comment 2c for more information about manganese in the groundwater. References to this issue have been removed from Attachment F section IV.D.4 of the tentative Order as shown in the response to Kipps Comment #16 above.

STAFF REVISIONS

STAFF REVISION #1 – Groundwater pH Limitation Rationale

Central Valley Water Board staff inadvertently included rationale in Attachment F section V.B.5 for pH groundwater limitations that were removed in a previous permit renewal and are not included in WDR section V.B the tentative Order. Thus, the rationale does not apply and has been removed from the tentative Order. Subsequent subsections have been renumbered accordingly.