

Central Valley Regional Water Quality Control Board
21 April 2016 Board Meeting

Response to Comments
for the
Sacramento Regional County Sanitation District
Sacramento Regional Wastewater Treatment Plant
Tentative Order Renewing Waste Discharge Requirements

The following are Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the Tentative Order Renewing Waste Discharge Requirements Order R5-2010-0114-04 (NPDES Permit No. CA0077682) for the Sacramento Regional County Sanitation District (Regional San or Discharger), Sacramento Regional Wastewater Treatment Plant (SRWTP or Facility).

The tentative Order was issued for a 30-day public comment period on 4 February 2016 with comments due by 7 March 2016. The Central Valley Water Board received public comments regarding the tentative Permit by the due date from the Discharger and the California Sportfishing Protection Alliance (CSPA). Changes were made to the proposed Permit based on public comments received.

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

DISCHARGER COMMENTS

Discharger Comment 1: Thermal Plan Exceptions

It is Regional San's understanding that, as proposed, the effluent and receiving water limits for the Facility would, upon adoption of the permit, be based on the Thermal Plan without exceptions, and that if the State Water Resources Control Board (State Water Board) concurs with the exceptions, the exceptions and alternative limitations would come into effect without further action by the Central Valley Water Board. Under all the circumstances, including that we expect the Facility to comply with Thermal Plan-based limitations over the next few months after permit adoption, this is an acceptable approach. We note, however, that it is important that the concurrence decision occur promptly, and hope to work with Central Valley Water Board staff to advance that action.

RESPONSE: The proposed Order includes effluent and receiving water limitations for temperature based on the Thermal Plan objectives and also includes alternative limitations based on exceptions to the Thermal Plan in accordance with Clean Water Act (CWA) section 316(a) and federal regulations. The Thermal Plan, however, requires that the State Water Board concur with any exceptions prior to them becoming effective. Central Valley Water Board staff submitted a request to the State Water Board on 14 January 2016¹ for its consideration. At this time the State Water Board has not acted on the request. Therefore, the proposed Order has been drafted such that the temperature limitations based on the Thermal Plan objectives would be effective immediately. If the State Water Board provides

¹ Memorandum from Pamela Creedon, Executive Officer of the Central Valley Water Board, to Tom Howard, Executive Director of the State Water Resources Control Board, 14 January 2016

concurrence with the Thermal Plan exceptions recommended by the Central Valley Water Board, the alternative temperature limitations would become effective upon its concurrence. No additional action would be required by the Central Valley Water Board.

Discharger Comment 2: Thermal Plan Language Suggestions

The Discharger supports the findings in the proposed Order regarding the Thermal Plan exceptions and provided suggested language changes for clarification purposes. The recommended changes are discussed separately below followed by Central Valley Water Board staff responses:

- a) **Page F-13, section III.A.i; also Attachment I, page I-2:** In these locations, the findings refer to the Code of Federal Regulations with respect to exceptions and alternative effluent limitations, and there is a finding that the “alternative limitations” will assure the protection of aquatic life (per the language of the regulations). It is thus implicit that limitations based only on the Thermal Plan are “more stringent than necessary . . .” However, we suggest that the Central Valley Water Board should make two findings: one to the effect that limitations based on the Thermal Plan are more stringent than necessary; and one to the effect that the alternative limitations are sufficient (each finding, of course, would track the language of the regulations).

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format below:

Attachment F, Fact Sheet, Section III.C.1.c. i. (second paragraph)

The Central Valley Water Board has considered the applicability of the Thermal Plan exceptions for the Facility’s discharge. Based on all evidence in the record the Board finds that the Discharger has adequately demonstrated through comprehensive thermal effect studies that the effluent and receiving water limitations based on the Thermal Plan are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made. The Board also finds that the alternative limitations, considering the cumulative impact of its thermal discharge together with all other significant impacts on the species affected, will assure the protection and propagation of a balanced indigenous community of shellfish, fish and wildlife in and on the Sacramento River and Delta. The detailed rationale for allowing ~~granting~~ the Thermal Plan exceptions is provided in Attachment I.

Attachment I, Thermal Plan Exceptions, Section I (first paragraph below Table I-1)

Based on all evidence in the record the Central Valley Water Board finds that the Discharger has adequately demonstrated through comprehensive thermal effect studies that the effluent and receiving water limitations based on the Thermal Plan are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made. The Board also finds that the alternative limitations, considering the cumulative impact of its thermal discharge

together with all other significant impacts on the species affected, will assure the protection and propagation of a balanced indigenous community of shellfish, fish and wildlife in and on the Sacramento River and Delta. The findings and conclusions relating to Code of Federal Regulations, title 40, section 125.73(a) are based on studies that analyzed the entire thermal effect of the discharge. Following is a summary of the evidence supporting ~~this~~ the findings.

- b) **Attachment I, page I-2:** Regional San recommends that the first paragraph under “Consideration of Thermal Plan Exceptions” clarify that the findings and conclusions relating to Code of Federal Regulations, title 40, section 125.73(a) are based on consideration of the entire thermal effect of the discharge, and that to the extent information is presented on the incremental difference between Thermal Plan-based limitations and exception-based limitations, this is for information and context only.

In the same vein, the first bullet on page I-2 appears to relate to the difference between Thermal Plan-based limitations and the alternative limitations. We recommend that this bullet be moved to after the current fourth bullet (which discusses cumulative effects), and that clarifications be added as necessary to explain that the current first bullet’s statements pertain to the incremental difference (which again, would be for context and information only). Also, the second paragraph under the current first bullet refers to a 100-foot area of thermal impacts. Overall, we believe that this paragraph may be misread, and we have not confirmed the technical conclusions that are stated. This statement is not necessary to the ultimate findings, and thus we recommend it be removed, here and from text on page I-8.

RESPONSE: Central Valley Water Board staff concurs that both the Thermal Plan limitations, and the proposed exception to those limitations meet the standard in 40 CFR section 125.73. See response to Discharger Comment 2.a).

With regard to the first bullet on page I-2, Central Valley Water Board staff does not concur with the request to move the bullet. The purpose of the first bullet is to provide some context regarding the transient nature and limited extent of the Thermal Plan exceptions. Central Valley Water Board staff concur, however, that clarification is needed regarding the stated area of thermal impact, because the statement in the tentative Order could be misinterpreted. The first bullet on page I-2 has been modified as shown in underline/strikeout format below:

- **Continued exceptions would allow minor and transient exceedance of Thermal Plan objectives within a small zone.**

Exceptions would primarily be needed during three months of the year when river temperatures are below 65°F. This is the time of year when river flows are highest and ambient temperatures are low.

The thermal plume quickly assimilates in the receiving water so the thermal impacts are limited to the near-field plume that under worst-case flow conditions is contained within 100 feet of in the vicinity of the diffuser. Due to requirements in this Order¹ the worst-case flow conditions occur infrequently and for only a matter of minutes at a time. Under typical conditions (flow ratio

of about 46:1), ~~the Thermal Plan objective 5.A.(1)a would be met within about 100 feet of the diffuser area of impact is significantly less.~~

Under fully mixed conditions (far-field conditions) Sacramento River temperatures would not change measurably with or without the exceptions. In other words, in the far-field (within 3 miles from discharge point where the discharge is completely mixed) thermal impacts would be virtually the same if the Discharger were to upgrade to fully meet the Thermal Plan objectives, versus continuing to operate under the limited exceptions.

- c) **Attachment I, page I-3:** Regional San comments that the finding relating to carbon footprint is important information. Regional San recommends that this information be relocated in the document since it is not, in this instance, necessary to the findings on exceptions and the sufficiency of evidence to support the alternative limitations. This description of carbon footprint and related issues could be moved to the very end of the first paragraph of the Introduction section; i.e., immediately preceding Table I-1.

RESPONSE: Although the information regarding the carbon footprint is not necessary to make the findings for the Thermal Plan exceptions under 40 C.F.R.125.73, the information is factual and relevant to the conditions at the facility. Therefore, the bullet has not been moved.

- d) **Attachment I, page I-4, second-to-last paragraph:** Note that the final sentence states that "The Court agreed . . . ," but the text has not, prior to this point, identified the court or the litigation in which thermal exceptions have been considered.

RESPONSE: Central Valley Water Board staff agrees that the CSPA litigation to which the sentence was referring is provided later in Attachment I. Therefore, the abovementioned sentence has been deleted on page I-4. The Sacramento Superior Court rulings are discussed in detail in section II.4 Permitting/Litigation History.

- e) **Attachment I, page I-7:** The bullet beginning at the bottom of page I-7 appears to relate to the difference between Thermal Plan-based limitations and the exceptions. We recommend that it be moved, to after the bullet that discusses cumulative effects, and that clarifications be added as necessary to explain that the current first bullet's statements pertain to the incremental difference. Also, the second paragraph under the current first bullet refers to a 100-foot area of thermal impacts. Overall, we believe that this paragraph may be misread, and we have not confirmed the technical conclusions. This statement is not necessary to the ultimate findings, and thus we recommend it be removed.

RESPONSE: Central Valley Water Board staff concurs in part, see response to Discharger Comment 2.b), above. Similar clarification has been made regarding the estimated area of thermal impact.

- f) **Attachment I, pages I-10 to I-13:** The 2010 model results presented on these pages, and conclusions based on those results, are based on an assumed 218 mgd of discharge, which is substantially greater than the volume being permitted. (As of the time of the 2010 study, Regional San was seeking increased permitted capacity, but subsequently concluded that such an increase is not necessary.) Accordingly, the text could appropriately be modified to reflect that the model results overstate the thermal

effects of the permitted discharge, but even with this conservative approach, zones of passage exist.

RESPONSE: Central Valley Water Board staff concurs and has modified the second to last paragraph on page I-10 of the Tentative Order as shown in underline/strikeout format below:

The zones of passage can be seen in the following figures. The thermal plumes were illustrated through two-dimensional, color graphics. These graphics were developed for the 218 mgd build-out discharge scenario with a maximum temperature differential of 25°F, for the worst-case flow ratio of 14:1 and the typical flow condition of 46:1. At the time the 2010 study was developed the Discharger was seeking increased capacity to 218 mgd, but subsequently concluded that the increase was not necessary. This Order only allows a flow of 181 mgd. Therefore, the 2010 model results overstate the thermal effects of the permitted discharge. However, as shown in the graphics below, even under this conservative approach zones of passage exist.

- g) **Attachment I, pages I-13 to I-14:** The paragraph starting on the bottom of page I-13 and beginning with “Under fully mixed conditions . . .” contains somewhat detailed statements regarding the incremental analysis. Regional San does not necessarily believe this is needed, or at minimum it should be clarified that the conclusions related to the Code of Federal Regulations standard for exceptions and alternative limitations pertain to the entire thermal load from the SRWTP.

RESPONSE: Central Valley Water Board staff concurs with the comment that the entire thermal load from SRWTP was analyzed in determining whether the standard under 40 CFR 125.73 is met if alternative Thermal Plan limitations are granted. To clarify this, the second paragraph under the heading, “Far-Field Plume Modeling” has been modified as shown in underline/strikeout format below:

Under fully mixed conditions in the far-field, Table I-2 demonstrates that Sacramento River temperatures would not change measurably whether SRWTP is operated to meet the Thermal Plan objectives or with the exceptions. In the 2013 study, incremental temperature changes were modeled for the 82-year (1922-2003) hydrologic period of record when complying with the Thermal Plan objective 5.A.(1)a year-round (20°FΔT) and the proposed exception (25°F ΔT) at a 181 mgd (ADWF) SRWTP discharge condition. The modeling demonstrated there were minimal changes in temperature whether SRWTP complied with the Thermal Plan objective or if the exception was allowed. At the 50th percentile there was no change in downstream temperature whether complying with the 20°FΔT objective or with the 25°F ΔT exception. At the 99.91 percentile the maximum differential was only 0.09°F (December). (Table I-2)¹

New Footnote1:

¹ The findings and conclusions relating to Code of Federal Regulations, title 40, section 125.73(a) are based on the entire thermal effect of the discharge.

- h) **Attachment I, pages I-15 to I-16:** Regional San believes that the finding related to carbon footprint is important information. However, Regional San recommends that this information be relocated in the document since it is not, in this instance, necessary to the ultimate findings on the exceptions. This description of carbon footprint and costs could be moved, to become an informational item “5” at the very end of the attachment.

RESPONSE: Central Valley Water Board staff does not concur. See response to Discharger Comment 2.c), above.

- i) **Attachment I, pages I-21 to I-22:** The chronological order of sections iii and v could be slightly modified. As written, the tentative order states “In July 2015 the Central Valley Water Board adopted the above findings and Thermal Plan exceptions based on the current evidence in the record . . .” The tense and use of “current” is somewhat awkward and implies that nothing is different in the record supporting the tentative order from the record that existed and supported the July 2015 order. The summary of the letters from the fisheries agencies could also be moved to after section v, which summarizes the synthesis report. Some reorganization can result in an improved chronology to illustrate that there are items that have become available after October 2015 and are being included in the record.

RESPONSE: Central Valley Water Board staff concurs. The proposed Order has been modified by moving the last two bullets under section 4.c.ii to a new section 4.c.iv titled “Fishery Agency Comments on 2015 Delta Smelt Addendum.” Furthermore, to address the Discharger’s comment regarding the tense and use of “current” in section 4.c.iii, the last paragraph of the section has been modified as follows in underline/strikeout format:

In July 2015, the Central Valley Water Board adopted the above findings and Thermal Plan exceptions based on ~~the current evidence in the record,~~
~~including~~ studies required by Order R5-2010-0114-04 completed in March 2013 and May 2015, and comments received from USFWS, CDFW and NMFS.

Discharger Comment 3: Denial of Mixing Zones for Copper and Cyanide

A chronic mixing zone has been approved in the tentative order. Regional San believes that it would also be appropriate for the Central Valley Water Board to grant an acute mixing zone; a limited 60-foot zone would be sufficient and meet all requirements of the State Implementation Policy and any other applicable policy or regulation.

Although we remain concerned with the risk of non-compliance, Regional San understands that Central Valley Water Board staff has concluded that Regional San will be able to comply with the effluent limitations without allowance of an acute mixing zone. Subject to our later comments regarding past and potential future changes in wastewater characteristics (see below), Regional San agrees to move forward with the limitations as proposed. However, respectfully, we strongly recommend that the basis for denial be the Central Valley Water Board’s anticipation of compliance based on performance rather than the existence of unknown toxicity in the Delta and the pelagic organism decline. (Tentative Order, p. F-31.) The latter stated reasons, we believe, are not a logic that supports denial of all acute mixing zones, and further Regional San is concerned with any potential implications of those statements for future permitting actions.

RESPONSE: The Delta is impaired for unknown toxicity and has experienced a significant pelagic organism decline. Considering the conditions of the Delta and the secondary treatment level provided by the Facility, Central Valley Water Board staff have determined that the allowance of an acute aquatic life mixing zone is not acceptable for this discharge at this time. The Discharger is currently constructing upgrades to the Facility that will result in a higher level of treatment and improved effluent quality. Section 1.4.2 of the SIP states, in part, "...*The allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis.*" Several factors are considered in granting or denying mixing zones, including the conditions of the receiving water and the overall treatment level provided by the Facility. The denial of the acute mixing zone in this Order does not mean an acute mixing zone cannot be reconsidered in the future.

Discharger Comment 4: Potential Changes in Wastewater Characteristics

Regional San states that the SRWTP has experienced significant changes in wastewater influent (and effluent) characteristics due to water conservation and drought. In general, reduced total household water use results in increased concentrations of certain pollutants, without change in total load. These changes are beyond Regional San's control. However, because effluent concentration is regulated in the NPDES permit, Regional San may be at risk of permit violations as wastewater flow conditions continue to change, and particularly if there are still further increases in conservation. Regional San thus requests acknowledgement of the potential future need to adjust final or interim limits as may be justified by future circumstances. In addition, Regional San may wish to pursue adjustments in criteria based on translators or a water effects ratio, or other actions that can ensure both protection of beneficial uses and compliance with applicable effluent limitations. Regional San will work with Regional Water Board staff cooperatively on any such future activities.

RESPONSE: Central Valley Water Board staff concur that the Facility has experienced changes in wastewater influent and effluent characteristics due to water conservation and drought. The drought conditions were considered in the development of the proposed Order and staff understands that further increases in water conservation could result in more changes in influent/effluent quality that are outside the control of the Discharger. The tentative order included a reopener provision addressing water conservation as it relates to the performance-based effluent limitations for electrical conductivity. The proposed Order has been revised to expand the reopener provision to other interim and final effluent limitations where Facility performance may be considered in the development of limitations. The proposed Order at Section VI.C.1.g has been modified as follows in underline/strikeout format:

- g. **Electrical Conductivity (EC) Effluent Limits and Other Limits Based on Facility Performance.** This Order may be reopened to revise ~~the~~ interim and/or final effluent limitations where Facility performance was considered in the development of the limitations (e.g., performance-based effluent limitations for EC) should the Discharger provide new information demonstrating the increase in discharge concentrations have been caused by water conservation efforts, drought conditions, and/or the change in disinfection chemicals.

With regard to the second part of the Discharger's comment, Central Valley Water Board staff will work cooperatively with the Discharger should it pursue adjustments of water quality criteria based on site-specific translators and/or water-effects-ratios (WERs). The proposed Order contains a reopener provision specifically regarding WERs and translators that would allow the permit to be reopened to adjust criteria, as appropriate.

Discharger Comment 5: Editorial Changes, Requested Clarifications and Other Changes

Regional San enclosed a table including comments and requested changes. Regional San notes that several comments and requested changes relate to proposed monitoring or reporting information where the burden seems excessive or disproportionate to the need. Regional San states that they conduct a tremendous amount of monitoring, both under the specific requirements of its permit and under other programs, and will continue to do so under this permit. Regional San recommended modifications reflecting their good-faith belief that some proposed requirements go beyond what is reasonably necessary, and request these comments be considered favorably.

The following are the Discharger's comments provided in the table provided with their comment letter. The comments are identified by the item number in the first column of the table.

- a) **Edits and Other Minor Changes.** Items 1-9, 11, 12, 14, 14a, 16, 20, 23, 31, 32, 35, 36, 39, 45, 52, 55, and 56 include proposed editorial changes and other minor changes.

RESPONSE: Central Valley Water Board staff concurs with the editorial and other minor changes and has modified the proposed Order accordingly.

- b) **Item 10, Limitations and Discharge Requirements, Section II.C.** Regional San states that this section of the tentative permit refers to provisions and requirements that implement only state law. The references should also include: the last two sentences of section III.A. (pertaining to recycled water use); and section VI.C.5.b. (WDRs pertaining to collection systems), particularly since the second sentence of the section states that the Discharger shall be subject to the WDRs.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections III.A (pertaining to recycled water use), IV.B, IV.C, ~~and VI. C.5.b, and~~ V.B are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

- c) **Item 13, Limitations and Discharge Requirements, Section IV.A.1.a, Table 4, IV.A.1.g, and VI.C.2.d; Attachment E, Section IV.A.1, Table E-4.** Regional San states that the references to the constituents to be monitored at the new location TER-001 are not consistent. Page 5, footnote 3 refers to compliance with final effluent limitations for BOD₅ and TSS; page 6, section IV.A.1.g does not include a footnote for total coliform at location TER-001; page E-7, footnote 2 only lists total coliform. Changes should be made for consistency.

RESPONSE: Central Valley Water Board staff does not concur. The proposed Order includes a new monitoring location (TER-001), which is located immediately following the future tertiary filtration disinfection facilities. Following Executive Officer approval, Monitoring Location TER-001 will be used to evaluate compliance with the final effluent limitations for total coliform organisms, BOD₅, and TSS. Monitoring at the final discharge point (EFF-001) will continue to be required for BOD₅ and TSS to characterize the final effluent prior to discharge to evaluate water quality impacts to the receiving water. Monitoring for total coliform organisms will no longer be required at EFF-001, because in accordance with the proposed Order the Discharger will have adequately demonstrated that no pathogens are introduced to the effluent after the disinfection process. Consequently, this is the reason for the perceived inconsistencies in the sections discussed in the Discharger's comment.

- d) **Item 15, Attachment E, Section I.B.** Regional San requests for "Final" to be inserted before "effluent samples," or for another change to be made to this paragraph, to reflect that turbidity monitoring of tertiary effluent will be measured after filtration but before disinfection.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

- B. Final ~~Effluent~~ samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

- e) **2nd Item 15, Attachment E, Section IV.B.** Regional San requests clarification that they will be able to stop monitoring for these parameters at EFF-01 once this location, TER-001, is approved.

RESPONSE: Central Valley Water Board staff does not concur. See response to Discharger Comment 5.e), above.

- f) **Item 17, Attachment E, Table E-4 and Table E-10.** Regional San requests the removal of footnote 8 on Table E-4 and footnote 3 on Table E-10. The sample type was changed from composite to grab sample for the EMP and ECS in the current permit to reduce contamination. Quality assurance procedures, including equipment and method blanks, are conducted for all semi-volatile analyses.

RESPONSE: The footnote discussed in the Discharger's comment is for monitoring bis (2-ethylhexyl) phthalate. It has been well documented that contamination issues can occur when sampling and analyzing for bis (2-ethylhexyl) phthalate. The footnote simply states, "In order to verify if bis (2-ethylhexyl) phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant." Although the Discharger may conduct sampling and analysis using clean techniques, Central Valley Water Board staff does not concur with removal of the footnote.

- g) **Item 18, Attachment E, Section IV.** Regional San requests for Monitoring Location FIL-001 to be added to reflect the location for filter effluent monitoring, consistent with the current permit.

RESPONSE: Central Valley Water Board staff does not concur. Monitoring Location FIL-001 is already in the proposed permit, Attachment E, Section IX.A.

- h) **Item 19, Attachment E, Section IX.B.** Regional San states that since their treatment process will radically change in the next permit cycle, this permit cycle's Effluent Characterization data is not valuable for future permit use. Regional San has 2 years of data from the current permit, and theoretically would have 3 more years this cycle if kept the same. One year will demonstrate that the plant does not experience radical changes in this permit cycle. Regional San requests that the effluent characterization study be reduced to one year, such as the third year, of the permit cycle. As other dischargers (Tracy, Stockton, Davis, Woodland, Redding) only have one year of effluent characterization. Year 3 will ensure that data gets into the ROWD. Regional San request every other month instead of monthly sampling.

RESPONSE: Central Valley Water Board staff does not concur. Considering the size of the discharge and the fact that the proposed upgrades will not be completed for another 5 years for the biological nutrient removal and 7 years for tertiary filtration, the monitoring will be needed for the next permit renewal.

- i) **Item 21, Attachment E, Table E-10.** Page E-24 (Section X.D.5.a) says "The Discharger is not required to sample and analyze for asbestos." Regional San request for Asbestos to be removed from Table E-10.

RESPONSE: Central Valley Water Board staff does not concur. The Discharger is not required to sample and analyze for asbestos in the pretreatment program as indicated on Page E-24 (Section X.D.5.a). However, Table E-10 is the requirement for effluent monitoring.

- j) **Item 22, Attachment E, Table E-10.** Remove Chromium (VI) from Table E-10. Total chromium has been less than 5 ug/L for the last 15 years. If total chromium follows historic trends, chromium (VI) will always be below the specified Maximum Reporting Level of 10 ug/L.

RESPONSE: Central Valley Water Board staff does not concur. Chromium VI is a priority pollutant that needs to be monitored. No changes have been made to the proposed Order.

- k) **Item 24, Attachment E, Table E-10.** Priority Pollutants, which make up a large portion of the list, are sampled quarterly each year under Pretreatment requirements. Priority Pollutant Data points will be submitted electronically now as part of the pretreatment program to CIWQS (new requirement this cycle. (P. E-24(b))). Regional San request for all priority pollutants to be deleted from Table E-10. If all priority pollutants cannot be removed, consider removing 2,3,7,8-TCDD because it has not been detected in the influent or effluent in 15 monitoring events, and is already included with the other priority pollutants sampled under pretreatment requirements. Historically dioxins have been a grab sample, so if the monitoring is not removed, Regional San requests the sample type be changed to a grab sample.

RESPONSE: The monitoring included in Table E-10 is required monthly every other year and is necessary to characterize the discharge for the next permit renewal. The Discharger is also required to conduct quarterly priority pollutant monitoring for the pretreatment program. The monitoring required in Table E-10 does not duplicate this monitoring. The pretreatment program monitoring can be used to satisfy the requirement in Table E-10. Footnote 2 to Table E-10 has been modified as shown in underline/strikeout format below to make this clearer.

- ² The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table E-4 or as part of the pretreatment program monitoring, except for hardness, pH, and temperature, which shall be conducted concurrently with the effluent sampling.

With regard to monitoring for 2,3,7,8-TCDD, this is a priority pollutant and must be monitored in accordance with all priority pollutants in Table E-10. The sample type has been changed to grab to be consistent with historical monitoring.

- l) **Item 25, Attachment E, Table E-10.** Regional San request for the pyrethroid analysis to be removed from the Effluent Characterization list. The pyrethroid test method is not an approved or certified method and does not provide accurate data at a reporting level of acceptable confidence.

RESPONSE: The monitoring requirements have been removed from the proposed Order. However, information regarding pyrethroids in POTW discharges and potential environmental effects is needed and a study will likely be required in the near future.

- m) **Item 26, Attachment E, Table E-10.** Regional San request for obsolete pesticides to be removed. All were removed from Order R5-2011-0083, because they were no longer available, used under restricted conditions, or historically not detected in the effluent or receiving water.

RESPONSE: These pesticides have been removed from Table E-10 to be consistent with the changes made to the previous NPDES permit per amending Order R5-2011-0083.

- n) **Item 27, 28, and 29, Attachment E, Table E-10.** Regional San requests for: Diquat, Atrazine, Simazine, Thiobencarb, NEMA, NDEA, Tributyltin be removed from Table E-10, these compounds were not detected in effluent sampled 24 times in 2013, and 2015; remove Ethylene Dibromide from Table E-10, this compound was not detected 120 times since 2003; and to remove Dibromochloropropane, Carbofuran from Table E-10, these compounds were not detected in effluent sampled 24 times in 2013, and 2015. These compounds have no active registration in California.

RESPONSE: Since the abovementioned compounds have not been detected in the effluent the monitoring frequency has been reduced from monthly to quarterly in Table E-10.

- o) **Item 30, Attachment E, Table E-10.** Regional San request for Organochlorine Pesticides 4,4'-DDD through Toxaphene to be removed from Table E-10. These compounds were not detected in effluent sampled 200 times from 2000 to 2015. These compounds were removed from most recent WDR permit.

RESPONSE: The abovementioned compounds are priority pollutants and for discharges to surface water must be monitored in accordance with the SIP. Since the compounds have not been detected the monitoring frequency has been reduced from monthly to quarterly in Table E-10.

- p) **Item 33, Attachment E, Table E-11.** December data is not available until January and document review requires one month. Change all SMR due date of 1 February to 1 March.

RESPONSE: Central Valley Water Board staff does not concur. Monthly self-monitoring reports are due the first day of the second calendar month following month of sampling. This applies to all calendar months, including December.

- q) **Item 34, Attachment E, section X.B.7.f.** Regional San states that Central Valley Water Board enforcement staff previously agreed that compliance determination is best made based on an instantaneous river grab temperature sample and the effluent temperature taken at the same time the river grab sample is collected.

Temperature Effluent Limitation. For every day receiving water temperature samples are collected at Monitoring Location RSWU-001, the Discharger shall calculate and report the difference between the effluent and upstream receiving water based on the difference in the daily average effluent temperature at Monitoring Location EFF-001 (at

the same time the RSWU-001 grab samples are collected) and temperature of grab samples collected at Monitoring Location RSWU-001

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

f. Temperature Effluent Limitation. For every day receiving water temperature samples are collected at Monitoring Location RSWU-001, the Discharger shall calculate and report the difference between the effluent temperature and upstream receiving water temperature based on the difference in the ~~daily average~~ effluent temperature at Monitoring Location EFF-001 and receiving water temperature of grab samples collected at Monitoring Location RSWU-001. The effluent temperature shall be taken from the continuous effluent data for the same time that the river grab sample was collected.

- r) **Item 37, Attachment E, section X.D.5.f.** Regional San request for the requirement to submit quarterly pretreatment reports to be changed to submittal of a July semi-annual pretreatment report. This request was approved in the last permit cycle. Submitting a quarterly report is a large admin burden with little to no changes anticipated to be reported for a limited number of significant industrial users.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

f. A Semi-annual reports describing the compliance status of each SIU characterized by the descriptions in items iii through vii above shall be submitted ~~for each calendar quarter by the first day of the second month following the end of the quarter~~ by 1 August (for period covering 1 January -30 June) and 1 February (for period covering 1 July – 31 December). The reports shall identify the specific compliance status of each such SIU and shall also identify the compliance status of the POTW with regards to audit/pretreatment compliance inspection requirements. If none of the aforementioned conditions exist, at a minimum, a letter indicating that all industries are in compliance and no violations or changes to the pretreatment program have occurred during the quarter must be submitted. ~~The information required in the fourth quarter report shall be included as part of the annual report due every 25 March.~~ This ~~quarterly~~ semi-annual reporting requirement shall commence upon issuance of this Order.

- s) **Item 38, Attachment F, section II.** Regional San states that there are many non-potable uses beyond irrigation that are clearly and specifically outlined in their regulatory and recycled water user documents.

RESPONSE: Central Valley Water Board staff concurs and has modified the last paragraph of Section II of the proposed Order as shown in underline/strikeout format, below:

The Discharger currently provides 5.0 MGD of treated wastewater to the Water Reclamation Facility (WRF) for unrestricted use, with a provision for WRF expansion

to 10 MGD. The WRF is regulated under Master Reclamation Permit No. 97-146 and ~~provides recycled water for specific non-potable uses landscape irrigation and wastewater treatment plant process water.~~

- t) **Item 40, Attachment F, section II.A.4.** Regional San suggested the below text changes for clarification.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

The Discharger conveys the extracted groundwater from the CAP extraction wells, at an average pumping rate of ~~estimated at~~ approximately 4.0-0.4 MGD, to the Facility effluent channel downstream of the secondary clarifiers and upstream of the plant chlorination station or onsite constructed wetlands.

- u) **Item 41, Attachment F, Table F-2.** Regional San states that in the “Maximum Daily” column of table F-2, the permit shows “20⁸”. This should either be just the footnote in this cell of table (like Tables F-16 and F-17, p. F-87 and F-97, respectively), or it should be “20/25⁸”

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

Parameter	Units	Effluent Limitation			Monitoring Data (March 2011 - September 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Temperature	°F	--	--	20/25 ⁸	--	--	26.4 ⁹

- v) **Item 43, Attachment F, section III.E.1.a, b, c.** Regional San requested for Order R5-2003-0076 to be replaced with Order R5-2015-0133. Also for text to be added for clarification in section III.E.1.a, “The SSB’s are governed by Order R5-2015-0133, which classifies the SSB’s as unclassified and exempt them from Title 27 pursuant to CCR Title 27 section 20090(a).

RESPONSE: Central Valley Water Board staff has updated the Order number for the waste discharge requirements that regulate the Solids Storage Basins (SSBs), but does not concur with the addition of the finding regarding exemptions from Title 27 regulations. The Title 27 findings for the SSBs are not appropriate for the proposed Order, because the SSBs are regulated by Order R5-2015-0133.

- w) **Item 44, Attachment F, section IV.B.2.c.** Regional San requested for the text to be corrected as shown below.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

c. pH. The secondary treatment regulations at 40 C.F.R. part 133 also require that pH be maintained between 6.0 and 9.0 standard units. This Order, however, requires a more stringent instantaneous ~~minimum~~ maximum effluent limitation for pH, as discussed further in section IV.C.3 of this Fact Sheet.

- x) **Item 46, Attachment F, section IV.C.3.c.i.(b).** Regional San requested for the second sentence with respect to the RPA results for ammonia to be revised as shown below.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

(b) RPA Results. The Facility is a POTW that treats domestic wastewater. Untreated domestic wastewater contains ammonia in concentrations that ~~without treatment, would be~~ is harmful to fish aquatic life and ~~would violate~~ exceeds the Basin Plan narrative toxicity objective ~~if discharged to the receiving water~~. Reasonable potential therefore exists and effluent limitations are required.

- y) **Item 47, Attachment F, section IV.C.3.c.iii.(b).** Regional San states that the second sentence in RPA results for carbon tetrachloride appears to be referring to receiving water, not effluent.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

(b) RPA Results. The MEC for carbon tetrachloride was 2.9 µg/L based on 41 samples collected between January 2012 and December 2014. Carbon tetrachloride was not detected in the ~~effluent~~ upstream receiving water based on 12 samples collected between January 2012 and December 2014.

- z) **Item 48, Attachment F, section IV.C.3.c.v.(b).** Regional San states that the second sentence in RPA results for chlorodibromomethane appears to be referring to receiving water, not effluent.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

(b) RPA Results. The MEC for chlorodibromomethane was 0.33 µg/L based on 41 samples collected between January 2012 and December 2014. Chlorodibromomethane was not detected in the upstream receiving water ~~effluent~~ based on 12 samples collected between January 2012 and December 2014.

- aa) **Item 49, Attachment F, section IV.C.3.c.viii.(b).** Regional San states that the second sentence in RPA results for dichlorobromomethane appears to be referring to receiving water, not effluent.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

(b) RPA Results. The MEC for dichlorobromomethane was 2.3 µg/L based on 41 samples collected between January 2012 and December 2014. Dichlorobromomethane was not detected in the upstream receiving water ~~effluent~~ based on 12 samples collected between January 2012 and December 2014.

- bb) **Item 50, Attachment F, section IV.C.3.c.ix.(a).** Regional San requested for the deadline for methylmercury limit to be inserted.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

The Facility is allocated 89 grams/year of methylmercury by 31 December 2030, as listed in Table IV-7B of the Basin Plan.

- cc) **Item 51, Attachment F, section IV.C.3.c.ix.(d).** Regional San requested for clarification for the Plant Performance and Attainability of methylmercury to be added.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

(d) Plant Performance and Attainability. Based on available effluent methylmercury data, the Central Valley Water Board finds the Discharger is unable to immediately comply with the final WQBEL's for methylmercury. Therefore, a compliance schedule in accordance with the State Water Board's Compliance Schedule Policy and the Delta Mercury Control Program has been established in Section VI.C.7.c this Order. The final WQBEL's are effective 31 December 2030.

- dd) **Item 53, Attachment F, section IV.C.3.c. xiv.(b).** Regional San states that this is not accurate and is copied and pasted from the prior permit. The MEC for settleable solids listed in table F-2 on page F-8 states that the highest average monthly discharge for settleable solids was <0.1 ml/L and the highest daily discharge was 0.1 ml/L. There is no reasonable potential, and the effluent limits for settleable solids should be removed.

RESPONSE: Central Valley Water Board staff concurs that the summary of data is not accurate and has modified the proposed Order as shown in underline/strikeout format, below. However, the effluent limitation for settleable solids will not be removed until the Facility is upgraded to tertiary treatment.

(b) RPA Results. The discharge of domestic wastewater has a reasonable potential to cause or contribute to an excursion above the Basin Plan's narrative objective for settleable solids. There was only one detection of 0.1ml/L on 11 November

2012 out of 1130 samples between 2012 and 2014. The maximum effluent concentration (MEC) for settleable solids was 2.5 ml/L. Currently, the Discharger only provides secondary treatment; therefore, settleable solids in the discharge has reasonable potential to cause or contribute to an in-stream excursion above the narrative toxicity objective or Basin Plan numeric objectives and waste load allocation.

ee) **Item 54, Attachment F, section VIII.A.** Regional San states that the last sentence of paragraph 1 in A is missing the ending.

RESPONSE: Central Valley Water Board staff concurs and has modified the proposed Order as shown in underline/strikeout format, below:

A. Notification of Interested Parties

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following: publication of a notice of public hearing (Notice) in the Sacramento Bee on XXXX 10 February 2016, posting of the Notice at the Facility, XXXX Citrus Highs City Hall, Elk Grove City Hall, Folsom City Hall, Rancho Cordova City Hall, Sacramento City Hall, West Sacramento City Hall, and XXXX US Post Office, and posting of the Notice on the Central Valley Water Board's website.

CALIFORNIA SPORTFISHING PROTECTION ALLIANCE (CSPA) COMMENTS

Request for Designated Party Status. CSPA requested designated party status for the Central Valley Water Board hearing scheduled for 21/22 April 2016 with regard to the proposed renewal of the NPDES Permit for the Sacramento Regional County Sanitation District, Sacramento Regional Wastewater Treatment Plant. The commenter will be granted designated party status for the subject hearing.

CSPA Comment 1: Thermal Plan Exceptions

CSPA comments that the proposed Permit allows for a Thermal Plan Exception that does not comply with the applicable federal regulations and an Order from the Sacramento Superior Court. Following the 2010 permit renewal, CSPA filed a lawsuit with the Sacramento Superior Court (Court). One of the issues raised by CSPA was related to the allowance of Thermal Plan exceptions in the 2010 Permit. In October 2015, the Court ruled that the 2010 Permit failed to include the proper findings for a Thermal Plan exception and ordered the Central Valley Water Board to vacate the Thermal Plan exceptions and reconsider the issue of whether Thermal Plan exceptions may be granted.

With respect to the October 2015 ruling², CSPA asserts that the Court held that “additional research was needed concerning the delta smelt.” This was not done. Instead, the previously rejected studies and agency communications were re-hashed, re-explained and re-argued in a new report (the “2015 Supplemental Report”). However, nothing in the Central Valley Water Board’s return to writ, the Draft Tentative Permit or the 2015 Supplemental Report on which the Draft Tentative Permit relies, supports a finding that the exceptions to the Thermal Plan are “more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made,” as required. Therefore, the Central Valley Water Board, in issuing the proposed Permit with inadequate findings, continues to violate the terms of the 29 October 2014 writ, the Court’s 26 March 2015 Order requiring “immediate compliance,” and the Court’s 19 October 2015 ruling that the Central Valley Water Board had failed to satisfy the requirements of 40 C.F.R. § 125.73(a) with respect to the exception to the Thermal Plan as it relates to Delta smelt.

The Court has rejected all of the temperature studies previously offered by the Central Valley Water Board in support of its finding that an exception to the Thermal Plan is warranted, with respect to the Delta smelt. The Court has already pointed out, these studies do not “focus on the protection and propagation of a balanced indigenous community of shellfish, fish and wildlife” because a showing that “the exception won’t kill or harm more Delta Smelt than are already being killed” did not “equate to a finding that the subject smelt are more than adequately protected and propagated.”

RESPONSE: Central Valley Water Board staff does not concur. Based on all evidence in the record Central Valley Water Board staff, using its professional judgment have determined that the Discharger has adequately demonstrated through comprehensive thermal effect studies that the effluent and receiving water limitations based on the Thermal Plan are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made. Staff also determined that the alternative limitations, considering the cumulative impact of its thermal discharge together with all other significant impacts on the species affected, will assure the protection and propagation of a balanced indigenous community of shellfish, fish and wildlife in and on the Sacramento River and Delta. The evidence relied upon includes several thermal effects studies and recommendations from State and federal fishery agencies. Attachment I of the proposed Order provides a detailed summary of the evidence supporting the determinations.

CSPA makes two assertions in its comments, both of which are inaccurate. First, CSPA claims that the Court required a new thermal effects study for Delta Smelt, stating that, “In the most recent ruling, the Court held that ‘additional research was needed concerning the delta smelt.’ This was not done.” CSPA has taken the Court’s statement out of context. The Court was providing a history of the thermal effects studies conducted by the

² Sacramento Superior Court, California Sportfishing Protection Alliance vs California Regional Water Quality Control Board, Central Valley Region, Case No. 34-2013-80001358-CU-WM-GDS, 19 October 2015 Court Ruling

Discharger that were relied upon by the Central Valley Water Board to make the Thermal Plan exception findings. The Court was referring to a 2013 study.³ The full text is as follows:

“The 2013 study provides a detailed analysis of whether the thermal plan exceptions protect aquatic life beneficial uses. (SAR 00280-82.) The study concludes that the exception ‘will have no species-specific or ecologically adverse thermal effects on the aquatic life beneficial uses of the lower Sacramento River/Delta, and thus balanced, indigenous populations of aquatic life will be maintained in the water bodies.’ (SAR 000282.) These findings demonstrate that the effluent limitations are more stringent than necessary to assure the protection and propagation of a balanced indigenous community of shellfish, fish, and wildlife, except to the extent additional research **was needed** concerning the delta smelt.” (emphasis added)

Contrary to CSPA’s assertion, taken in context, the Court’s statement supports the use of the 2013 study, noting that it was adequate to support use of the alternative Thermal Plan limits with the exception of additional studies that were needed to show possible effects on Delta Smelt. Subsequent to completion of the 2013 study, the United States Fish and Wildlife Service (USFWS) requested additional research regarding Delta Smelt. In response, the Discharger developed the 2015 Delta Smelt Addendum⁴, thus addressing the need for additional research. The Court did not infer that a new study was needed in addition to the 2015 Delta Smelt Addendum. Rather, the Court was simply citing the history and subsequently refers to the 2015 Delta Smelt Addendum as addressing the need for additional study in the following paragraph of the Court ruling. After completing its technical review, USFWS submitted a letter to the Central Valley Water Board on 28 December 2015, subsequent to the October 2015 Court Ruling, stating that the 2015 Delta Smelt Addendum, “referenced relevant and up-to-date scientific literature on the ecology and thermal tolerances of Delta smelt” and the “conclusions provided in the Delta Smelt Addendum were clear, logical and supported by the provided modeling outputs.” In conclusion, USFWS stated, “This completes our technical review of the thermal effects of the Sacramento Regional Wastewater Treatment Plant and therefore we do not require any additional information or studies.” Furthermore, the California Department of Fish and Wildlife (CDFW) also reviewed the 2015 Delta Smelt Addendum and provided a memorandum to the Central Valley Water Board on 19 January 2016. CDFW stated it, “agrees with the conclusions” and, “does not believe that any additional studies are needed to evaluate the Plant’s thermal plume impacts”.

The second incorrect assertion by CSPA is that, “The Court has rejected all of the temperature studies previously offered by the Regional Board in support of its finding that an exception to the Thermal Plan is warranted, with respect to the Delta smelt.” CSPA again takes the Court Ruling out of context. The Court did not reject the 2015 Delta Smelt Study. Rather the Court states that the 2015 Delta Smelt Addendum’s “conclusions...do not focus on the protection of a balanced indigenous community of shellfish, fish, and wildlife” and

³ Temperature Study to Assess the Thermal Impacts of the Sacramento Regional Wastewater Treatment Plant Discharge on Aquatic Life of the Lower Sacramento River, prepared by Robertson-Bryan, Inc, March 2013

⁴ Temperature Study to Assess the Thermal Impacts of the Sacramento Regional Wastewater Treatment Plant Discharge on Aquatic Life of the Lower Sacramento River: Delta Smelt Addendum, prepared by Robertson-Bryan, Inc, March 2015

“does not make adequate findings in compliance with 40 CFR section 125.73(a).” The Court did not rule on the adequacy of the scientific basis of the 2015 Delta Smelt Addendum. Rather the Court questioned whether the 2015 study conclusions supported the federal standard in 40 CFR section 125.73(a). As discussed above, the State and federal fishery experts provided technical reviews of the 2015 Delta Smelt Addendum and agree with the scientific basis of the reports, and that the reports completely characterize the Discharger’s thermal plume.

In December 2015, the Discharger submitted a report, “Regional San Temperature Study: Synthesis, Supplemental Analysis and Findings Report” (Supplemental Report). The report provided the science-based findings that directly address the regulatory standard (40 CFR section 125.73(a)) for granting exceptions to the Thermal Plan for SRWTP. In addition to interpreting the previous temperature studies, the report included characterization of a balanced, indigenous community of aquatic organisms in the lower Sacramento River, and factors that affect such a community. It established a context for analyses and conclusions regarding the thermal effects of the SRWTP discharge, and the adequacy of exceptions and alternative limitations under applicable federal regulatory standards. The 2015 Supplemental Report makes clear that the studies evaluated the effects of the thermal discharge as compared to discharge conditions without any thermal component.

The 2013 Study provided the scientific basis for making the appropriate findings to grant the exceptions to the thermal plan. The 2015 Addendum was developed to answer specific questions posed by USFW in regards to Delta Smelt. The Addendum was not meant to “stand-alone,” but developed in the context of the findings and conclusions in the 2013 Study. Central Valley Water Board staff have considered the 2015 Synthesis, 2013 Study, and 2015 Addendum together to re-evaluate whether the appropriate findings may be made to grant the proposed exceptions. Staff have also considered findings by State Water Board staff indicating agreement with the technical basis for making the findings and additional discussion with the resource agencies [USFW, CDFW, and NMFS]. The resource agencies have provided that the scientific bases of the studies are sound and no additional information is needed to evaluate the effects of the thermal discharge. Considering all evidence in the record including information provided subsequent to the Superior Court’s October 2015 ruling, the Central Valley Water Board staff have determined that the thermal plume as permitted does not: 1) have lethal or sublethal effects; 2) block or delay migration of fishes due to thermal conditions; 3) attract predatory fishes; 4) cause acute or chronic toxicity to fish; 5) increase river temperatures that would be of concern for aquatic life. Therefore, these conclusions support the Central Valley Water Board’s staff finding that the Thermal Plan objectives are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of fish, shellfish, and wildlife in and on the Sacramento River and Delta. The studies further support the Central Valley Water Board’s finding that the alternative limitation, considering the cumulative impact of the thermal discharge together with all other significant impacts on species affected, will assure the protection and propagation of a balanced, indigenous community of fish, shellfish, and wildlife in and on the Sacramento River and Delta.

CSPA Comment 2: Title 27 Exceptions

CSPA comments that the proposed Permit incorrectly cites exemption from California Code of Regulations (CCR) Title 27 for land disposal/storage facilities. The land disposal areas have degraded groundwater quality contrary to the requirements of the Basin Plan. Therefore, the

preconditions for exemption from CCR Title 27 have not been met and the land disposal areas cannot be exempted from regulatory requirements.

RESPONSE: Central Valley Water Board staff does not concur. The Facility includes Emergency Storage Basins that are regulated by the proposed Order and are exempt from Title 27 pursuant to CCR Title 27 section 20090(a).

The Title 27 exception provided in Section 20090(a) states, in part, the following:

(a) Sewage – Discharges of domestic sewage or treated effluent which are regulated by WDRs . . . , or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with [Title 27].

The first part of the regulation, “*Discharges of domestic sewage or treated effluent which are regulated by WDRs . . . , or for which WDRs have been waived*”, conditionally exempts the Facility’s post-treatment activities provided the discharge complies with applicable water quality objectives. While the second part, “*and treatment or storage facilities associated with municipal wastewater treatment plants*”, unconditionally exempts treatment or storage facilities associated with municipal wastewater treatment facilities.

The Emergency Storage Basins meet the unconditional exemption provided in the second part of the Title 27 Sewage exemption, because the basins are storage facilities associated with a municipal wastewater treatment plant. The Emergency Storage Basins are integral to protecting the treatment processes from washing out due to peak wet weather flows or for storage of diverted flow to comply with the conditions of the proposed Order. Furthermore, Emergency Storage Basin, ESB-D, is lined with 60-mil reinforced polypropylene liner. The primary use of ESB-D is to store diverted chlorinated effluent to comply with flow dilution, potential chlorine excursions and thermal requirements. Since ESB-D is lined there is minimal threat to groundwater and is consistent with water quality objectives and therefore is also exempt from Title 27 pursuant to the first part of the Title 27 Sewage exemption, which is conditional upon compliance with water quality objectives.

CSPA Comment 3: Effluent Limitation for pH

CSPA comments that the proposed Permit contains an Effluent Limitation for pH that does not comply with the pH instantaneous minimum Basin Plan objective of 6.5. The Permit may not contain an Effluent Limitation below the Instantaneous Minimum Basin Plan Water Quality Objective. The proposed Permit, Fact Sheet F-83, contains the Reasonable Potential Analysis for pH yet provides no explanation or justification for a pH limitation less stringent than that provided by the Basin Plan. The Fact Sheet contains a single word reference to a chronic mixing zone, however since pH is not a conservative parameter it is doubtful that a mixing zone analysis has been conducted for pH.

RESPONSE: The proposed effluent limitations for pH are in compliance with federal regulations. A mathematical dynamic model was developed by Flow Sciences Incorporated for the Discharger, consisting of five models linked in series. River pH levels downstream of the discharge were evaluated using the Discharger’s dynamic model. Based on the

modeling, the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Basin Plan objectives. Therefore, water quality-based effluent limitations are not required for pH. Modeling experts from Tetra Tech, a USEPA contractor, assisted with the review of the dynamic model. Tetra Tech's modeling experts concluded that the model is capable of providing an accurate probabilistic representation of receiving water quality conditions.

The secondary treatment regulations at 40 C.F.R. part 133 require that pH be maintained between 6.0 and 9.0 standard units. Therefore, as discussed in Section IV.B of the Fact Sheet, technology-based effluent limitations of 6.0 and 9.0 as an instantaneous minimum and maximum, respectively, are applicable to the discharge. The proposed instantaneous minimum effluent limitation of 6.0 is based on the technology-based effluent limitation, and has also been demonstrated through modeling that the limit ensures compliance with the Basin Plan's minimum pH objective in the receiving water. The Fact Sheet (Attachment F, Section IV.C.3.c.xiii) has been modified to provide additional clarification of the rationale for the pH effluent limitations.

CSPA Comment 4: Mixing Zone

CSPA comments that the proposed Permit contains an allowance for a mixing zone that does not comply with the requirements of Federal Regulation 40 CFR Section 131.12 (a)(1) and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) or the Basin Plan.

RESPONSE: Central Valley Water Board staff does not concur. The mixing zones and dilution credits allowed in the proposed Order are in compliance with federal regulations, the SIP, and the Basin Plan; and are adequately protective of the beneficial uses of the receiving water. In summary, the mixing zones allowed in the proposed Order are as small as practicable, will not compromise the integrity of the entire water body, restrict the passage of aquatic life, dominate the water body or overlap existing mixing zones from different outfalls. The chronic aquatic life mixing zone is 400 feet wide and extends 60 feet downstream of the diffuser, and the human health mixing zone extends downstream of the discharge where complete mixing occurs, which is approximately 3 miles downstream of the discharge. The nearest drinking water intake is about 40 miles downstream of the discharge, which is 37 miles from the end of the mixing zone. The mixing zones and dilution credits are discussed in detail in the Fact Sheet in Section IV.C.2.c.

The Discharger's consultant, Flow Sciences Incorporated., conducted a dynamic model that consists of five models linked in series: 1) U.S. Bureau of Reclamation's Project Simulation Model, PROSIM, and Temperature Models; 2) Fischer Delta Model, FDM; 3) Flow Science's Computation Fluid Dynamics Model, FLOWMOD; 4) Flow Science's Longitudinal Dispersion Model, LD; and 5) U.S. EPA's Dynamic Toxicity Model, DYNTOX. Additionally the Discharger performed several field validation studies to corroborate the effectiveness of the modeling tools in representing water quality conditions in the Sacramento River. Due to the complexity of the mathematical models, the Central Valley Water Board used the services of Tetra Tech, a USEPA contractor, to assist with the review of the dynamic model. Tetra Tech's modeling experts concluded that the model study was conducted in a sound and scientifically defensible manner. The modeling experts determined that the linked dynamic

modeling system is capable of providing an accurate probabilistic representation of receiving water quality conditions.

The chronic aquatic life and human health mixing zones meet the requirements of the SIP, and comply with the Basin Plan; subsequently, allowance of dilution credits were evaluated on a pollutant-by-pollutant basis. The proposed Order allows dilution credits for bis(2-ethylhexyl)phthalate, carbon tetrachloride, chlorodibromomethane, copper, cyanide, dichlorobromomethane, and pH in compliance with the SIP and the Basin Plan. The resulting effluent limitations are protective of the beneficial uses of the receiving water as discussed in the Fact Sheet.

The allowance of the mixing zones also complies with the state and federal antidegradation requirements. The State Water Board established California's Anti-degradation Policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation requirements and requires that existing quality of waters be maintained unless degradation is justified based on specific findings. Item 2 of Resolution 68-16 states, "*Any activity which produces or may produce a waste or increased volume or concentration of waste and which dischargers or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*" The effluent limitations required by the proposed Order that were calculated with the allowance of mixing zones for bis(2-ethylhexyl)phthalate, carbon tetrachloride, chlorodibromomethane, copper, cyanide, dichlorobromomethane, and pH will result in the Discharger implementing best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

CSPA Comment 5: Reasonable Potential Analysis

CSPA comments that the proposed Permit contains an inadequate reasonable potential by using incorrect statistical multipliers as required by Federal regulations, 40 CFR § 122.44(d)(1)(ii). The reasonable potential analysis fails to consider the statistical variability of data and laboratory analyses as explicitly required by the federal regulations. The procedures for computing variability are detailed in Chapter 3, pages 52-55, of USEPA's Technical Support Document For Water Quality-based Toxics Control (TSD). The State and Regional Boards do not have the authority to override and ignore federal regulation.

RESPONSE: Central Valley Water Board staff does not concur. The reasonable potential analysis (RPA) was conducted appropriately considering the variability in effluent data in accordance with the federal regulations. For priority toxic pollutants the SIP governs the methodology for conducting the RPA. The RPA approach in section 1.3 of the SIP was used for all priority pollutants and considers variability of the data.

While the SIP mandates specific RPA procedures for priority pollutants, for non-priority pollutants, the Central Valley Water Board has discretion to use its judgment in determining the appropriate method for conducting the RPA considering site-specific conditions. The federal regulations do not specify a specific manner in which to conduct the RPA. Federal regulations at 40 CFR § 122.44(d)(1)(ii), state "when determining whether a discharge

causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.”

CSPA contends that the Central Valley Water Board failed to consider the variability of the pollutant parameter in the effluent, because the statistical procedures for projecting a maximum effluent concentration described in USEPA’s TSD were not followed. The USEPA approach is guidance and not mandated by federal regulations. Furthermore, the procedures discussed in the TSD are for situations where there are small datasets and dilution will be considered in the RPA. The RPA in the proposed Order was conducted using an extensive dataset with over 20,000 data points. For most constituents dilution was not considered in the RPA, therefore, consistent with the SIP procedures the Central Valley Water Board considered maximum concentrations when conducting the RPA. In situations where dilution was considered in the RPA as discussed in the TSD, the proposed Order utilizes the statistical procedures described in the TSD to project the effluent data. The Tentative Order at page F-59 states, “The critical effluent pollutant concentration, C_d , was determined using statistics recommended in the TSD for statistically calculating the projected maximum effluent concentration (i.e., Table 3-1 of the TSD using the 99% probability basis and 99% confidence level).” The proposed Order provides the RPA rationale constituent-by-constituent in the Fact Sheet (Attachment F, Section IV.C.3).

CSPA Comment 6: Reasonable Potential Analysis and Derivation of Effluent Limits

CSPA comments that the proposed Permit fails to utilize valid, reliable, and representative effluent data in conducting a reasonable potential and limits derivation calculations contrary to US EPA’s interpretation of Federal Regulations, 40 CFR 122.44(d), and should not be adopted in accordance with 40 CFR 122.4 (a), (d) and (g) and CWC Section 13377. The proposed Permit utilized data from January 2012 through December 2014 to conduct the Reasonable Potential Analysis to determine the necessity of Effluent Limitations. This resulted in the elimination of numerous Effluent Limitations from the proposed Permit or relaxation of others. The discharger failed to use the data from the last permit and any and all other relevant and reliable data. There is no presentation of why any of the discarded data would be invalid. There have been no documented major changes to the treatment system or the character of the waste stream that would account for any data being discredited. The Regional Board has presented no information that would justify discarding, at a minimum, the data from the last permit development period.

RESPONSE: The reasonable potential analysis (RPA) and derivation of effluent limitations were conducted utilizing valid, reliable, and representative effluent and receiving water data. The data were based on the most recent three years of monitoring data for the effluent and receiving water at the time of submittal of the report of waste discharge, specifically January 2012-December 2014. This is an extensive dataset with over 20,000 data points and comprised of more than 200 constituents. Using the most recent three years of monitoring data is representative of the discharge and ambient conditions, which can change over time. In this case, the severe drought that has occurred for the past several years has impacted the characteristics of the wastewater enter the Facility. The Governor has called for a

20 percent reduction in urban water use statewide by 2020. Installation of water meters and calls for water conservation have resulted in decreasing influent wastewater flows to the Facility and increased concentrations in some constituents (e.g., ammonia, copper, and electrical conductivity).⁵

The recent, most representative dataset used in the RPA resulted in the removal of effluent limitations for some constituents, because the newer data demonstrated the discharge no longer exhibited reasonable potential to cause or contribute to an in stream excursion of the applicable water quality objectives. The new RPA was based on significant datasets and the limits have been appropriately removed in compliance with federal antibacksliding regulations (see Response to CSPA Comment 7, below). In most cases, the constituents were not detected in the effluent. The RPA for each constituent is documented in the Fact Sheet of the proposed Order in section IV.C.3.a.

Also, due to changes to the influent wastewater characteristics some effluent limits where the treatment performance of the Facility was considered were increased in the proposed Order, due to increased concentrations caused by the drought. The relaxation of the effluent limitations is in compliance with the State Anti-Degradation Policy and federal antibacksliding regulations, as documented in the Fact Sheet (section IV.D.3 and IV.D.4) and discussed below in Response to CSPA Comment 7 and Comment 10.

CSPA Comment 7: Antibacksliding

CSPA comments that the proposed Permit contains Effluent Limitations less stringent than the existing permit contrary to the Antibacksliding requirements of the Clean Water Act and Federal Regulations, 40 CFR §122.44 (l)(1).

RESPONSE: Central Valley Water Board does not concur. The relaxation of effluent limitations for aluminum, bis (2-ethylhexyl) phthalate, chlorodibromomethane, copper, cyanide, dibenzo(a,h)anthracene, dichlorobromomethane, electrical conductivity, manganese, methyl tertiary butyl ether, pentachlorophenol, and tetrachloroethylene in the proposed Order is consistent with the anti-backsliding requirements of the CWA and federal regulations, specifically CWA §402(o)(1) and CWA §402(o)(2). The rationale for each constituent is discussed in detail in the Fact Sheet of the proposed Order (Attachment F, Section IV.D.3).

CWA §402(o)(1) prohibits the establishment of less stringent water quality-based effluent limitations “*except in compliance with Section 303(d)(4).*” For attainment waters, CWA §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 requirements. As discussed in the proposed Order, section IV.D.4, of the Fact Sheet (Attachment F), relaxation of the effluent limitations for the abovementioned constituents complies with federal and state

⁵ Furthermore, on 16 May 2005, the Alameda County Superior Court issued a ruling on the appeal of the NPDES Permit for the City of Woodland directing that only 3 years of data be used in the RPA. Legally, the ruling does not set a precedent applicable to all NPDES permits, but is a Court opinion that may be considered along with other pertinent factors.

antidegradation requirements. Thus, removal of the effluent limitations meets the exception in CWA §303(d)(4)(B).

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. Based on updated data for conducting the reasonable potential analyses, aluminum, dibenzo(a,h)anthracene, manganese, methyl tertiary butyl ether, pentachlorophenol, and tetrachloroethylene no longer exhibit reasonable potential to cause or contribute to an excursion of the applicable water quality objectives in the receiving water. Therefore, the water quality-based effluent limitations for these constituents were removed in the proposed Order. Additionally, updated information that was not available at the time the previous NPDES permit was issued allowed for new or revised dilution credits resulting in less stringent effluent limitations for bis (2-ethylhexyl) phthalate, chlorodibromomethane, copper, cyanide, and dichlorobromomethane. The new information to conduct the reasonable potential analyses and adjust dilution credits meets the antidegradation exception under CWA §402(o)(2)(B)(i), because it is new information that was not available at the time the previous permit was adopted which would have resulted in less stringent limits.

CSPA Comment 8: Effluent Limitation for Iron

CSPA comments that the proposed Permit fails to include an Effluent Limitation for Iron which is improperly justified by discarding relevant and reliable data, contrary to 40 CFR 122.44 (l)(1) and 40 CFR 122.44(d)..

RESPONSE: Central Valley Water Board staff does not concur. All relevant and reliable data was used to conduct the reasonable potential analysis for iron. Section 1.3 of the SIP provides the Central Valley Water Board the discretion to require additional monitoring in lieu of effluent limitations if data are unavailable or insufficient to conduct the reasonable potential analysis (RPA). In this case, an outlier data point was determined to not be reliable and representative data and was not used in the RPA. The proposed Order requires effluent monitoring for iron, which will be used to conduct the RPA for the next permit renewal. The rationale for excluding the data point is explained in the Fact Sheet of the proposed Order (Attachment F, Section IV.C.3.a.v).

CSPA Comment 9: Effluent Limitations for Chronic Toxicity

CSPA comments that the proposed Permit does not contain Effluent Limitations for chronic toxicity and therefore does not comply with Federal regulations, at 40 CFR 122.44 (d)(1)(i) and SIP.

RESPONSE: Response: The chronic toxicity issue was addressed in State Water Board Water Quality Order (WQO) 2008-0008 (City of Davis), and WQO 2003-0012 (Los Coyotes). With regard to the need for a numeric chronic toxicity effluent limit, City of Davis Order states, *"We have already addressed this issue in a prior order and, once again, we conclude that a numeric effluent limitation for chronic toxicity is not appropriate at this time."*

The proposed Order includes a narrative chronic toxicity effluent limitation in section IV.A.1.d which reads, "There shall be no chronic toxicity in the effluent discharge." This is consistent with the SIP and the Los Coyotes Order. The proposed Order also includes compliance determination language to implement the narrative limitation, in a manner suggested by both the City of Davis and Los Coyotes Orders. This language states, "*Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with the effluent limitation.*" This compliance determination language is consistent with the Los Coyotes and City of Davis Orders, which require narrative effluent limitations for chronic toxicity and also mandate numeric benchmarks for triggering accelerated monitoring, rigorous toxicity reduction evaluation/toxicity investigation evaluation conditions; and a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity.

The commenter states that, "*The Tentative Permit requires the Discharger to conduct an investigation of the possible sources of toxicity if a threshold is exceeded. This language is not a limitation and essentially eviscerates the Regional Board's authority...*" To the contrary, Central Valley Water Board staff believes that the accelerated testing and toxicity reduction evaluation (TRE)/toxicity identification evaluation (TIE) requirements should be viewed as an integral part of the effluent limitation, assuring consistency with the SIP and Los Coyotes Order. In the Los Coyotes Order, the State Water Board noted that best management practices (BMPs) may substitute for numeric effluent limitations when developing numeric limitations is infeasible. The State Water Board then concluded that numeric toxicity limitations are infeasible (Los Coyotes Order, pp. 9-10). The TRE/TIE is the key to addressing chronic toxicity under the Los Coyotes approach. Relying on accelerated testing and the TRE/TIE to satisfy the narrative effluent limitation is a BMP-based approach and therefore consistent with the reasoning in the Los Coyotes Order.

The State Water Board required the narrative effluent limitation in addition to BMPs because "*NPDES permits must contain effluent limitations that will achieve compliance with water quality standards that have . . . reasonable potential . . .*" (Los Coyotes Order, p. 9) The intent of the effluent limitation was to "*ensure that the requirements to perform a TRE/TIE and to eliminate toxicity are clear and enforceable.*" (Los Coyotes Order, p. 10) The compliance determination language is consistent with the State Water Board's purpose for requiring the effluent limitation.

During the TRE/TIE process, the Discharger is subject to the acute toxicity effluent limitation and a chronic toxicity receiving water limitation. (Permit, section V.A.16.) Taken together, these provisions require the Discharger to promptly address any newly-discovered chronic toxicity, or the Discharger will be in violation of the permit. This is consistent with the State Water Board's permitting approach for chronic toxicity.

CSPA Comment 10: Antidegradation Analysis

CSPA comments that the proposed Permit contains an inadequate antidegradation analysis that does not comply with the requirements of Section 101(a) of the Clean Water Act, Federal Regulations 40 CFR § 131.12, the State Board's Antidegradation Policy (Resolution 68-16) and California Water Code (CWC) Sections 13146 and 13247. The proposed Permit provides for an increase in the volume and mass of pollutants discharged for copper, cyanide, chlorodibromomethane, dichlorobromomethane and electrical conductivity and removes effluent

limitations for aluminum, dibenzo(a,h)anthracene, manganese, methyl tertiary butyl ether, pentachlorophenol, and tetrachloroethylene. The Order relaxes the effluent limitations for copper, cyanide, and bis (2-ethylhexyl) Phthalate based on allowance of mixing zones. Yet, the proposed Permit states, page F-94, that an Antidegradation Policy analysis was only conducted for chlorodibromomethane and dichlorobromomethane.

RESPONSE: Central Valley Water Board staff does not concur. As discussed in Response to CSPA Comment 7, the removal of the effluent limitations for aluminum, dibenzo(a,h)anthracene, manganese, methyl tertiary butyl ether, pentachlorophenol, and tetrachloroethylene are due to the discharge no longer exhibiting reasonable potential to cause or contribute to an in stream exceedance of the applicable water quality objectives. The relaxation of the effluent limits will not result in an increase in the discharge volume or mass of pollutants. The removal of the effluent limitations complies with the state and federal antidegradation policies as the Order does not authorize a discharge that will lead to an increase in pollutant loading or concentration, a decrease in the level of treatment or control, or a reduction in receiving water quality.

The proposed Order also relaxes the effluent limitations for copper, cyanide, and bis (2-ethylhexyl) phthalate resulting in the allowance of an increase in the volume and mass of pollutants that may be discharged. The revised effluent limitations are based on allowance of mixing zones in accordance with the Basin Plan, the SIP, and EPA's Water Quality Standards handbook, 2nd Edition (updated July 2007) and TSD. As discussed in the proposed Order at section IV.C.2.c of the Fact Sheet, and in the response to CSPA Comment #4 above, the mixing zones comply with all applicable policies and requirements and will not be adverse to the purpose of the state and federal antidegradation policies. Furthermore, the increase in the volume and mass for these constituents are minor resulting in use of less than 10% of the available assimilative capacity in the receiving water. According to USEPA's memorandum on Tier 2 Antidegradation Reviews and Significance Thresholds, any individual decision to lower water quality for non- bioaccumulative chemicals that is limited to 10% of the available assimilative capacity represents minimal risk to the receiving water and is fully consistent with the objectives and goals of the Clean Water Act. The minimal increase in these constituents is fully consistent with the antidegradation analysis performed in support of the prior Order (R5-2010-0114). The Central Valley Water Board staff finds that any lowering of water quality outside the mixing zone will be de minimus and will accommodate important economic or social development in the Sacramento area. Further, any change to water quality will not unreasonably affect present and anticipated beneficial uses and will not result in water quality less than prescribed in State Water Board policies or the Basin Plan. The measures implemented by the Discharger and required by this Order constitute BPTC. Thus, the relaxation of the effluent limitations for copper, cyanide, and bis (2-ethylhexyl) phthalate complies with the state and federal antidegradation policies.

The proposed Order also relaxes the effluent limitations for electrical conductivity. Although updated effluent data indicates that effluent concentrations of electrical conductivity are increasing due to recent drought conditions and water conservation efforts, as discussed in the proposed Order at section IV.C.3.a.x of the Fact Sheet, the mass loading of salinity is not increasing, and the relaxed effluent limitations will not result in an increased volume or mass to the receiving water. Thus, the relaxation of effluent limitations for electrical conductivity complies with the state and federal antidegradation policies.