

**Regional Water Quality Control Board  
Central Valley Region  
Board Meeting – 13/14 September 2007**

**Response to Written Comments for City of Lodi White Slough Water Pollution  
Control Facility Proposed Time Schedule Order and Tentative Waste Discharge  
Requirements**

---

At a public hearing scheduled for 13/14 September 2007, the Regional Water Quality Control Board, Central Valley Region (Regional Water Board) will consider adoption of 1) a renewed National Pollutant Discharge Elimination System (NPDES) permit to regulate the surface water discharge from the City of Lodi White Slough Water Pollution Control Facility (Facility), including waste discharge requirements (WDR) to regulate the land discharges, and 2) a Time Schedule Order (TSO) that accompanies the proposed NPDES permit. The tentative orders were issued on 13 July 2007. This document contains responses to written comments received from interested persons in response to the proposed orders. Written comments from interested persons were required to be received by the Regional Water Board by 17 August 2007 in order to be included in the record. Comments were received by the deadline from the following:

1. City of Lodi (City or Discharger)
2. Dr. Ken Hajek, Woodbridge Farms
3. California Sportfishing Protection Alliance (CSPA)
4. Central Valley Clean Water Association (CVCWA)

Written comments from the above interested persons are summarized below, followed by the response of the Regional Water Board.

---

**CITY OF LODI COMMENTS**

---

**CITY OF LODI –COMMENT #1, “Total Mercury Loading Limitations,”: Section IV.A.4.b. Interim Mercury Mass Performance-based Limit.** Previous to the proposed permit, the City was required to comply with the mercury mass loading limit of 0.113 lb/month. The proposed interim monthly mercury mass limit of 0.013 lb/month is based on mercury samples collected since the City upgraded the Facility to provide a tertiary level of treatment (e.g. a maximum value of 0.0072 µg/L was seen on 17 August 2005). The City contends that the proposed more stringent limit *has the effect of penalizing the City for improving performance over the last five years, and is an approach to discourage, rather than encourage, aggressive actions to reduce loadings.* The City also contends that the SIP (p.22) contains a provision *to preserve the status quo in advance of TMDL development and to ensure that POTWs are not required to make significant investments in new treatment or infrastructure before a TMDL is completed and appropriate wasteload allocations are developed.* The City asserts that *to maintain the proposed loading limit of 0.013 lb/month at the build-out flow rate of 8.5 mgd, the effluent discharge concentration would need to be reduced to 0.0059 µg/L, which would be very difficult.* The City also asserts that the proposed interim monthly mercury mass limit should allow for additional mercury loadings (i.e. a maximum effluent mercury

concentration value of 0.2 µg/L) from the Flag City Wastewater Treatment Plant (WWTP) since the City *is planning to accept up to 0.2 mgd from the Flag City Service Area No. 31*; thus eliminating the existing Flag City WWTP effluent discharge. The City requests that the Regional Water Board modify the proposed monthly mercury mass limit 1) based on the current treatment capacity of 8.5 mgd, 2) to allow for additional mercury loadings associated with the Flag City Service Area, and 3) to be an annual mass limit to better reflect the long term concerns with mercury mass loadings.

*Request: Change the proposed interim mercury mass limit to 1) 0.064 lb/month based on a discharge flow of 7.0 mgd and concentrations that were occurring prior to the tertiary upgrade, or 2) 0.026 lb/month based on the current capacity of 8.5 mgd and the additional mercury loadings associated with Flag City WWTP, and 3) to express the mercury requirement as an annual load instead of a monthly load.*

**RESPONSE:** Regional Water Board staff agree with the Discharger and have modified the proposed Order to include the interim total mercury mass loading limit from the previous Order. The only change being that the limit has been changed from a running 12-month average to monthly average. This change is necessary to allow automation of compliance determination with the California Integrated Water Quality System (CIWQS) database.

**CITY OF LODI - COMMENT #2, Monthly Average Effluent Ammonia Limits: Sections IV.A.1.a, 2.a, and 3.a, Tables 6-8. Average Monthly Ammonia (as N) Effluent Limitation.** The proposed average monthly effluent limit (AMEL) for ammonia was calculated using the equations  $AMEL = LTA_{MIN} \times \exp[0.5\sigma_n^2 - z \sigma_n]$ , where  $\sigma_n^2 = \ln(CV^2/n + 1)$  and  $n = 30$ . The City contends that the AMEL was inappropriately calculated and instead should be calculated using the value of 'n' as 4, which is the required sampling frequency for ammonia in the Monitoring and Reporting Program within the proposed NPDES permit.

*Request: Recalculate and change the AMEL for ammonia using the value of 'n' as 4.*

**RESPONSE:** Regional Water Board staff agree that the AMEL was inappropriately calculated. USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001) recommends "the actual planned frequency of monitoring normally be used to determine the value of 'n' for calculating the AMEL," and also recommends (1999 Update of Ambient Water Quality Criteria for Ammonia, December 1999, EPA/822/R-99-014) that "for each sample, the criterion should be determined at the pH and temperature of the sample" when receiving water pH and temperature is not constant over a period of time, which applies to this site. Therefore, the water quality-based ammonia effluent limitations were recalculated based on USEPA guidance documents as follows, and the proposed Order was change accordingly:

**Table F- 7**  
**WQBEL Calculations for Ammonia**

	Annual CV <sup>1</sup> = 2.47 2.88		
	Acute	Chronic	
		30-day	4-day
Criteria (mg/L) <sup>(2)</sup>	4.28	4.441.19	3.532.98
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	4.28	4.441.19	3.532.98
ECA Multiplier	0.100.09	0.400.36 <sup>(3)</sup>	0.170.15
LTA	0.440.40	0.570.43	0.60.44
AMEL Multiplier (95 <sup>th</sup> %)	2.486.71	<sup>(4)</sup>	<sup>(4)</sup>
<b>AMEL (mg/L)</b>	<b>1.12.7</b>	<sup>(4)</sup>	<sup>(4)</sup>
MDEL Multiplier (99 <sup>th</sup> %)	0.7510.57	<sup>(4)</sup>	<sup>(4)</sup>
<b>MDEL (mg/L)</b>	<b>4.3</b>	<sup>(4)</sup>	<sup>(4)</sup>

- (1) Coefficient of Variation
- (2) USEPA Ambient Water Quality Criteria
- (3) Calculated based on the TSD modification presented in the 22 December 1999 Federal Register notice where  $\sigma^2 = \ln(CV^2/30 + 1)$
- (4) Limitations based on acute LTA ( $LTA_{acute} < LTA_{chronic}$ )

**CITY OF LODI - COMMENT #3, Time Schedule Order Compliance Deadline: Sections IV.A.1.a. Table 6. Footnote 2, IV.A.4.a, and VI.C.7.a. Compliance Schedule for Final Ammonia Effluent Limits.** The proposed NPDES permit final ammonia limits become effective on 18 May 2010, which is approximately six months after the projected completion of the City’s facility upgrades. The City contends that the proposed final ammonia effluent limits are more stringent than anticipated when the design for the facility upgrades were being developed. The City anticipated *the applicable limits would like range between 2.5 and 6.1 mg/L*, and therefore, more time is needed to evaluate the effectiveness of the design upgrades. The City further contends that if substantial design changes are necessary, then the completion date for the current upgrade project could be extended, which cannot be predicted.

*Request: Extend the compliance schedule for final ammonia effluent limits to five-years.*

**RESPONSE:** This comment refers to the ammonia AMEL of 1.1 mg/L in the draft tentative Order. The proposed NPDES permit contains the recalculated ammonia limits (See Comment #2) of AMEL = 2.7 mg/L and maximum daily effluent limit (MDEL) = 4.3 mg/L. Both limits fall within the City’s anticipated design (*range between 2.5 mg/L and 6.1 mg/L*), and therefore, it is not necessary to change the compliance schedule beyond 17 May 2010.

**CITY OF LODI –COMMENT #4: Section IV.B.3. BOD<sub>5</sub> Loading Limit.** The City contends that BOD field loading limits should be based on a seasonal average not a

cycle average as stated in the proposed BOD loading limit. The City notes that the proposed BOD loading limit is based on the recommended *USEPA guidelines, Pollution Abatement in the Fruit and Vegetable Industry*, July 1977 (USEPA Guidelines), which contain a 100 lbs/acre/day “estimated recommended maximum BOD load to be added on well-aerated soil” as an **average summer season** load (see Table IV-3. BOD Loading Rates on p. 66 of the USEPA Guidelines). Thus, the City asserts that EPA’s recommended BOD loading limit is clearly supposed to be applied as a seasonal average, and therefore, the seasonality of the cannery discharge to land is not an appropriate justification for providing a more stringent cycle average limit because most canning facilities experience seasonal flows.

*Request: Replace the proposed BOD<sub>5</sub> loading limit as a cycle average with a performance-based limit of 100 lbs/acre/day as a seasonal average for the entire irrigation area.*

**RESPONSE:** The BOD<sub>5</sub> loading limit is necessary to prevent anaerobic conditions from occurring in the soil, which cause nuisance odors, and to prevent reducing conditions in the soil that mobilize iron and manganese allowing these metals to migrate to the groundwater.

**CITY OF LODI – COMMENT #5: Section IV.B.3. BOD<sub>5</sub> Loading Limit.** The proposed BOD loading limits to any agricultural field are more stringent waste discharge requirements to land than in the City’s previous permit. The City contends that past monitoring results indicate that 100 lbs/acre/day as a *seasonal average* over the *entire irrigation area* can currently be met; however, the City asserts that there maybe loadings above the proposed BOD loading limits for individual fields. The City contends additional time is needed to evaluate current practices and to implement changes if necessary, including expanding the land application area. Thus, the City requests a time schedule to meet the final BOD loading limits.

*Request: Add a compliance schedule for meeting final BOD loading limits, and interim BOD Loading Limits defined as:*

**BOD<sub>5</sub>.** *The maximum BOD<sub>5</sub> loading to ~~the any individual~~ agricultural fields (1A through 6G as shown in Attachment C-2) shall not exceed ~~any of the~~ following:*

a. *100 lbs/acre/day as a ~~cycle~~ seasonal average*

**20°C Biological Oxygen Demand, 5-day (BOD<sub>5</sub>) (Section IV.B.3.).** *BOD<sub>5</sub> loading rates shall be calculated for each irrigation field on a monthly basis using the total volume applied on the days of application, the number of days between applications, the total application period, application area, and a running average of the three most recent results of BOD<sub>5</sub> for the applicable*

~~*source wastewater. A running average for the entire irrigation season of the loadings to each of the individual fields shall be calculated. For compliance determination with the interim limit, the cycle season-long running average BOD5 loading rates for each irrigation field shall be averaged together to calculate the loading rate to the entire irrigated area, using the total volume applied on the day of application, the number of days between applications, the total application period, application area, and a running average of the three most recent results of BOD5 for the applicable source wastewater. When reporting, include the daily BOD5 loading rates, which shall be calculated using the total volume applied on the day of application, estimated application area, and a running average of the three most recent results of BOD5 for the applicable source water.*~~

**RESPONSE:** The BOD<sub>5</sub> loading limit is necessary to prevent anaerobic conditions from occurring in the soil, which cause nuisance odors, and to prevent reducing conditions in the soil that mobilize iron and manganese allowing these metals to migrate to the groundwater. The Discharger has not submitted adequate justification for a compliance schedule.

**CITY OF LODI - COMMENT #6: Section IV.B.3. BOD<sub>5</sub> Loading Limit.** The City contends that the proposed BOD waste discharge requirement to land should be a goal and not a final limit for the following reasons:

- *Like the salinity goals, the proposed BOD loading limit is based on a general guidance not an adopted criteria.*
- *The proposed loading limit does not take into account site specific conditions.*
- *No evidence has been provided that historic loadings of BOD have lead to nuisance odor conditions or groundwater degradation.*
- *Like the salinity goals, compliance with this guideline could require significant expenditures.*

*Request: Replace the BOD loading limit of 100 lbs/acre/day as a cycle average per irrigation field with a BOD goal of 100 lbs/acre/day as a seasonal average for each individual field. Include an optional site-specific study to evaluate the appropriate BOD loading rate, and impose BOD loading limits in the next permit.*

**RESPONSE:** See staff response to CITY OF LODI –COMMENT #4.

**CITY OF LODI - COMMENT #7: Section VII.F. Mass Effluent Limitations.** The City contends that the average daily discharge flow should be defined as the average dry weather flow.

*Request: Modify VII.F. language as follows: Compliance with the mass effluent limitations will only be determined during average dry weather periods during months when rainfall has not occurred, groundwater is at or near normal, and runoff is not occurring.*

**RESPONSE:** The statement that “groundwater is at or near normal, and runoff is not occurring” refers to the dry season when influent flows are not affected by infiltration and inflow. A light rain in the summer months would not affect the influent flow and mass limits should apply.

**CITY OF LODI - COMMENT #8: Section VII.G. Average Daily Discharge Flow Effluent Limitations.** The City contends that the average daily discharge flow effluent limitations should be defined as the average dry weather flow.

*Request: Modify VIII.G as follows: **Average Dry Weather Daily Discharge Flow Effluent Limitations**. The Average Dry Weather Daily Discharge Flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the Average Dry Weather Daily Discharge Flow effluent limitations will be determined annually based on the average daily flow over three consecutive dry weather months (e.g. July, August, and September) and will be measured at times when groundwater is at or near normal and runoff is not occurring.*

**RESPONSE:** To be consistent with recently adopted NPDES permits, the proposed Order has been modified to define the compliance determination of the average daily discharge flow effluent limitation to be based on the average daily flow over three consecutive dry weather months (e.g. July, August, and September).

**CITY OF LODI - COMMENT #9: Sections IV.A.1.g, IV.A.2 and 2.b, IV.A.3 and 3.b, and VI.C.7.b. Average Daily Discharge Flow.** The City contends that the average daily discharge flow should be defined as the average dry weather flow.

*Request: Replace the phrase “average daily discharge flow” within the proposed permit with the revised phrase “average dry weather flow.”*

**RESPONSE:** The permit already defines the average daily discharge flow as the average dry weather flow as stated in section VII.G. “*The Average Daily Discharge*

*Flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring.” No change is required.*

**CITY OF LODI - COMMENT #10: Section IV.A.1.a, Table 6, Footnote 2, Compliance Schedules.** The City contends that the final effluent limitations’ effective dates should be based solely on the compliance schedule allowed in the proposed NPDES permit.

*Request: Revise Footnote 2 to state: This Order includes interim effluent limitations for aluminum, ammonia, chlorodibromomethane, and dichlorobromomethane (section IV.A.4.a.). Effective immediately, the interim effluent limitations shall apply in lieu of the respective final effluent limitations. The final effluent limitations for aluminum, chlorodibromomethane, and dichlorobromomethane become effective 18 May 2010, and the final effluent limitations for ammonia, ~~chlorodibromomethane, and dichlorobromomethane~~ become effective five years from the effective date of this order when the Discharger complies with Special Provisions VI.C.7.b. or 18 May 2010, whichever is sooner.*

**RESPONSE:** The footnote is correct. Final compliance with the final effluent limitations for aluminum, ammonia, chlorodibromomethane, and dichlorobromomethane is 18 May 2010. This compliance date coincides with the schedule for completion of the Dischargers Phase III upgrade project, which will provide additional aeration basins. The additional aeration capacity will allow the Discharger to meet the effluent limitations for ammonia. In addition, the problems with aluminum and trihalomethanes (THMs) have been a result of problems with the Discharger’s current foaming problems in its aeration basins. The Discharger has used chlorine in the aeration basins to control the foam, which likely resulted in the formation of THMs. The foaming has also resulted in the need for the Discharger to add alum in the tertiary process to meet the turbidity limitations. The additional aeration capacity will solve the foaming issue and thus allow the Discharger to comply with the final limits for aluminum, chlorodibromomethane, and dichlorobromomethane.

**CITY OF LODI - COMMENT #11: Section IV.B.4. Metals Loading Limits.** The City requests a language revision to specify loading “limits.”

*Request: Replace loading “rate” with loading “limits.”*

**RESPONSE:** This proposed modification is reasonable and the proposed Order has been changed accordingly.

**CITY OF LODI - COMMENT #12: Section VI.C.2.d.i. Groundwater Monitoring Workplan.** The City requests that the definitive compliance deadline date be changed.

*Request: Replace the deadline date of "1 November 2007" with the phrase "90 days from the effective date of the permit."*

**RESPONSE:** This proposed modification is reasonable and the proposed Order has been changed accordingly.

**CITY OF LODI - COMMENT #13: Section VI.C.2.f. Effluent and Receiving Water Characterization Study.** The City contends that the receiving water characterization should be conducted outside the influence of the discharge, and therefore, the monitoring location should be changed from RSW-001 to RSW-005.

*Request: Change the receiving water monitoring location to RSW-005.*

**RESPONSE:** Staff agrees with this recommendation and the agenda version of the proposed permit has been modified accordingly.

**CITY OF LODI - COMMENT #14: Section VI.C.5.d.iii. The Agricultural Fields' Area Specifications.** The City contends *that precipitation events can occur during the typical irrigation season and only provide a very small portion of the total irrigation demand.* Therefore, the City currently applies wastewater during, prior to, and after precipitation events, and requests the removal of the restriction on applying wastewater in this proposed provision.

*Request: Remove the wastewater restriction language in Provision VI.C.5.d.iii. and add a restriction of applying wastewater to saturated soils as follows:*

iii. ~~Wastewater may not be used for irrigation purposes, or bBiosolids~~ may not be applied, to any agricultural field 24 hours before forecasted precipitation, during periods of precipitation, and for at least 24 hours after cessation of precipitation, or when soils are saturated.

iv. Wastewater may not be used for irrigation purposes when soils are saturated.

**RESPONSE:** Regional Water Board staff agrees that this specification may be overly restrictive. The requirement will be modified as follows:

- iii. ~~Wastewater may not be used for irrigation purposes, or b~~Biosolids may not be applied, to any agricultural field 24 hours before forecasted precipitation, during periods of precipitation, and for at least 24 hours after cessation of precipitation, or when soils are saturated.
- iv. Wastewater may not be used for irrigation purposes during periods of significant precipitation, and for at least 24 hours after cessation of significant precipitation, or when soils are saturated. Significant rainfall is defined as 0.25 inches during a 24-hr period.

**CITY OF LODI –COMMENT #15: Section III.A.1, Table E-2, Footnote 2. Municipal Influent Monitoring.** The City contends that the language “*Influent flow shall be determined from a time-weighted composite sample*” does not make sense.

*Request: Delete or modify the language in Footnote 2 for clarification.*

**RESPONSE:** The footnotes to Table E-2 have been clarified. The time-weighted composite samples are for the BOD<sub>5</sub> and TSS samples.

**CITY OF LODI - COMMENT #16: Section V.A.1, Acute Toxicity Testing Frequency.** The City requests to conduct acute toxicity monitoring monthly.

*Request: Reduce acute toxicity monitoring from “weekly” to “monthly” monitoring.*

**RESPONSE:** Weekly acute toxicity testing is appropriate and necessary to protect the aquatic life beneficial use of the receiving water.

**CITY OF LODI - COMMENT #17: Section VI.A.1, Table E-6, Footnote 2.** The City contends that the cannery wastewater is mixed with other industrial flows prior to reaching the City’s Facility, and therefore, they cannot measure the Fixed Dissolved Solids in the cannery wastewater only.

*Request: Revise Footnote 2 to state “Fixed dissolved solids monitoring is required for only when cannery wastewater only is being discharged to the field areas (e.g. Pacific Coast Producers cannery wastewater).”*

**RESPONSE:** Footnote 2 to Table E-6 has been removed.

**CITY OF LODI - COMMENT #18: Section VI.B.1, The Agricultural Field Inspections.**

The City leases the Agricultural Field areas to local farmers who are responsible for coordinating irrigation events; as such, the City would not receive immediate notification of changes to irrigation events. The City further contends that some fields are not accessible during irrigation because of soil saturation. The City requests modification to the Field Inspection requirements that are applicable and reasonable.

*Request: Modify the Field Inspections as follows:*

1. The Discharger shall inspect the land application areas at least once daily during irrigation events, and observations from those inspections shall be documented for inclusion in the monthly self-monitoring reports. Each field that receives irrigation water will be monitored at least once during each monthly period. The following items shall be documented ~~for each field to be irrigated on that day if observed:~~

- a. Evidence of erosion;
- b. Evidence of berm condition damage or erosion;
- c. Evidence Condition of damage to of each standpipes and flow control valves (if applicable);
- d. Evidence of improper ~~Proper~~ use of valves;
- e. Evidence of damage or excessive erosion in the ~~Condition of~~ head ditches;
- f. ~~Soil saturation;~~ *(Note that because surface irrigation is employed, soil will be saturated both during and following irrigation events.)*
- g. Ponding 24-hours after last irrigation application; *(Note that because surface irrigation is employed, ponding will occur during irrigation events.)*
- h. Evidence of damage to tailwater ditches and evidence of potential and actual runoff to off-site areas;
- i. Evidence of potential and actual discharge to surface water;
- j. Accumulation of organic solids in ditches and at soil surface;
- k. ~~Soil clogging;~~ *(Note that it is not clear how the City would evaluate this other than to look for ponding 24-hours after last irrigation application.)*
- l. Odors that have the potential to be objectionable at or beyond the property boundary; and
- m. Excessive insect populations or swarms.

**RESPONSE:** These requirements are necessary to determine compliance with the permit. Daily monitoring is necessary to ensure compliance. Most of the proposed changes to the items to be observed are reasonable and have been made in the proposed Order, except for the following items, which will be changed as follows:

- f. Saturation of soil within 2-days prior to planned irrigation.
- k. Ponding 24-hours after last irrigation application ceases.
- m. Evidence of fly and/or mosquito breeding.

**CITY OF LODI - COMMENT #19: Section IX.A.1, and Table E-9. Municipal Water Supply Monitoring.** The City contends that with over 26 monitoring wells the proposed monitoring requirements impose a *significant increase in sampling time and costs*. Therefore the City requests that the proposed quarterly monitoring requirements be changed

*Request: Modify the monitoring requirements as follows:*

1. The Discharger shall ~~establish~~ characterize source water adequately to evaluate compliance with salinity goals where a representative sample of the municipal water supply can be obtained. ~~Municipal water supply samples shall be collected at approximately the same time as effluent samples, and~~ Monitoring shall include at least the following.

**Table E-9. Municipal Water Supply Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Dissolved Solids	mg/L	Grab	<del>1/quarter</del> <u>year</u>
Electrical Conductivity @ 25°C <sup>1</sup>	umhos/cm	Grab	<del>1/quarter</del> <u>year</u>
Standard Minerals <sup>2</sup>	mg/L	Grab	<del>1/quarter</del> <u>three years</u>

**RESPONSE:** The proposed changes to the paragraph above the table is reasonable and the proposed Order has been modified accordingly. Due to the numerous drinking water sources, the TDS and EC monitoring will be reduced to semi-annually (January and July of each year) and the Standard Minerals monitoring will be reduced to once per permit term.

**CITY OF LODI –COMMENT #20: Section IV.C.3.t. Pathogens.**

*Request:* The City requests that the following phrase be changed on **Page F-33. Item IV.C.3.t** to clarify the fact that coliform testing cannot be conducted continuously:

Coliform testing, by comparison, ~~is not~~ cannot be conducted continuously and requires several hours...

**RESPONSE:** This proposed modification is reasonable and the proposed Order has been changed accordingly.

**CITY OF LODI - TSO COMMENT #1, Time Schedule Order Compliance Deadline: Compliance Schedule for Final Effluent Limits for Nitrate and Nitrite.** The proposed

NPDES permit contains final effluent limits for nitrate and nitrite, and the associated TSO require the City to comply with these limits by 17 May 2010. The City contends that *because treatment performance for ammonia reduction is interrelated with nitrate removal, the lower ammonia limits could also affect the City's ability to comply with the proposed nitrate and nitrite limits.*

*Request: Extend the compliance schedule for final effluent limits for nitrate and nitrite to five-years.*

**RESPONSE:** See response to City of Lodi – NPDES Comment #3

---

**DR. KEN HAJEK, WOODBRIDGE FARMS, COMMENTS**

---

**DR. HAJEK - COMMENT #1, Section IV.B. -Land Discharge Specifications.** The deleterious TDS components, once placed on the soil, cannot be prevented from moving to the groundwater as this item seems to imply. Your technical experts understand that the TDS components cannot be held at some arbitrary level in the soil profile. If so little water is used that the TDS ions are allowed to concentrate in the root zone as the plants remove water by transpiration, the increasing concentrations will kill the crop. Irrigation must move it below the root zone. Once in that part of the soil profile, the TDS ions continue to be mobile and move to the groundwater with winter rains, further irrigation, or both.

**RESPONSE:** The Discharger's land application activities appear to be a threat to groundwater quality. However, site-specific studies provided by the Discharger indicate complex seasonal and local gradient variances from regional data, as well as local deflections of groundwater flow. Thus, the Discharger's current monitoring well network is not adequate to fully characterize the background groundwater quality conditions within the vicinity of the Facility. The proposed Order requires the Discharge to complete a background groundwater quality and groundwater degradation assessment study. If the groundwater monitoring results show that the discharge of waste is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality, the Discharger must submit a BPTC Evaluation Workplan that sets forth a scope and schedule for a systematic and comprehensive technical evaluation of each component of the Facility's waste management system to determine best practicable treatment or control for each waste constituent of concern.

**DR. HAJEK - COMMENT #2, Section IV.B. -Land Discharge Specifications.** The City needs a requirement that there be a fully established root zone as a precondition for discharge. When the City grows corn with the wastewater there are very few roots for uptake for fully half the crop growing time. Nitrate uptake by seeds and small plants is essentially nil, and because the nitrate ion is not retained on soil particles it moves to groundwater. If the calculation averages out to the correct theoretical amount prescribed for a seed-crop cycle, then it accomplishes neither purpose -- the groundwater is not protected and the maturing crop has insufficient nitrogen. The other TDS components are very mobile as well.

**RESPONSE:** The Land Discharge Specifications of the proposed Order adequately require the Discharger apply the reclamation water to the agricultural fields at agronomic rates. However, to ensure the correct application of the loading limits, the proposed Order has been modified to require that all monitoring reports developed for compliance with the loading limits shall be prepared under the direct supervision of a certified agronomist. Furthermore, the proposed Order has been

modified to include a requirement to submit a comprehensive nutrient management plan annually.

**DR. HAJEK - COMMENT #3,** My orchard is roughly one mile from the Facility. My trees turn sickly yellow every July and August as the groundwater deteriorates from acceptable spring or late fall irrigation water analyses. The yellowing is associated with chloride, nitrate, and TDS levels higher than Lodi's permit rate. These levels seem appropriately timed with Lodi's land discharge just over a mile away via the seasonal draw of groundwater to the northeast of the plant by agricultural acreage in that direction.

Are there high spikes in chloride concentrations because chloride is sent to the Facility that way from the power plant and discharged? Are the byproducts and processing chemicals sent from the cannery causing transient but prolonged spikes in nitrate concentrations?. Such spikes would cause damage to beneficial uses even though a longer reporting period would average out those high concentrations. Definition of the situation requires frequent sampling in the first year, then reduced sampling during critical periods. Infrequent sampling at the outset (such as your quarterly sampling requirement for some parameters) would continue to mask such problems.

**RESPONSE:** To identify potential groundwater quality issues related to the industrial wastewater, the proposed Order requires the Discharger to submit a monitoring study that characterizes the wastewater influent collected by its industrial line. The goal of the study is to isolate and characterize the primary unique components of the industrial influent, including: 1) industrial influent that contains discharges from Pacific Coast Producers (PCP) (during the irrigation season June through September), 2) industrial influent that only contains discharges from the remaining industrial users (Non-irrigation season, which excludes PCP's wastewater), and 3) industrial influent that contains the first-flush of off-site and on-site stormwater runoff. Upon completion, the Discharger shall summarize the analytical results of the data collected and describe future monitoring to take place. The proposed Order includes a reopener provision that allows the permit to be reopened to include additional groundwater limitations or requirements based upon the results of this study.

**DR. HAJEK - COMMENT #3, Regarding the authority of the Order.** City compliance with the monitoring requirements of the previous permits has been poor; City land discharge of nitrate was markedly above-permit allowances for fully five years, and when called on it they proposed to continue for another three to five years; and the City even diminishes your maximum discharge limitation for the nitrate component, referring to it only as a "goal" in their "Existing Conditions" report. These are indicators of a lack of respect for the Board's authority and intentions, and this attitude has brought them only benefit. Will this new permit be similarly compromised?

**RESPONSE:** The proposed Order is more stringent than the previous Order. If the Discharger violates the permit the Regional Water Board will consider the appropriate enforcement action to be taken.

---

## **CALIFORNIA SPORTFISHING PROTECTION ALLIANCE (CSPA) COMMENTS**

---

**CSPA COMMENT #2, Incomplete Report of Waste Discharge.** Federal Regulation, 40 CFR 122.21(e) states in part that: “The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits. In accordance with 40 CFR 122.21 (e) and (h) and 124.3 (a)(2) the Regional Board shall not adopt the proposed permit without first a complete application, in this case for industrial, sludge supernate, and groundwater for which the permit application requirements are extensive. The facility has also received truck/hailed waste from offsite facilities. In regards to groundwater, the CEQA document indicates that, at least seasonally, the groundwater underlying the land application area is hydraulically connected to the adjacent ponds (borrow pits) and wetland. The CEQA document concludes that the application of waste to the land application area may have a significant impact of this surface water. The draft permit shows that the Discharger has failed to characterize the industrial waste, sludge supernate, and groundwater in the Report of Waste Discharge.

**RESPONSE:** The Discharger has submitted a complete permit application for their NPDES permit in compliance with all State and Federal requirements (Cal EPA Form 200, U.S. EPA NPDES Form 1 and Form 2C). As stated in 40 CFR § 122.21(e)(1), “The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity.” 40 CFR § 124.3(a)(2) states, “The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See §§270.10, 270.13 (RCRA), 144.31 (UIC), 40 CFR 52.21 (PSD), and 122.21 (NPDES).” Accordingly, staff has concluded a complete NPDES permit application was submitted by the Discharger and the wastewater has been adequately characterized in compliance with the regulations cited above.

**CSPA COMMENT #3, The Discharger failed to submit valid data.** The Regional Board’s May 2006 inspection report shows that the Discharger laboratory failed to use chain of custody procedure, inadequate SOP procedures, and general lack of necessary documentation to demonstrate that the laboratory results are valid. Second, the effluent discharge is intermittent and, at times, the WPCF has omitted required monitoring and reporting and follow-up for a short duration discharge within a calendar period. The MRP Order No. 5-00-031 addresses intermittent discharge and requires the Discharger to monitor and record data for all of the constituents in the section Effluent Monitoring Of Wastewater Discharged To Dredger Cut except metal and priority pollutants on the first day of the discharge. Non-compliance with this requirement

results in data collection gaps and reporting violations. An example is the effluent discharge to Dredger Cut in June of 2005 for ten days several constituents were not recorded on the first day of the discharge.

**RESPONSE:** The issues identified in this comment are enforcement issues and are not related to the development of permit.

**CSPA COMMENT #4, The Basin Plan, Implementation, Page IV-24-00, prohibits the discharge of wastewater to low flow streams as a permanent means of disposal and requires the evaluation of land disposal alternatives.** The Basin Plan, Implementation, Page IV-24-00, Regional Water Board prohibitions, states that: "Water bodies for which the Regional Water Board has held that the direct discharge of waste is inappropriate as a permanent disposal method include sloughs and streams with intermittent flow or limited dilution capacity." The proposed permit characterizes the receiving stream as a tidally influenced dead end slough with minimal dilution within the vicinity of the discharge. The proposed permit does not discuss any efforts to eliminate the discharge to surface water and therefore, is not in compliance with the Basin Plan Prohibition. The area surrounding the facility is zoned agriculture and land is available for additional land application that would reduce surface water discharges. In addition, the facility is capable of producing tertiary recycled water that is suitable for public parks and golf courses. The Discharger owns numerous parks and landscaped areas along streets where recycled water may be applied. Federal Regulation 40 CFR 122.4 states that no permit shall be issued for any discharge when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA and are inconsistent with a plan or plan amendment. The proposed Order is silent on alternate disposal methods or studies to reduce surface water discharges. In accordance with the Basin Plan, Implementation, Page IV-15.00, Policies and Plans (2) Wastewater Reuse Policy, the Discharger was required as a part of the Report of Waste Discharge to submit a land disposal and reuse analysis. The permit must be amended to require that the Discharger develop a workplan to eliminate the wastewater discharge to surface water in accordance with the Basin Plan.

**RESPONSE:** The Basin Plan does not explicitly prohibit discharges to low flow streams. However, the Basin Plan's Water Reuse Policy encourages the reuse of wastewater. The Discharger evaluated the feasibility of increasing its discharge to land as part of its Environmental Impact Report adopted in September 2004.

**CSPA COMMENT #5, The proposed Permit contains a compliance schedule for aluminum based on "a new interpretation of the Basin Plan" but fails to provide any defensible explanation or definition of the "new interpretation" of the Basin Plan.** The Fact Sheet, page F-22, states "The water quality-based effluent limitations for aluminum are based on a new interpretation of the narrative standard for protection of receiving water beneficial uses. Therefore, a compliance schedule for compliance with the aluminum effluent limitations is established in the Order." In a memorandum, dated 19 July 2002, to NPDES Staff from Kenneth Landau; Mr. Landau states in part that;

“The critical factor in use of this “new interpretation” is that the previous Permit contains something that clearly indicates that a reasoned decision was made by the Board to grant mixing zones or not protect certain beneficial uses. This can include standards which are not measured for a considerable distance downstream, effluent limits obviously too large to be protective, or statements that “the ditch contains no fish”. Just because an existing permit is silent on an issue (for instance nothing was mentioned about drinking water protection), does not mean a “new interpretation” can be considered to occur.” The simple unsupported claim that there is a “new interpretation” of the Basin Plan is insufficient to claim coverage under State Board Order WQ 2001-06 at pp 53-55. The Regional Board has included compliance schedules for aluminum in enforcement orders for several years. The Regional Board must, at a minimum, define the old interpretation of the Basin Plan with respect to aluminum and how has it changed. The permit must be modified to include the details of the new interpretation or the compliance schedule moved to an enforcement order.

**RESPONSE:** There are a number of Basin Plan narrative objectives that are the basis for numeric effluent limits. The two most common narrative objectives impacting NPDES Permits are the “Narrative Toxicity Objective”, and the “Taste and Odor” objective. Compliance schedules may be included in permits for effluent limitations based upon “new interpretations” of narrative water quality objectives. An August 2005 Second District California Appeals Court Ruling [CBE v. SWRCB regarding the Avon Refinery (aka, Tosco Refinery)] agreed with the State Water Board’s interpretation of the San Francisco Bay Water Board’s Basin Plan narrative objective “new interpretation”. Effluent limits based upon a narrative water quality objective may be considered a “new interpretation” that will allow a compliance schedule to be placed in an NPDES Permit when that effluent limit is first applied to that discharger. In this case, the previous NPDES permit did not include an effluent limit for aluminum. The inclusion of an effluent limit for aluminum for this discharge is, therefore, a new interpretation. Mr. Landau’s memorandum is an internal staff document that provides guidance to staff, but is not the applicable law or policy. The State Board’s order sets forth the applicable policy.

**CSPA COMMENT #6, The Order fails to contain an adequate reasonable potential analysis because it uses incorrect statistical multipliers**

The reasonable potential analysis utilized a hardness value of 91 mg/l, see permit Fact Sheet page F-20. The permit fails to identify the measured hardness of the receiving water. The SIP and CTR require the ambient receiving water hardness be used to determine reasonable potential.

Federal regulations, 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.” Emphasis added.

Attachment D: The reasonable potential analyses for CTR constituents fail to consider the statistical variability of data and laboratory analyses as explicitly required by the federal regulations. For example, a multiplier of 1 was used for CTR constituents instead of the required multiplier factors necessary to properly evaluate reasonable potential. 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*.

The reasonable potential analyses for CTR constituents are flawed and must be recalculated. The fact that the SIP illegally ignores this fundamental requirement does not exempt the Regional Board from its obligation to consider statistical variability in compliance with federal regulations.

**RESPONSE:** Until adoption of the SIP by the State Water Board, USEPA’s Technical Support Document for Water Quality-based Toxics Control (TSD) was the normal protocol followed for permit development for all constituents. The SIP is required only for California Toxics Rule (CTR) and National Toxics Rule (NTR) constituents and prescribes a different protocol when conducting a Reasonable Potential Analysis (RPA), but is identical when developing water quality-based effluent limitations (WQBELs). For some time after SIP adoption, SIP protocols were used for CTR/NTR constituents, and TSD protocols were used for non-CTR/NTR constituents. While neither protocol is necessarily better or worse in every case, using both protocols in the same permit has led to confusion by dischargers and the public, and greater complexity in writing permits. Currently there is no State or Regional Water Board Policy that establishes a recommended or required approach to conduct an RPA or establish WQBELs for non-CTR/NTR constituents. However, the State Water Board has held that the Regional Water Board may use the SIP as guidance for water quality-based toxics control. The SIP states in the introduction “*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency.*” Therefore, for consistency in the development of NPDES permits, we have begun to use the RPA procedures from the SIP to evaluate reasonable potential for both CTR/NTR and non-CTR/NTR constituents.

With regards to determining the appropriate criteria for hardness-dependent metals, the proposed Order has established the criteria based on the reasonable worst-case effluent and receiving water hardness. Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, “floating” effluent limitations that are reflective of actual conditions at the time of discharge, effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. Recent studies indicate that using the

receiving water lowest hardness for establishing water quality criteria is not the most protective for the receiving water. The Regional Water Board has evaluated these studies and concurs that for some parameters the beneficial uses of the receiving water are best protected using the lowest hardness value of the effluent, while for some parameters, the use of both the highest hardness value of the receiving water and the lowest hardness value of the effluent is the most protective. This approach was used for the reasonable potential analysis for hardness-dependent metals.

**CSPA COMMENT #7, Permit fails to contain mass-based effluent limits for chlorodibromomethane, dichlorobromomethane, aluminum, and manganese.** The proposed Permit contains effluent limitations, see Effluent Limitation No. A1a, for Chlorodibromomethane, Dichlorobromomethane, Aluminum, and Manganese which are expressed in concentration, i.e. ug/L; however, the Order fails to include a mass limitation for the listed pollutants.

**RESPONSE:** 40 CFR SEC 122.25(f) states the following:

*“Mass limitations. (1) All pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass except:*

*(i) For pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass;*

*(ii) When applicable standards and limitations are expressed in terms of other units of measurement; or*

*(iii) If in establishing permit limitations on a case-by-case basis under §125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.*

*(2) Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations.”*

40 CFR section 122.25(f)(1)(ii) states that mass limitations are not required when applicable standards are expressed in terms of other units of measurement. All pollutants with numerical effluent limitations in the proposed permit are based on water quality standards and objectives. These are expressed in terms of concentration. Pursuant to 40 CFR section 122.25(f)(1)(ii), expressing the effluent limitations in terms of concentration is expressly allowed and is in no way contrary to Federal Regulations.

**CSPA COMMENT #8, The proposed Permit fails to contain an Effluent Limitation for bis(2-ethylhexyl)phthalate despite a clear reasonable potential to exceed waste quality standards in violation of Federal Regulations 40 CFR 122.44.** The Discharger obtained fourteen samples from February 2005 through August 2006. Only one sample, collected on 7 September 2005, indicated a bis(2-ethyl-hexyl)phthalate concentration of 11 ug/L. Bis(2-ethylhexyl)phthalate exceeds water quality standards above the CTR Water Quality Standard of 1.8 µg/l. The draft permit indicates that the Discharger was concerned about the detect limit of the test used. However, the concentration of 11ug/L exceeds the laboratory reporting and method detection level of 1.7 ug/l by a factor of over five and therefore, is a valid data point. The Discharger subsequent collection of additional samples that were non-detect after the fact does not make the September 2005 sample result invalid. The proposed permit Fact Sheet states that the sampling data for bis(2-ethylhexyl)phthalate collected in September 2005 is not representative. However, the sample point is being discarded without any supporting documentation from the laboratory quality assurance/quality control (QA/QC) documents. The draft permit shows a total disregard for scientific methods, specifically sampling and laboratory QA/QC methodologies, in throwing out data points that would lead to a reasonable potential for a pollutant to exceed water quality standards. Failure to include an effluent limitation for bis(2-ethylhexyl)phthalate in the proposed permit violates 40 CFR 122.44 and CWC 13377.

**RESPONSE:** The Discharger obtained fourteen samples from February 2005 through August 2006. One sample collected on 7 September 2005, indicated a bis (2-ethyl-hexyl) phthalate concentration of 11 ug/L. Because previous samples (collected on 5 February 2005, and 13 April 2005) were non-detects based on a Minimum Detection Limit of 1.7 ug/L, and the fact that the handling and storing of bis (2-ethyl-hexyl) phthalate samples are known to be easily contaminated, the Discharger, suspicious of this analytical result, accelerated monitoring at lower detection limits. All subsequent analytical results (nine samples collected from November 2005 to August 2006) were non-detects, based on a lower Method Detection Limit of 0.6 ug/L. Based on this information, and as authorized by the SIP (Section 1.2), the Regional Water Board determined that the analytical results of the sample collected on 7 September 2005, was not representative, and therefore, the discharge does not have a reasonable potential to cause or contribute to an in-stream excursion above the NTR criterion for bis (2-ethylhexyl) phthalate and effluent limitations for bis (2-ethylhexyl) phthalate are not necessary.

**CSPA COMMENT #9, The proposed Permit does not contain an effluent limitation for oil and grease in violation of federal regulations 40 CFR 122.44 and California Water Code, Section 13377.** The proposed Permit is for a domestic wastewater treatment plant. Domestic wastewater treatment plants, by their nature, receive oil and grease in concentrations from home cooking and restaurants that present a reasonable potential to exceed the Basin Plan water quality objective for oil and grease (Basin Plan III-5.00). Confirmation sampling is not necessary to establish that domestic wastewater

treatment systems contain oil and grease in concentrations that present a reasonable potential to exceed the water quality objective. The Central Valley Regional Board has a long established history of including oil and grease limitations in NPDES permits at 15 mg/l as a daily maximum and 10 mg/l as a monthly average, which has established BPTC for POTWs. The California Water Code (CWC), Section 13377 states in part that: "...the state board or the regional boards shall...issue waste discharge requirements...which apply and ensure compliance with ...water quality control plans, or for the protection of beneficial uses..." Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter. Failure to include an effluent limitation for oil and grease in the proposed permit violates 40 CFR 122.44 and CWC 13377.

**RESPONSE:** Based on information included in self-monitoring reports submitted by the Discharger, the effluent oil and grease was non-detectable (<5.0 mg/L) in 9 of 36 samples in 2006. The maximum effluent concentration was 0.8 mg/L on 17 February 2006. Therefore, the discharge does not have a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative objectives for oil and grease and floating material, and State Water Board Resolution No. 68-16 (antidegradation policy). The previous permit, Order 5-00-031, included monthly average and daily maximum effluent limitations for oil and grease of 10 mg/L and 15 mg/L, respectively. The proposed Order removes the effluent limitations for oil and grease based on new information consistent with anti-backsliding requirements of 40 CFR 122.44(l)(2)(i)(B)(1).

**CSPA COMMENT #10, The Order fails to include limits for Lindane.** The CWA 303d listing for the Sacramento-San Joaquin Delta waterways, including Dredger Cut, includes: diazinon, and chlorpyrifos (Organophosphate pesticides); aldrin, dieldrin, endrin, heptachlor, heptachlor epoxide, chlordane (total), lindane, hexachlorocyclohexane (total), endosulfan (total), and toxaphene (Group A organochlorine pesticides); DDT; mercury; and unknown toxicity. The proposed Permit removes the effluent limitation for Lindane and authorizes an expansion of the facility including an increase in the effluent flow rate. Therefore, the proposed Permit improperly authorizes an increase in the mass loading for Lindane to an impaired waterbody for which a TMDL has not been completed.

**RESPONSE:** The tertiary treated effluent was monitored for Lindane on ten occasions during the period from 2 February 2005 through 10 May 2006 and was not detected in the effluent (MDLs ranging from 0.002 – 0.012 ug/L). The previous permit contained effluent limitations for lindane; however, based on this new

information the proposed Order does not contain lindane effluent limitations. The removal of the lindane effluent limitations is consistent with the anti-backsliding requirements of the CWA and Federal regulations.

**CSPA COMMENT #11, The Order fails to include limits for methylmercury.** The Tentative Permit includes an interim effluent mass limitation, or cap, for total mercury. Inexplicably, it ignores methylmercury; the bioaccumulative and biodamaging form of mercury. Regional Board TMDL staff has consistently maintained that the pending Delta Mercury TMDL will require substantial reductions in the mass loading of methylmercury from wastewater treatment plants. The Tentative Permit must include an interim cap on methylmercury loading.

The Tentative Permit states that, if the Regional Board determines that a mercury offset program is feasible, the Order may be reopened to reevaluate the interim mercury mass loading limitation(s) and the need for mercury offset program. An explicit permit re-opener to include final load reductions established in the Delta Mercury TMDL must be incorporated in the Order.

**RESPONSE:** CSPA contends that an interim effluent limitation for methylmercury should be included in the tentative Permit and a reopener should be included to allow inclusion of mercury effluent limitations upon adoption of a mercury TMDL. The 303(d) listing of the Delta is for mercury. Although Regional Water Board staff is developing a methylmercury TMDL, the TMDL is still under development and has not been adopted by the Regional Water Board. Pursuant to Section 2.1.1. of the SIP, the tentative Permit contains an interim mass limitation on total mercury to maintain current loadings pending TMDL development. The tentative Permit already contains a reopener provision (Section VI.C.1.c.) to include effluent limitations for mercury (total or methylmercury) upon adoption of a TMDL.

**CSPA COMMENT #12, The Order fails to include limits for chlorine.** CSPA comments that the Discharger receives chlorinated water from the Northern California Power Agency and uses bleach as a facility cleaning agent, therefore, there is a reasonable potential that chlorine residual could be in the discharge. CSPA contends that effluent limitations and continuous chlorine residual monitoring is necessary.

**RESPONSE:** The previous permit contained effluent limitations for chlorine. However, the Discharger has since upgraded the Facility, and now uses Ultra Violet Light Disinfection instead of disinfection by chlorination. Therefore, the proposed Order does not contain chlorine effluent limitations. However, although the likelihood is small that there would be chlorine residual in the effluent, the proposed Order requires the Discharger to monitor for total chlorine residual should chlorine be used at the Facility (e.g. Maintenance activities). The removal of the chlorine residual effluent limitation is consistent with the anti-backsliding requirements of the CWA and Federal regulations.

**CSPA COMMENT #13 and 14, Proposed Order fails to contain an effluent limit for electrical conductivity (EC) or total dissolved solids (TDS).** CSPA comments that the discharge exceeds the agricultural goal for EC and TDS and therefore the narrative water quality objectives for EC and TDS present a reasonable potential to exceed the water quality objective. The proposed permit contains an interim effluent limitation for EC of 780  $\mu\text{mhos/cm}$ , as a monthly average. The proposed EC limitation clearly exceeds the agricultural water quality goal for EC. The proposed Order fails to establish an effluent limitation for EC that are protective of the Chemical Constituents water quality objective. The City's wastewater discharge increases concentrations of EC to unacceptable concentrations adversely affecting the agricultural beneficial use. The wastewater discharge not only presents a reasonable potential, but actually causes, violation of the Chemical Constituent Water Quality Objective in the Basin Plan. The available literature regarding safe levels of EC for irrigated agriculture mandate that an Effluent Limitation for EC is necessary to protect the beneficial use of the receiving stream in accordance with the Basin Plan and Federal Regulations. Failure to establish effluent limitations for EC that are protective of the Chemical Constituents water quality objective blatantly violates the law.

**RESPONSE:** TDS and EC are both indicators of the salinity of the effluent. A review of the Discharger's monitoring reports from 2 February 2005, through 31 July 2006, shows the maximum monthly average effluent concentration of 662  $\mu\text{mhos/cm}$ , and an average of 621  $\mu\text{mhos/cm}$  for 23 samples. These data show that on average, the effluent does not exceed the most stringent salinity criterion applied as a screening value (the agricultural goal of 700  $\mu\text{mhos/cm}$ ). Therefore, the effluent does not have a reasonable potential to cause or contribute to an exceedance of a water quality objective in the receiving water for salinity. The Discharger must implement best practicable treatment or control (BPTC) of its discharge. For salinity, the Regional Water Board finds that limiting effluent salinity to an increment of 500  $\mu\text{mhos/cm}$  over the salinity of the municipal water supply meets BPTC for this discharge, taking into account the addition of the Flag City wastewater to its facility. Therefore, the proposed Order includes an effluent limitation of 780  $\mu\text{mhos/cm}$  for EC, based on the municipal water supply EC plus an increment of 500  $\mu\text{mhos/cm}$ .

The proposed Order also requires the Discharger to implement salinity reduction measures to reduce the salinity in its discharge to Dredger Cut. Specifically, Special Provision VI.C.3.b. of the proposed Order requires the Discharger to prepare and implement a Salinity Evaluation and Minimization Plan and to report on its progress in reducing salinity discharges to Dredger Cut. Implementation measures to reduce salt loading may include source control, mineralization reduction, chemical addition reductions, changing to water supplies with lower salinity, and limiting the salt load from domestic and industrial dischargers. Compliance with these requirements will likely result in a salinity reduction in the effluent discharged to the receiving water.

**CSPA COMMENT #15, The proposed Permit contains an effluent limitation for acute toxicity that allows mortality that exceeds the Basin Plan water quality objective and does not comply with federal regulations, at 40 CFR 122.44 (d)(1)(i).** Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This section of the Basin Plan further states, in part that, compliance with this objective will be determined by analysis of indicator organisms.

The Tentative Permit requires that the Discharger conduct acute toxicity tests and states that compliance with the toxicity objective will be determined by analysis of indicator organisms. However, the Tentative Permit contains a discharge limitation that allows 30% mortality (70% survival) of fish species in any given toxicity test, see Effluent Limitation No. A1c. It is well documented and known that Delta fish populations have crashed and the Delta smelt faces and other endangered species face extinction.

**RESPONSE:** The tentative permit contains several mechanisms to ensure that effluent discharge does not cause acute or chronic toxicity in the receiving water. Receiving water limits proscribe the discharge from causing toxicity in the receiving water. For effluent limitations included for the protection of the aquatic life beneficial use, the tentative permit includes end-of-pipe effluent limits and were developed based on aquatic life toxicity criteria. Furthermore, the proposed Order requires whole effluent chronic toxicity testing, which identifies both acute and chronic effluent toxicity. If this testing shows that the discharge causes, has the reasonable potential to cause, or contributes to an in stream excursion of the water quality objective for toxicity, the proposed Order requires the Discharger to investigate the causes of, and identify corrective actions to eliminate the toxicity.

The acute whole effluent toxicity limits establish additional thresholds to control acute toxicity in the effluent: survival in one test no less than 70% and a median of no less than 90% survival in three consecutive tests. Some in-test mortality can occur by chance. To account for this, the acute toxicity test acceptability criteria allow ten percent mortality (requires 90% survival) in the control. Thus, the acute toxicity limits allow for some test variability, but impose ceilings for exceptional events (i.e., 30% mortality or more), and for repeat events (i.e., median of three events exceeding mortality of 10%). These effluent limitations are consistent with U.S. EPA guidance. In its document titled "Guidance for NPDES Permit Issuance", dated February 1994, it states the following:

*"In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc."*

The proposed Order protects aquatic life beneficial uses by implementing numerous measures to control individual toxic pollutants and whole effluent toxicity. Both the acute limits and receiving water limits are consistent with numerous NPDES permits issued by the Regional Water Board and throughout the State and are appropriate.

**CSPA COMMENT #16, 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 the SIP.** Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including state narrative criteria for water quality. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The Proposed Permit states that: "...to ensure compliance with the Basin Plan's narrative toxicity objective, the discharger is required to conduct whole effluent toxicity testing...". However, sampling does not equate with or ensure compliance. 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, and the authority granted to third parties under the Clean Water Act, to find the Discharger in violation for discharging chronically toxic constituents. An effluent limitation for chronic toxicity must be included in the Order. In addition, the Chronic Toxicity Testing Dilution Series should bracket the actual dilution at the time of discharge, not use default values that are not relevant to the discharge.

Finally, the Monitoring and Reporting must require the Discharger to commence TRE workplan immediately as the Regional Board has already determined that the discharge is toxic. The Discharger has already avoided implementing a TRE Workplan in violation of the previous Order and gained an economic benefit at the expense of the Delta.

**RESPONSE:** The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits.

This has resulted in the petitioning of a NPDES permit in the Los Angeles Region<sup>1</sup> that contained numeric chronic toxicity effluent limitations. As a result of this petition, the State Water Board adopted WQO 2003-012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, *“In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits.”* The process to revise the SIP is currently underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process.

Since the toxicity control provisions in the SIP are under revision it is infeasible to develop numeric effluent limitations for chronic toxicity. Therefore, the proposed Order requires that the Discharger meet best management practices for compliance with the Basin Plan’s narrative toxicity objective, as allowed under 40 C.F.R. 122.44(k).

CSPA comments that the Discharger must develop a TRE work plan immediately. This is already required in the proposed Order. The Discharger must submit a TRE work plan within 90 days of the effective date of the Order.

**CSPA COMMENT #17, The proposed Order fails to contain receiving water limitations for trace element water quality objectives.** The Basin Plan states “Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. The chemical objectives in Table III-1 apply to the water bodies specified. The listed applicable water bodies listed in Table III-1 includes the “Sacramento-San Joaquin Delta”. The proposed permit, Finding No. C, “ states “Discharge Point 001 (see table on cover page) to Dredger Cut, a water of the United States, and part of the Sacramento-San Joaquin Delta.” The tentative Order indicates that Dredger Cut is a dead end slough with no assimilative capacity. The proposed Order fails to include receiving water limits for chemical objectives listed in Table III-1 for Arsenic, Barium, Copper, Iron, Manganese, Cyanide, Silver and Zinc. The tentative Permit must be

---

<sup>1</sup> In the Matter of the Review of Own Motion of Waste Discharge Requirements Order Nos. R4-2002-0121 [NPDES No. CA0054011] and R4-2002-0123 [NPDES NO. CA0055119] and Time Schedule Order Nos. R4-2002-0122 and R4-2002-0124 for Los Coyotes and Long Beach Wastewater Reclamation Plants Issued by the California Regional Water Quality Control Board, Los Angeles Region SWRCB/OCC FILES A-1496 AND 1496(a)

revised to include limitations for the cited Chemical Objectives. In addition, the monitoring program for the receiving water must be modified to include the cited pollutants.

**RESPONSE:** A reasonable potential analysis (RPA) has been performed to determine whether the discharge has the reasonable potential to cause or contribute to an exceedance of applicable water quality objectives, including the Basin Plan's chemical constituent objective. Of the trace metals listed by the commenter, the discharge demonstrated reasonable potential only for manganese and an effluent limitation is included in the proposed Order. There is no need to require receiving water limitations for these constituents, since there is no reason to believe the effluent would cause or contribute to an exceedance of the objectives in the receiving water. The commenter states that receiving water monitoring should be required for these constituents. Staff agrees, which is the reason the proposed Order includes a provision (section VI.C.2.f.) requiring the Discharger to monitor the effluent and receiving water quarterly during the third of the permit term. This data will be used to perform an RPA during the next permit cycle.

**CSPA COMMENT #18, The Order violates state and federal endangered species acts.** As discussed above, Delta waterways are listed on the 303(d) list as impaired because of unknown toxicity and are home to species protected by state and federal endangered species acts. There is no remaining assimilative capacity for toxicity, toxic pollutants or oxygen demanding constituents. Astonishingly, the Tentative Permit allows acute toxicity, fails to limit chronic toxicity and includes effluent limits that are not protective of listed species. The Tentative Permit is likely to result in the illegal "take" of listed species and will likely result in the destruction or adverse modification of critical habitat in violation of Section 9 of the federal Endangered Species Act (ESA). The Order has been developed with federal funds and is issued pursuant to U.S. Environmental Protection Agency (EPA) authorization. Consequently, the Regional Board and/or EPA must enter into formal consultation with both the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the ESA. The discharge of toxicity and toxic pollutants by the Discharger is a violation of Section 9 of the ESA and requires an incidental take permit pursuant to Section 10 of the ESA. The Regional Board's issuance of an Order that authorizes and/or "causes" an illegal "take" is also a violation of Section 9 of the ESA. Consequently, both the Discharger and the Regional Board must secure incidental take permits from NMFS and USFWS.

The Tentative Permit will also likely result in an illegal "take" of listed species pursuant to Section 2080 of the California Fish and Game Code; i.e., the California Endangered Species Act (CESA). The Discharger must obtain a permit under Section 2081 or a consistency determination under Section 2080.1 of CESA. Unlike ESA, CESA requires that authorized take be "fully mitigated" and that all required measures be "capable of successful implementation." Since there are no provisions for time schedules under

CESA, the Discharger must comply with protective limits as soon as possible and certainly prior to any increase in the rate of discharge. The inadequate toxicity, temperature, ammonia, and dissolved oxygen limits in the Tentative Permit should be revised to be fully protective of listed species. The Discharger and Regional Board must initiate consultation with the California Department of Fish and Game.

**RESPONSE:** Regional Water Board staff disagree with CSPA's statements. The tentative Permit is protective of aquatic life beneficial use. The proposed permit contains numeric effluent limitations for acute toxicity, narrative limitations for chronic toxicity, and a receiving water limitation for toxicity that states the discharge shall not cause "*Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.*" The tentative Permit also contains water quality-based effluent limitations based on aquatic toxicity criteria, where applicable. The commenter's statements are without basis or fact.

**CSPA COMMENT #19, CEQA documentation is incomplete.** The permit states that the action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of Division 13 of the Public Resources Code in accordance with Section 13389 of the CWC. The action to adopt an NPDES permit may be exempt from CEQA; however the proposed permit discusses significant expansion of the wastewater treatment plant, which is not exempt from CEQA. The CEQA document did not address that the discharger is discharging designated waste to the storage ponds.

**RESPONSE:** The premise for this comment is incorrect. The waste in the ponds is not considered designated waste, as discussed in staff's response to CSPA COMMENT #24, below. Furthermore, sludge is not stored in the unlined storage ponds and the sludge lagoon supernatant and DAF subnatant, though currently discharged to the storage ponds, is not considered designated waste. The Discharger is currently construction facilities to reroute the supernatant and subnatant to the wastewater treatment plant. These changes will occur prior to an increase in allowable effluent flow rate.

**CSPA COMMENT #20, Draft Order fails to include a pond freeboard limitation.** The tentative Order fails to include a freeboard limitation for the wastewater ponds, see Pond Operating Requirements, and is inconsistent with other Orders adopted by the Regional Board. Freeboard means the vertical distance between the lowest point along the top of a surface impoundment dike, berm, levee, or other similar feature and the surface of the liquid contained therein. The Regional Board has policy requires that a two feet of freeboard be maintained for wastewater impoundments in order to prevent over topping and levee failures. The Fact Sheet (page F-72) indicates that "freeboard is necessary to prevent levee failures or overtopping due to wave actions, which could

cause undesirable reactions”; however, the proposed Order fails to require any freeboard levels be maintained in the pond.

The tentative Order also does not contain an adequate description of the ponds and lacks the critical information including pond volume(s), flow rates for the industrial discharge and subnatant, percolation rates for unlined ponds and structural features present. For example, are the ponds equipped with a spillway?

**RESPONSE:** The previous Order does not contain a pond freeboard limitation, as is usually required and the Discharger occasionally needs to use the full capacity of its unlined storage ponds for winter storage. The pond berms are protected from erosion with geotextile/rock faces and the tops are paved. In addition, water from the ponds can be pumped to the Discharger’s treatment system for discharge to Dredger Cut to prevent overflows. However, should the ponds overtop, the flows would remain on site and be returned through the agricultural tailwater system. The Discharger has been making changes to reduce flows directed to the ponds (i.e. sludge fluids and off-site stormwater runoff) and has plans to increase its Recycled Water Program. The proposed Order does not require the ponds to maintain a 2-foot freeboard. However, a study requirement has been added for the Discharger to determine the risk of failure of a berm should the ponds overflow.

**CSPA COMMENT #21, Proposed Order fails to contain flow limitation for the industrial discharge and sludge supernate.** The proposed Order fails to contain a flow limitation for the industrial discharge or sludge supernate to the impoundment and is inconsistent with other Orders adopted by the Regional Board. Virtually every engineering textbook includes *Ten States Standards* as standard engineering design and a recognized civil engineering basis for wastewater treatment plant design parameters including pond systems used to manage the industrial waste.

**RESPONSE:** The storage ponds are operated differently during the winter and summer months. During the winter months (typically November through March), the storage ponds are used to hold the industrial and other captured flows that cannot be discharged to Dredger Cut. During the summer months, typically beginning in mid-April and extending through mid-October, the City irrigates the City-owned agricultural reuse areas, using the ponds only for operational storage of the flows that are used for irrigation with all industrial influent flows going directly to the agricultural irrigation fields. A flow limit as suggested by the commenter really only would be applicable during the winter operations. However, due to the nature of the industrial pipeline influent flows, a flow limitation is not appropriate. The controllable industrial influent flows from the industrial waste discharges are minimal compared to the overall flows entering the ponds via the industrial pipeline. The majority of the wintertime industrial influent flows to the storage ponds are stormwater related flows that cannot be controlled by the City, including captured stormwater runoff from a few industrial sites within the City limits, stormwater runoff from approximately 118

acres of City-owned property, and stormwater runoff generated from the agricultural area located east of the City's property.

With regards to the biosolids supernatant, the City is in the process of making modifications to the Facility to return the biosolids supernatant to the wastewater treatment facility.

**CSPA COMMENT #22, The monitoring program fails to require flow monitoring biosolids supernate and sludge discharge.** The monitoring program fails to require flow-monitoring equipment for the biosolids supernate discharge and sludge discharge but relies on the Discharger to guess. Without flow monitoring equipment the amount of waste loading applied to the land application areas cannot be accurately determined, which is critical for the Discharger to maintain agronomic loading rates. Flow monitoring equipment is also necessary for the Discharger to comply with BPTC. The Regional Board cannot argue that guessing the volume of waste applied land is BPTC.

**RESPONSE:** The flow rate of the biosolids that are discharged to the agricultural fields is metered. With regards to the flow measurement of the biosolids supernatant and DAF subnatant, these flows are currently calculated by pump run times. However, the City is in the process of making modifications to the Facility to return these flows to the wastewater treatment facility upstream of the aeration basins and will no longer discharge to the storage ponds or agricultural fields.

**CSPA COMMENT #23, Order should be revised to include to pond monitoring sufficient to address nuisance orders.** The facility has a history of nuisance odors. We have frequently detected and reported odor from this facility to the Regional Board. The proposed monitoring frequency of a weekly grab sample for dissolved oxygen and pH monitoring is not adequate to prevent nuisance conditions. Given the history of noncompliance, daily monitoring is appropriate and necessary to prevent septic odor conditions. In addition, the monitoring fails to specify that samples for dissolved oxygen must be collected in morning and therefore, is inconsistent with Regional Board Orders, which require "dissolved oxygen monitoring be conducted before 9:00 a.m."

The proposed Order must be revised to increase the monitoring frequency for dissolved oxygen and pH to daily and also require that the dissolved oxygen monitoring be performed before 9:00 a.m.

**RESPONSE:** Weekly monitoring of the ponds for pH and dissolved oxygen is adequate and typical of many waste discharge requirements issued by the Regional Water Board. However, we agree that the dissolved oxygen should be monitored prior to 9:00am and have modified the permit accordingly.

**CSPA COMMENT #24, Proposed Permit Fails to Comply with Title 27.** The proposed permit, page 2, indicates “Biosolids are treated by anaerobic digestion and stored in the Facility’s lined sludge stabilization pond. During the summer months, this biosolid slurry is mixed with the storage ponds wastewater and the industrial untreated-wastewater stream, and applied through Discharge Point 003 (see table on cover page) by flood irrigation to The Agricultural Fields.” The stabilization pond supernate and subnatant from the DAF is also discharged to the unlined storage ponds. The storage and handling of treatment sludge and biosolid sludge must comply with Title 27 regulations.

**RESPONSE:** The discharges of domestic sewage or treated effluent are exempt from Title 27 under section 20090(a). Residual sludges or solid waste are not exempt. The biosolids supernatant and DAF subnatant are liquids and are not defined as residual sludges or solid waste. These wastes are part of the domestic wastewater and fall under the exemption in section 20090(a). Sludge is defined in Title 27, section 20164 as follows, “*“Sludge” (SWRCB) means residual solids and semi-solids from the treatment of water, wastewater, and other liquids. It does not include liquid effluent discharged from such treatment processes.*”

**CSPA COMMENT #25, The unlined ponds must comply with Title 27 Prescriptive Standards.** The proposed permit indicates that the ponds are not lined. Title 27 section 20250 contains prescriptive standards for impoundments and requires that “New and existing Class II landfills or waste piles shall be immediately underlain by natural geologic materials which have a hydraulic conductivity of not more than  $1 \times 10^{-6}$  cm/sec (i.e., 1 foot/year) and which are of sufficient thickness to prevent vertical movement of fluid, including waste and leachate, from Units to waters of the state for as long as wastes in such units pose a threat to water quality. Class II units shall not be located where areas of primary (porous) or secondary (rock opening) hydraulic conductivity greater than  $1 \times 10^{-6}$  cm/sec (i.e., 1 foot/year) could impair the competence of natural geologic materials to act as a barrier to vertical fluid movement.” The ponds must comply with requirements for a Class II impoundment including installation of a leachate collection system.

**RESPONSE:** The storage ponds are part of the wastewater treatment facility and are explicitly exempt from Title 27 under section 20090(a). Staff agrees that the ponds, as currently operated, are a threat to water quality and have required the Discharger to ensure it meets best practicable treatment or control of the discharge, which may result in the lining of the ponds.

**CSPA COMMENT #26, Proposed Order fails to determine if industrial waste or sludge is a hazardous waste.** The proposed Order has not demonstrated that the industrial discharge, supernate, DAF subnatant, and biosolid sludge is not a hazardous waste. In accordance with Title 22 Section 66261.1 the discharge classified as a

“waste”. The permit writer clearly failed to consider that there is no domestic sewage exclusion authorized under Title 22 regulations. The RWD failed to properly characterize the waste in accordance with Title 22 Section 66261.24; nor does the MRP require the Discharger to periodically conduct test the sludge in order to determine if the sludge has become a hazardous waste. Furthermore, the industrial line receives “7% flows from metal finishers,” which are Federal categorical dischargers and produce hazardous waste from non-specific sources (40 CFR 261.31). Therefore, the hazardous waste mixture rule and derived from rule applies to these discharges because the industrial discharge is “untreated”, is not mixed with domestic sewage, and is not processed through a POTW, but discharged directly to land for disposal. The Discharger has also received truck/hailed waste from off-site industrial facilities, a fact that the tentative Order ignores. The proposed Order fails to consider that Federal and state land ban prohibitions apply to this discharge for the same reason cited above.

Without adequate monitoring data and routine testing to characterize the sludges, there is no factual information on which the Regional Board can rely to determine if the sludges are a hazardous waste. Moreover, the regulation of hazardous waste applied directly to land is not the within jurisdiction of the Regional Water nor is a Class I impoundment.

**RESPONSE:** The previous order required the Discharger to evaluate the discharges from the industrial dischargers to determine if the waste was considered hazardous waste. In addition, the previous Order required the Discharger to monitor the industrial influent to the storage ponds annually in February for heavy metals. The report and subsequent monitoring data demonstrate that the metal concentrations are well below human health water quality objectives and is not a hazardous waste. With regards to the biosolids, the application of biosolids to land is authorized under the Code of Federal Regulations at 40 CFR part 503.

**CSPA COMMENT #27, Order fails to comply with Resolution 68-16 for discharges to land.** The Order is silent BPTC measures employed by the Discharger and simply fails to comply with Resolution No. 68-16 as follows:

- a. The draft Order indicates that the groundwater is degraded; however the degradation is not confined within a specified boundary;
- b. The Discharger has not minimizes the degradation by fully implementing, regularly maintaining, and optimally operating Best Practicable Treatment and Control (BPTC) measures. The discharge of untreated industrial waste and designated waste (sludges) to unlined facilities is not BPTC;
- c. The degradation is not limited to waste constituents typically encountered in municipal wastewater. The Order fails to consider that waste constituents associated with industrial waste are not such as hexavalent chrome and spent degreasing solvents. In fact, the groundwater monitoring does not require testing for industrial waste constituents; and

- d. The degradation will result in water quality less than that prescribed in the Basin Plan. The Regional Board May 2006 Inspection Report and the file record shows that groundwater underlying the Dischargers ponds has been increasing degraded since 2002. Furthermore, the concentration of waste in the industrial line exceeds water quality objectives and the subsequent discharge to unlined ponds that seasonally intersect the groundwater is pollution.

**RESPONSE:** The Antidegradation Policy requires that a discharge will not result in degradation of waters of the state unless the discharge is required to result in best practicable treatment or control of the discharge and it can be demonstrated that the degradation is to the maximum benefit of the people of the state. The Discharger's land application activities appear to be a threat to groundwater quality. However, site-specific studies provided by the Discharger indicate complex seasonal and local gradient variances from regional data, as well as local deflections of groundwater flow. Thus, the Discharger's current monitoring well network is not adequate to fully characterize the background groundwater quality conditions within the vicinity of the Facility and the agricultural fields, which is necessary to determine if degradation is occurring. The proposed Order requires the Discharge to complete a background groundwater quality and groundwater degradation assessment study. If the groundwater monitoring results show that the discharge of waste is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality, the Discharger must submit a BPTC Evaluation Workplan that sets forth a scope and schedule for a systematic and comprehensive technical evaluation of each component of the Facility's waste management system to determine best practicable treatment or control for each waste constituent of concern.

**CSPA COMMENT #28, Order fails to limit nutrients to agronomic rates.** Finding B states in part that, "municipal wastewater is treated to at least secondary level, and then pumped to the Facility's 40-acres of unlined storage ponds, and is eventually used to irrigate the Discharger's agricultural fields. The Discharger's agricultural fields cover approximately 790 acres adjacent to the Facility..."

This Finding does not accurately describe the purpose of land application areas. "Land application areas" are actually an integral part of the wastewater treatment facility and are specifically for the treatment of waste. Land application areas must be operated and maintained in a fashion that ensures the highest and most consistent waste treatment possible. While we encourage the Regional Boards' recycling efforts, land application areas must remain first and foremost as treatment units for waste removal. Historically crops raised on the land application have not been selected for maximum waste removal. Selection of crops with a lower waste removal rates but which may be more profitable but cannot comply with Resolution 68-16, as it is not BPTC. The Regional Board May 2006 Inspection Report states "A comprehensive nutrient management plan should be established to justify the any crop uptake for the disposal fields." Therefore,

the tentative Order must require that crop selection, crop management and harvest are based on the highest obtainable waste treatment/removal rates as specified in a nutrient management plan. The Fact Sheet, page F-56, "Waste applications must be balanced to provide adequate plant nutrients and water while minimizing nuisance potential and percolation of waste constituents to the water table. The chemical and biological reactions that take place are interrelated and require that constituent loadings and wetting and drying cycles be optimized. As in this case, when the depth of the unsaturated (vadose) zone is less than several feet, the zone in which most of the treatment and attenuation occurs is limited." However, the permit fails to limit the application of waste constituents other than nitrogen to agronomic rates and does not ensure that treatment is optimized in the limited soil column.

In addition, the TDS and EC concentration of the industrial waste exceed water quality objectives and the crops historically cultivated at the site will not reduce the salinity concentrations significantly. The proposed Order must be revised to include limitations for salinity, carbon and phosphorous. The monitoring program must be updated to include these pollutants.

**RESPONSE:** The Land Discharge Specifications of the proposed Order adequately requires the Discharger apply the reclamation water to the agricultural fields at agronomic rates. However, to ensure the correct application of the loading limits, the proposed Order has been modified to require that all monitoring reports developed for compliance with the loading limits shall be prepared under the direct supervision of a certified agronomist. Furthermore, Regional Water Board staff agree there is a need for the Discharger to submit a comprehensive nutrient management plan. Therefore, the proposed Order has been modified to include the requirement to submit this plan annually.

**CSPA COMMENT #29, The Order must prohibit land application of waste during periods of high groundwater.** The draft permit indicates that at times the groundwater elevation underlying the application area is within four feet of the ground surface. The land application area receives designated waste and therefore, is a land treatment unit. In accordance with Title 27, Chapter 3, Subchapter section 20250, for new and existing land treatment units, the base of the treatment zone shall be a minimum of five feet (5 ft.) above the highest anticipated elevation of underlying ground water. The Order fails to require to comply with Title 27 in that the draft Order does not require a five-foot separation be maintained between the groundwater. The tentative Order must be revised to prohibit discharges during periods when the groundwater is less than five-feet below the base of the treatment zone including the capillary fringe.

**RESPONSE:** The wastewater applied to the agricultural fields is not defined as designated waste under Title 27. Furthermore, the proposed Order requires that the hydraulic loading rate of the applied wastewater be at reasonable agronomic rates,

designed to minimize percolation of wastewater constituents below the evaporative and root zone (i.e., deep percolation). No change is necessary.

**CSPA COMMENT #30, The Order must be revised to protect against flooding and nuisance conditions.** Federal regulations 40 CFR 503 prohibits the application of biosolids to land that may be flooded or in such a manner that biosolids may enter surface water or wetlands. The western portion of the land application area, see Attachment C-2 west of Interstate Highway 5, is subject to flooding and at such times is hydraulically connected to White Slough and the adjacent wetlands (borrow pits). The Discharger uses flood irrigation to apply the biosolid slurry and industrial waste. This disposal practice leaves biosolid and industrial waste deposited on the surface of the soil where it may be washed away during periods of flooding. The Regional Board May 2006 Inspection Report indicates that “The western disposal fields are within the 100-year floodplain. The 100- year flood elevation is estimated to be at 8-feet elevation, which is approximately five feet above the western fields. Undisinfected secondary effluent, biosolids, pond residuals, digester decant water, WAS air thickener supernatant, and untreated industrial flows all go to the disposal fields without flood protection. These fields are not protected by levees and WPCF staff indicated that floods have inundated the fields in the past. Therefore the threat to water quality must be considered.” The proposed Order fails to consider water quality impacts related to the western fields.

In regards to flooding at the WWTP, the tentative Order is silent on the construction standard required for the WWTP and therefore, is inconsistent with other Orders adopted by the Regional Board. The draft Order must be revised to require “All treatment and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.”

The decomposition of the waste residue on the soil surface creates nuisance condition such as odors and flies. The facility’s discharge has created nuisance conditions for public, which is documented in the record. The adjacent neighbor, myself and Regional Board staff, have documented noxious odors created by the discharge that has gone unabated for over five years. The draft permit is inconsistent with other Regional Board Orders that require “biosolids to be completely incorporated into the soil with 48 hours after the application” in order to prevent nuisance conditions. The draft permit must be revised to require the Discharger to incorporate biosolids and industrial waste into the soil with 48 hours after the application. The tentative Order must include a Finding on nuisance conditions created by the Discharger and mitigation measures in the permit that are designed to prevent them.

**RESPONSE:** The Discharger’s agriculture fields west of I-5 are not protected from inundation during a 100-yr storm event. Typically, land application areas are required to be protected from inundation during a 100-yr storm event. However, for several reasons, in this particular instance, the water quality risks are likely minimal.

The western fields are bordered by levees on the west and cannot naturally drain to the Delta. Flooding would occur if they were overtopped, which has happened in the past, but the water sits on-site until it is processed through the tailwater system. The only "runoff" would be the volume of water that is higher than the elevation of the levees. In addition, biosolids are only applied to the corn fields, which are tilled in every year in the fall. Therefore, biosolids that had been applied during the previous irrigation season would be incorporated into the soil before there is a potential for a flooding event to occur. Finally, since flooding risk is always linked to high precipitation, there would be no need to irrigate. However, to reduce or prevent water quality impacts that can be caused by the flooding of the fields, the proposed Order has been modified to include a requirement that the Discharger develop and implement a management plan to reduce the risk of water quality impacts in the event the fields are inundated.

**CSPA COMMENT #31, The Order must be revised to comply with recycled water requirements.** The use of the untreated industrial wastewater flow containing digester decant water, air thickened WAS supernatant, and pond residuals does not meet the Title 22 requirements for the application of recycled water. The Discharger cannot mix wastes with recycled water and then claim that the recycled water complies with Title 22 requirements. The draft Order must be revised so that the application of waste complies with Title 22.

The Department Health Services requires that the American Water Works Association (AWWA) Guidelines for Distribution of Non-Potable Water and Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water be implemented in design and construction of recycling equipment. The guidelines require installation of purple pipe, adequate signs, and adequate separation between the recycled water lines and domestic water lines and sewer lines. The Discharger operates a recycled water system. The tentative Order must be revised to include recycled water specifications, which require the Discharger's recycled water system complies with American Water Works Association (AWWA) Guidelines for Distribution of Non-Potable Water and Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water.

**RESPONSE:** The California Department of Health Services (DHS) has not previously made a determination whether the disposal of wastewater to the agricultural fields is subject to Title 22 standards. Therefore, the proposed Order requires the Discharger to submit a Title 22 engineering report to allow DHS to make that determination.

**CSPA COMMENT #32, The Order fails to contain an adequate antidegradation analysis and violates both state and federal antidegradation requirements.** Table F-11 of the Fact Sheet indicates that the proposed Permit allows significant increases in mass loads of aluminum, arsenic, copper, iron, manganese, molybdenum, zinc,

bromoform, chloroform, total THMs, MTBE, chloride, sulfate, oxygen demanding substances, TSS, TDS, phosphorus and probably EC. The Fact Sheet is silent on the potential increases in loading for most of the other priority pollutants: including many classified as carcinogens, immune suppressors and reproductive and developmental toxins.

The antidegradation analysis in the proposed Permit is seriously deficient. The brief discussion of antidegradation requirements, in the Findings and Fact Sheet, consist largely of skeletal, unsupported, undocumented conclusory statements totally lacking in factual analysis. The failure to undertake a rigorous antidegradation analysis for a "major" discharge of pollutants into a severely degraded and legally impaired waterbody whose fisheries are experiencing catastrophic collapse due, in part, to poor water quality is appalling. Regional Board staff are either unaware of state and federal policies regarding antidegradation analyses or they have been directed to ignore them.

**RESPONSE:** The State and Federal antidegradation policies require the maintenance of high quality water unless the discharge is required to meet best practicable treatment or control of the discharge and the discharge is consistent with the maximum benefit to people of the state. The Fact Sheet contains an antidegradation analysis consistent with state and federal policies. In this case the discharge is required to meet Title 22 California Code of Regulations "tertiary" standards or equivalent, which is considered to be best practicable treatment or control for sewage treatment facilities. The discharger was already authorized by the Regional Water Board to increase the discharge to 8.5 mgd provided it could demonstrate compliance with dissolved oxygen standards. The discharger has provided that demonstration. The Fact Sheet evaluates pollutant by pollutant the impact to waters of the state and demonstrates that such discharges will not unreasonably degrade the waters of the state.

**CSPA COMMENT #33, The proposed Order fails to comply with the State's Enforcement Policy.** The proposed permit and time schedule order does not comply with the Enforcement Policy in that it has the following deficiencies:

- Fails to recover economic benefit gained from the violations,
- Fails to take enforcement for groundwater pollution,
- Fails to require that the Discharger obtain a Title 27 WDR for the 200 acre land application area which is receiving designated waste,
- Fail to require the Discharger to cease discharging designated waste to unlined facilities, and
- Fails to enforce against the Discharger for not implementing Pretreatment regulations. The Discharger failed to require installation of pretreatment equipment at metal finishers such as Lodi Chrome.
- Fails to prevent nuisance conditions.

The Regional Board has elected to ignore the Enforcement Policy and has subverted the Legislative intent for water quality protection through pollution prevention into that of pollution permission and rewarding recalcitrant polluters with increased limits.

**RESPONSE:** The proposed action is not an enforcement action subject to the State Water Board's Enforcement Policy. See also Response to CSPA Comment #24 regarding the Title 27 issues.

---

## **CENTRAL VALLEY CLEAN WATER ASSOCIATION (CVCWA)**

---

**CVCWA COMMENT #1, Compliance Schedules for Ammonia and Aluminum.** The tentative order contains compliance schedules for ammonia and aluminum that are based on the compliance schedule provisions for California Toxic Rule (“CTR”) constituents as is contained in the Code of Federal Regulations for CTR pollutants. The tentative order contains a final compliance date of May 18, 2010 for these two constituents. CVCWA is concerned with the implication of such a final compliance date for two non-CTR constituents. The compliance schedule provisions in the CTR apply only to CTR constituents and are not applicable to non-CTR constituents.

**RESPONSE:** See the staff response to CITY OF LODI - COMMENT #10.

**CVCWA COMMENT #2, Final Effluent Limitations for Aluminum.** CVCWA has previously commented regarding the Regional Board’s use of the U.S. EPA recommended ambient water quality criteria for aluminum in Central Valley permits. As CVCWA and others have previously expressed, the recommended U.S. EPA ambient water quality criteria were not developed for streams and waterways that are reflective of those in the Central Valley. The recommended ambient water quality criterion for chronic aluminum was developed in water that was very low in pH and very low in hardness. That is not typically found in the Central Valley.

CVCWA understands that three of its members are currently in the process of conducting water effects ratio studies. According to our members, sampling results from these WER studies indicate that the WERs are large, therefore showing a lack of toxicity. We understand that the sampling results from these studies have already been, or in the near future will be, provided to the Regional Board staff under separate cover. In light of the information garnered from these studies, CVCWA encourages the Regional Board to not apply the EPA ambient water quality criteria for aluminum to Central Valley waterways, unless the Regional Board determines that there is substantial evidence to suggest that the criteria is applicable to the receiving water in question. CVCWA encourages the Regional Board to continue to engage CVCWA and its members in a dialogue on this issue.

**RESPONSE:** The Discharger has not provided information specific to the receiving water that demonstrates that the NRWQC for aluminum are not applicable. In the absence of such information, the Regional Water Board must rely on the national criteria to prevent toxicity to aquatic life from aluminum. The national criteria were developed based on scientific studies that concluded that aluminum is toxic to aquatic life at specified concentrations. Since the discharge contains aluminum it is necessary to assure that the discharge does not result in toxicity. The narrative toxicity objective from the Basin Plan is applicable to the discharge. Aluminum is a toxic constituent of the discharge. Applying the narrative toxicity objective using the

USEPA National Recommended Water Quality Criteria for aluminum is consistent with state policy, the *Policy for Application of Water Quality Objectives* in Chapter IV (beginning on page IV-16.00) of the Basin Plan. With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including EPA's published water quality criteria. [(40 CFR 122.44(d)(1)(vi)(A), (B), or (C)].