1.[1] **Finding II. S., Provisions and Requirements Implementing State Law, Page 8.**

The Tentative Order imposes effluent limitations for BOD_5, TSS, turbidity, and pathogens, as well as a requirement for a tertiary level of treatment, or its equivalent, based on the California Department of Public Health (DPH) reclamation criteria published in Title 22, for the general protection of beneficial uses. *See* Tentative Order at IV.A.1.a. (BOD_5, TSS) IV.A.1.f. (Coliform), IV.B.1.a. (BOD_5, TSS), IV.B.1.f. (Coliform), VI.C.4.c. (turbidity) and VI.C.6.a. (tertiary treatment or its equivalent); *see also* Tentative Order at Finding II.M. and Fact Sheet at IV.C.3.w. These permit provisions are not required under the federal Clean Water Act, which requires secondary treatment or its equivalent for discharges from publicly-owned treatment works, and associated BOD_5, TSS, turbidity, and pathogen restrictions. *See* 33 U.S.C. §§ 1311(b)(1)(B); 40 C.F.R. 133.102. Thus, the BOD_5, TSS, turbidity, pathogen, and technology-based tertiary or its equivalent requirements are being included in the Tentative Order to implement state law and DPH recommendations. **The City requests that Tentative Order sections IV.A.1.a. (BOD_5, TSS) IV.A.1.f. (Coliform), IV.B.1.a. (BOD_5, TSS), IV.B.1.f. (Coliform), VI.C.4.c. (turbidity) and VI.C.6.a. (tertiary treatment or its equivalent) be included in Finding II.S.**

Finding II.S. includes reference to provisions that do not exist in the Tentative Order; specifically, Tentative Order sections VI.C.2.b. and VI.C.2.c. **The City requests that Tentative Order sections VI.C.2.b. and VI.C.2.c be removed from Finding II.S., or Finding II.S. should be modified to include the sections that Regional Board staff intended to reference.**

2. **Section IV.A.1.a., Table 6, Copper Translator – Discharge Point 001, page 10.**

The Tentative Order does not use a translator value for copper based on the City's translator study. **The City requests that as a conservative and protective measure, the effluent limitations for copper should at least consider the translator values calculated for the effluent samples (chronic = 0.66, acute = 0.82).**

3. **Section IV.A.1.a.,Table 6, Effluent Limitations for Carbon Tetrachloride, Chlorodibromomethane, and Dichlorobromomethane in Harding Drain Based on MUN Beneficial Use, page 10.**

The final effluent limitations for carbon tetrachloride, chlorodibromomethane, and dichlorobromethane at Discharge Point 001 (Harding Drain) are based on application of the MUN beneficial use to Harding Drain (effluent limitations based on human health water quality criteria in the California Toxics Rule). While the Fact Sheet acknowledges that the MUN beneficial use has not been designated for Harding Drain in the Basin Plan, directly or via the Basin Plan's tributary statement, and is not an existing beneficial use, the Fact Sheet nonetheless concludes that the MUN beneficial use must be retained and protected in Harding Drain based on the Regional Board's incorporation of State Board Resolution 88-63 (Sources of Drinking Water Policy) into the Basin Plan. *See* Fact Sheet at F-11 and F-12. The Fact Sheet also recites the State Board's previously enunciated position in the City of Vacaville Water Quality Order (2002-0015) that a Basin Plan amendment must be performed to remove beneficial uses applied

[1] The City incorporates by reference herein prior comments submitted on November 21, 2008.

via Resolution 88-63 if a receiving water qualifies for an enumerated exception in Resolution 88-63. *Id*. In this case, Harding Drain qualifies for the agricultural drainage waters exception in Resolution 88-63. *Id*.

While the City understands the Regional Board's position regarding the process necessary to remove the non-existent MUN beneficial use from application to Harding Drain, the City believes the Regional Board retains the flexibility to apply effluent limitations to Harding Drain that more appropriately reflect the necessary level of protection for the Harding Drain and the San Joaquin River downstream, so that the City is not required to expend scarce public resources on compliance with the more stringent effluent limitations for carbon tetrachloride, chlorodibromomethane, and dichlorobromethane imposed for Harding Drain. As noted in the Fact Sheet, and discussed further below, discharge to the Harding Drain will only be retained in the future as an emergency discharge point.

The City will cease discharging into Harding Drain once construction of the pipeline to the San Joaquin River is complete, except that the City will maintain the ability to discharge to Harding Drain in emergency situations prompted by power failure at the pipeline pump station or other emergency condition associated with the pipeline pump station or pipeline itself. *See* Findings II.B. and Discharge Prohibition III.E. (prohibiting discharge to Harding Drain except in these limited circumstances). Those emergency discharges will be infrequent and of limited duration. By imposing final effluent limitations in Table 6 for carbon tetrachloride, chlorodibromomethane, and dichlorobromethane for the Harding Drain that are more stringent than required for direct discharge to the San Joaquin River, the City will be forced to modify and/or upgrade its treatment facility solely to comply with the rarely-invoked effluent limitations for Harding Drain. Given that the MUN beneficial use does not actually exist in the Harding Drain, the City believes the Regional Board should focus on protecting the downstream San Joaquin River potential MUN beneficial use, and replace the average monthly and maximum daily final effluent limitations for carbon tetrachloride, chlorodibromomethane, and dichlorobromethane in Table 6 with those in Table 7 (calculated for protection of the San Joaquin River). This will ensure that both the Harding Drain and the potential MUN beneficial use downstream of Harding Drain will be fully protected, but avoid the City having to incur the unnecessary and excessive cost of designing and constructing facilities to comply with effluent limitations that will be rarely invoked for the protection of a non-existent beneficial use.

The City requests that the average monthly and maximum daily final effluent limitations for carbon tetrachloride, chlorodibromomethane, and dichlorobromethane in Table 6 be replaced with the average monthly and maximum daily final effluent limitations for carbon tetrachloride, chlorodibromomethane, and dichlorobromethane in Table 7 (calculated for protection of the San Joaquin River).

4. **Section IV.B.1.a., Table 7, Compliance Schedules for Aluminum, Iron, Manganese, and Nitrate-N Should Be Included in Tentative Order, page 12.**

On December 31, 2008, the City submitted to the Regional Board an Infeasibility Analysis Report setting forth the City's request and justification for schedules of compliance for final effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, aluminum, iron, manganese, and nitrate-N.

The City requests that compliance schedules granted for average monthly and daily maximum effluent limitations for aluminum at Discharge Point 002 be included within the Tentative Order, as those limitations are derived from a new interpretation of the Basin Plan's narrative toxicity water quality objective, applying USEPA developed National Recommended Ambient Water Quality Criteria.

The City also requests that compliance schedules granted for iron, manganese, and nitrate-N be included within the Tentative Order, as the final effluent limitations for these constituents are due to the new application and interpretation of the Basin Plan's narrative objective for chemical constituents, resulting in limitations more stringent than the limitations in the City's prior NPDES Permit. *See, accord*, State Board Order 2001-06, *CBE, et al. v, SWRCB*, 34 Cal.Rptr.3d 396 (2005), and SWRCB Resolution 2008-0025, *Policy for Compliance Schedules in NPDES Permits*, Section 1.e. (OAL and EPA approval pending).

In summary, the City requests that granted compliance schedules be included within the Tentative Order for aluminum, iron, manganese, and nitrate-N.

5. **Section IV.B.1.a., Table 7, Copper Translator – Discharge Point 002, page 12.**

The Tentative Order considered the City's response to Regional Board/Tetra Tech comments on the City's translator study and incorporated a chronic translator for calculation of effluent limitations for copper. However, the Regional Board did not similarly apply an acute site-specific translator based on the City's submittal. **The City requests that if a mixing zone study is required to grant the San Joaquin River based acute translator value, that the effluent translator samples (chronic = 0.66, acute = 0.82) be used until the City completes a mixing zone study that allows a receiving water or "synthetic" sample (effluent and upstream receiving water mix) based translator.**

6. **Section IV.B.1.a., Table 7, Nitrate Assimilative Capacity, page 12.**

On December 31, 2008, the City submitted to Regional Board staff an assessment of assimilative capacity for nitrate in the San Joaquin River, a copy of which is attached hereto and incorporated by reference. The assessment concluded that sufficient upstream assimilative capacity (5:1) was available based on the conservative and protective assumption of using historical San Joaquin River concentrations *downstream* of the City's discharge and observed 7Q10 flow upstream of the discharge. This dilution would result in an effluent limitation approaching 47 mg/L as N. Because a more stringent performance-based nitrate limitation of 26.2 mg/L as N is achievable, protective, and allows additional downstream assimilative capacity, the City recommends the performance-based limitation as the final effluent limitation. The performance-based limitation is approximately equivalent to a 2.2:1 upstream river flow to permitted discharge flow dilution.

The City requests that the nitrate final effluent limitation be modified to a performance-based monthly average (AMEL) of 26.2 mg/L as N. Upstream dilution under critical conditions (7Q10) provides significant dilution, even using conservative assumptions. If necessary for the Regional Board to grant the City's request, the City can obtain additional data and provide additional technical analysis of the available assimilative capacity over the next two months, and requests that adoption of the Tentative Order be briefly delayed to April or June 2009 to allow consideration of this pertinent

information. The City would develop a CORMIX-based model to establish the area of the nitrate mixing zone to meet the requested performance-based final effluent limitations under critical conditions. Because the outfall is not yet constructed, the model would not be verified with field measurements. The City could complete data gathering and additional modeling analysis by March 16, 2009. If assimilative capacity is not granted, or adoption of the Tentative Order is not delayed, a compliance schedule, interim effluent limitations, and a specific re-opener for consideration of dilution for nitrate effluent limitations should be included in the Tentative Order.

7. **Sections IV.A.2. and IV.B.2., Interim Limitation for Iron, pages 11 and 13.**

Based on data collected in 2006, the City requested a compliance schedule for iron in the Infeasibility Analysis Report submitted to the Regional Board on December 31, 2008. Compliance with the final annual average effluent limitation is not immediately achievable under certain conditions that last occurred in September 2006. The City has used certain coagulants to meet turbidity operational requirements in the City's existing NPDES permit that may cause effluent iron and manganese concentration increases. In an effort to reduce iron and manganese concentrations, more recently, the City has used coagulants containing aluminum that may pose aluminum compliance issues. The City is investigating the optimum chemical additions and mixtures to ensure compliance. **If a compliance schedule is granted for iron, the City requests an interim effluent limitation for iron of 2,500 µg/L, based on the maximum observed effluent concentration.**

8. **Sections IV.A.2. and IV.B.2., Interim Limitation for Manganese, pages 11 and 13.**

Based on data collected in 2006, the City requested a compliance schedule for manganese in the Infeasibility Analysis Report submitted to the Regional Board on December 31, 2008. Compliance with the final annual average effluent limitation is not immediately achievable under certain conditions that last occurred in September 2006. The City has used certain coagulants to meet turbidity operational requirements in the City's existing NPDES permit that may cause effluent manganese and iron concentration increases. In an effort to reduce iron and manganese concentrations, more recently, the City has used coagulants containing aluminum that may pose aluminum compliance issues. The City is investigating the optimum chemical additions and mixtures to ensure compliance. **If a compliance schedule is granted for manganese, the City requests an interim effluent limitation of 200 µg/L, based on the maximum observed effluent concentration.**

9. **Section IV.B.2., Interim Limitation for Aluminum, page 13.**

The City requested a compliance schedule for aluminum in the Infeasibility Analysis Report submitted to the Regional Board on December 31, 2008. The average monthly final effluent limitation (AMEL, 261 µg/L) based on EPA acute water quality objective (750 µg/L) is not immediately achievable. To meet turbidity operational requirements in the City's existing NPDES permit, the City currently uses a coagulant addition that contains aluminum. Under certain conditions, high aluminum concentrations for certain months in the effluent will cause the average monthly concentration to exceed 261 µg/L. **If a compliance schedule is granted for aluminum, the City requests an interim effluent limitation be set as a maximum daily value of 750 µg/L.**

10. **Sections IV.A.2.b and IV.B.2.b., Interim Limitation for Electrical Conductivity, pages 11 and 13.**

The Tentative Order's interim performance-based effluent limitation calculation for salinity as electrical conductivity (922 µmhos/cm) was calculated based on the highest annual average of less than three years of data (October 2006 through April 2008). Because only two and half years are considered, there is a high probability that this interim limitation will not be achievable. A probability distribution was fitted to the available monthly data (October 2006 through December 2008) with no consideration of possible seasonal affects, and a recursive "Monte Carlo" model was run for a 100 year period (1200 months). This recursion was performed 10 times to develop an estimate of average annual averages for the 10 recursions. The average was 914 µmhos/cm with a standard deviation of 19.6 µmhos/cm, and an average maximum of 967 µmhos/cm. An achievable interim limitation would be the average value plus 3.3 times the standard deviation (979 µmhos/cm). **The City requests that the interim annual average effluent limitation for electrical conductivity at Discharge Points 001 and 002 be modified to 979 µmhos/cm.**

11. **Section VI.C.1.e., WER Re-opener, page 21.**

In the near term, the City plans on continued limited episodic use of aluminum-based coagulants for control of discharge turbidity that may cause intermittent exceedances of the proposed average monthly effluent limitation for aluminum (261 µg/L) that is based on the EPA acute objective of 750 µg/L, and may be related to episodes of elevated copper in the effluent that could exceed the proposed average monthly effluent limitation of 7.6 µg/L. If an alternate coagulant or treatment process cannot feasibly be used, the City will consider updating other aluminum water effects ratio (WER) studies performed in the San Joaquin River (*i.e.*, City of Manteca and City of Modesto preliminary) to determine an appropriate acute site specific objective for the San Joaquin River. Operational conditions may also cause intermittent copper exceedances and the City may pursue site-specific adjustments to this CTR water quality standard using the EPA promulgated biotic ligand model (BLM) for copper. **The City requests that the re-opener language be modified as follows:**

> **e. Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable ~~inorganic~~ constituents. In addition, except for the ~~chronic~~ aquatic life criterion for copper, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for inorganic constituents. <u>An acceptable WER can be used to adjust aquatic life-based water quality standards, including metals such as copper, and Basin Plan incorporated EPA water quality standards for ammonia and aluminum. EPA has also promulgated an objective for copper based on the Biotic Ligand Model (BLM) that can be used as the basis for a site specific copper effluent limitations.</u> If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators and submits an approved report, this Order may be reopened to modify the effluent limitations for the applicable ~~inorganic~~ constituents.

12. **Section VI.C.1., Low Method Detection Level Study and/or Re-opener for Trihalomethanes and Carbon Tetrachloride, page 22.**

The Tentative Order's final effluent limitations for trihalomethanes and carbon tetrachloride for San Joaquin River discharge are calculated based on upstream receiving water concentrations reported as "not detected" at a method detection limits between 0.2 µg/L and 0.3 µg/L. Alternate analytical methods with method detection limits approaching 0.05 µg/L could demonstrate additional assimilative capacity, and allow higher yet still protective effluent limitations.

The City requests that adoption of the Tentative Order be briefly delayed to April or June 2009 to allow the City to perform a low method detection level study, during which the City will collect additional data at lower method detection levels to recalculate the average upstream concentration. This will ensure that appropriate, yet protective, effluent limitations for trihalomethanes and carbon tetrachloride are initially adopted, and will avoid Regional Board staff from having to devote resources to re-opening the City's NPDES permit shortly after adoption of the Tentative Order.

Alternatively, the City requests that the following specific re-opener be added to the Tentative Order to allow this new information for recalculation of the effluent limitations:

i. **Trihalomethane and Carbon Tetrachloride Low Method Detection Level Study.** The effluent limitations for chlorodibromomethane, dichlorobromomethane, and carbon tetrachloride at Discharge Point 002 include assimilative capacity per the SIP using the harmonic mean San Joaquin River dilution and the average upstream concentrations. Because the upstream concentrations are reported as "not detected" for all samples, the method detection limits are used for the water quality based effluent limitation calculation. The effluent limitations for these constituents may be reopened if the Discharger collects additional data at the lower method detection levels to recalculate the average upstream concentration. A modified EPA-approved drinking water method (EPA 524.2 SIM) may be used.

13. **Section VI.C.3., Salinity Source Control Program, Page 24.**

The Tentative Order requires the City to develop and implement a Salinity Source Control Program to achieve a non-regulatory[2] goal of the "annual average salinity of the water supply plus 500 µmhos/cm." The Tentative Order also requires the City to participate financially in the development of the Central Valley Salinity Management Plan at a level commensurate with its contributions of salinity to the Delta.

The City objects to having to meet the non-regulatory goal of the "annual average salinity of the water supply plus 500 µmhos/cm," given that the Regional Board already undertook an extensive regulatory process to adopt the TMDL for Salt and Boron in the Lower San Joaquin

[2] The use of the term "non-regulatory" in this context means a water quality goal that has not been the subject of a quasi-legislative process resulting in regulatory action to adopt the goal as a water quality objective or other Basin Plan provision.

River, which imposes on the City a specific seasonal wasteload allocation (WLA) for electrical conductivity of 1,000 µmhos/cm (Sept 1 – March 31) and 700 µmhos/cm (April 1 – August 31). The WLAs are incorporated into the Tentative Order as final effluent limitations. *See* Tentative Order at Sections IV.A.1.h. and IV.B.1.h. Requiring the City to devote scarce resources to meeting an additional, non-regulatory goal for salinity, when the City already must address compliance with the TMDL WLAs is confusing, unnecessary, and unreasonable. **The City requests that any Salinity Source Control Program be developed by the City for purposes of compliance with the final effluent limitations for electrical conductivity in the Tentative Order, and omit reference to the non-regulatory goal of the annual average salinity of the water supply plus 500 µmhos/cm.**

Furthermore, the City objects to the financial participation requirements contained in the Tentative Order. Neither the Clean Water Act, Water Code, nor the Basin Plan authorize the Regional Board to mandate financial participation in a stakeholder process as an enforceable term of a federal NPDES permit, especially where stringent discharge requirements (in the form of effluent limitations derived from TMDL WLAs) have already been placed on the City, which will require significant and limited rate payer funds to comply. While the City acknowledges the value of stakeholder participation in a Central Valley Salinity Management Plan process, the Regional Board should not mandate that participation, financially or otherwise, as an enforceable term of a federal NPDES permit. **The City requests that the requirement to financially participate in the Central Valley Salinity Management Plan process be removed from the Tentative Order.**

14. **Section VI.C.7.a., Compliance Schedule For Final Effluent Limitations for Electrical Conductivity, Pages 28-29.**

Sections IV.A.1.h., fn.1., and IV.B.1.h., fn.1., of the Tentative Order state that compliance with final effluent limitations for electrical conductivity is required by July 28, 2022 (all water year types, except critically dry) or July 28, 2026 (for critically dry water years) pursuant to the Salt and Boron TMDL previously adopted by the Regional Board. However, in Section VI.C.7.a. of the Tentative Order, the compliance schedule is inexplicably shortened to January 1, 2016. This action is not consistent with the compliance schedule implementation provisions of the Salt and Boron TMDL, and is inconsistent with the recent permitting action taken by the Regional Board for the only other municipal discharger assigned WLAs in the Salt and Boron TMDL, where the City of Modesto was properly granted a compliance schedule of July 28, 2022 and/or July 28, 2026 (depending upon the water year type).

In 2008, the Regional Board adopted the renewed NPDES Permit for the City of Modesto, the only other municipal discharger assigned WLAs in the Salt and Boron TMDL. The compliance schedule provided to the City of Modesto is consistent with the TMDL, and allows the City until July 28, 2022 and/or July 28, 2026 to comply (depending upon water year type). *See* Order No. R5-2008-0059 at page 32, attached hereto. No basis exists for treating the City of Turlock differently. **The City requests that the compliance schedule for final effluent limitations for electrical conductivity be consistent with the Salt and Boron TMDL and prior permitting action taken by the Regional Board for the City of Modesto, and that final compliance be required by July 28, 2022 and/or July 28, 2026.**

15. **Section VII., Compliance Determination - Annual Average Calculation, page 31.**

The Tentative Order does not specify a method for calculation of compliance with annual average effluent limitations. Because sampling of certain constituents may not be performed on a consistent schedule (*i.e.*, one month may have four samples and another month may have one sample), to avoid bias all values in a calendar year should not be averaged together. Typically, the City would verify a high value with an additional sample collected when the initial results are available form the first sample. Averaging all values together would tend to bias the annual average high. **The City requests that the following clarification be provided for calculation of annual averages in the Compliance Determination section of the Tentative Order:**

> **H. Annual Average Calculation.** Annual averages for iron, manganese, aluminum, and salinity effluent concentrations shall be performed as the average value of each averaging period as specified in the Monitoring and Reporting Program. For example, effluent monitoring for iron is required quarterly. The annual average for this constituent would be the average of the four quarterly averages. Each quarterly average would be the average of the verified results in that calendar quarter.

16. **Attachment E, Monitoring and Reporting Program, Table E-3, Priority Pollutant Monitoring, Pages E-4 and E-5.**

Table E-3 requires quarterly or monthly effluent monitoring for specified priority pollutants (Bis-2 through Zinc), and then monthly effluent monitoring for all "priority pollutants" during the 3rd year of the permit term. To avoid confusion of potential redundant monitoring requirements, **the City requests that the word "Remaining" be inserted before the term "Priority Pollutants" in Table E-3.**

17. **Fact Sheet Section VII.B.2.c., Rationale for Provisions, Aluminum Site-Specific Studies, Page F-87.**

The Fact Sheet references aluminum site-specific studies that are not required by the Tentative Order, which makes sense given that final effluent limitations are imposed, derived from both EPA criteria and MCLs. **The City requests that Section VII.B.2.c. be removed from the Fact Sheet.**