Regional Water Quality Control Board
Central Valley Region
Board Meeting – 13/14 March 2008

Response to Written Comments for City of Clovis, Clovis Sewage Treatment and Water Reuse Facility,
Fresno County
Tentative Waste Discharge Requirements/NPDES Permit

At a public hearing scheduled for 13/14 March 2008, the Regional Water Quality Control Board, Central Valley Region (Regional Water Board) will consider adoption of Waste Discharge Requirements (WDRs)(NPDES No. CA0085235) for the City of Clovis, Clovis Sewage Treatment and Water Reuse Facility (ST/WRF). This document contains responses to written comments received from interested parties regarding the Tentative Waste Discharge Requirements (TWDRs) circulated on 21 December 2007. Written comments from interested parties were required by public notice to be submitted to the Regional Water Board by noon on 25 January 2008 to receive full consideration. Written comments were received from:

1. City of Clovis (City)
2. California Department of Public Health (DPH)
3. Central Valley Clean Water Association (CVCWA)
4. Fresno Irrigation District (FID)

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

CITY OF CLOVIS (CITY)

CITY – COMMENT 1: The City requests the TWDRs be revised to clarify that Fancher Creek is an irrigation canal.

RESPONSE: Pages 4 and F-3 of the TWDRs have been revised as follows:

"Fancher Creek, at Discharge Point 001, is a modified natural creek <u>(i.e., canal)</u> used and managed . . ."

CITY – COMMENT 2: The City indicates that the ST/WRF treatment process will not include coagulation prior to membrane filtration. The City states that the Fact Sheet should be revised to indicate that the proposed wastewater treatment system is consistent with TWDRs Provision VI.C.6.b, which states "Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected as specified in Title 22, CCR, Division 4, Chapter 3, or the equivalent."

RESPONSE: Consistent with Title 22, California Code of Regulations (CCR), Division 4, Chapter 3, coagulation need not be used as part of the treatment process if the wastewater passes through microfiltration, ultrafiltration, nanofiltration, or reverse osmosis. As the ST/WRF treatment process will include microfiltration, coagulation has been deleted from TWDRs Provision VI.C.6.b. Fact Sheet, Section VII.B.6.a (pg. F-50) of

the TWDRs has also been revised to indicate that Title 22, CCR, Division 4, Chapter 3 does not require coagulation when the treatment process includes microfiltration.

CITY – COMMENT 3: The City comments that the TWDRs Fact Sheet (pg. F-5) incorrectly indicates that the Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004 (Basin Plan) incorporates State Water Resources Control Board (State Water Board) Resolution No. 88-63 (i.e., Sources of Drinking Water Policy) to apply to surface waters. The Basin Plan "incorporates Resolution 88-63 only for groundwaters." Thus, the City recommends that the Fact Sheet be revised to state that surface waters not specifically named in the Basin Plan have not been designated as municipal and domestic supply (MUN) through Resolution No. 88-63.

RESPONSE: The requested change to the Fact Sheet has not been made. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised October 2007 includes the following language in Chapter 2: "Water Bodies within the basins that do not have beneficial uses designated in Table II-1 are assigned MUN designations in accordance with the provisions of State Water Board Resolution No. 88-63 which is, by reference, a part of this Basin Plan ..." The Tulare Lake Basin Plan does not include this blanket designation language in Chapter 2, but does incorporate Resolution 88-63 for both groundwater and surface water. Chapter 5 (pg. V-2) of the Tulare Lake Basin Plan includes the following explanation of how Resolution 88-63 is incorporated into the Basin Plan:

> **7. State Water Board Resolution No. 88-63, "Sources of Drinking Water" Policy**
> This policy, adopted on 19 May 1988, specifies that, except under specifically defined exceptions, all surface and ground waters are suitable or potentially suitable for MUN. The specific exceptions are for waters with existing high total dissolved solids concentrations (greater than 3,000 mg/l), aquifers with low sustainable yield (less than 200 gallons per day for a single well), water with contamination that cannot be treated for domestic use using best management practices or best economically achievable treatment practices, waters within particular municipal, industrial and agricultural wastewater conveyance and holding facilities, and regulated geothermal ground waters. Where the Regional Water Board finds that one of the exceptions applies, it may remove the MUN designation for the particular water body through a formal Basin Plan amendment which includes a public hearing. The exception becomes effective upon approval by the State Water Board and the Office of Administrative Law. See Appendix 7.

Even if the Basin Plan did not incorporate Resolution 88-63 for surface water, the permit terms would have been the same.

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (DPH)

DPH – COMMENT 1: DPH would like to know if coagulant is going to be added between the secondary treatment process and the membrane filters.

RESPONSE: See City – Comment 1.

DPH – COMMENT 2: DPH comments that the TWDRs Provision VI.C.8.e.iv (pg. 34) could be changed as shown below as the City may expand its water recycling program to include dual plumbing systems:

> "The specific use to be made of the recycled water, the use site acreage, the type of vegetation/crops or other types of reuses to which the recycled water will be applied, and the anticipated volume of recycled water to be used;"

RESPONSE: TWDRs Provision VI.C.8.e.iv has not been changed as the Provision already requires the City to specify the specific use to be made of the recycled water.

DPH – COMMENT 3: DPH states that Table E-3 (pg. E-3 of the Monitoring and Reporting Program) must be changed to require daily coliform testing as required by Title 22, CCR, Division 4.

RESPONSE: Table E-3 has been modified to require daily total coliform sampling when discharging to REC-001 (i.e., recycled water use areas).

DPH – COMMENT 4: DPH comments that Section VII.B.1 of the Monitoring and Reporting Program (MRP) does not state to whom the City is to submit its quarterly Recycled Water Users Summary Report. DPH would like to receive a copy of the report.

RESPONSE: Section VII.B.1 of the MRP has been revised to require the City to submit the quarterly Recycled Water Users Summary Report to the Executive Officer and provide DPH a copy of the report.

DPH – COMMENT 5: DPH recommends several changes and additions to TWDRs Provision VI.C.4.b (Ultraviolet (UV) Disinfection System). Some of the recommendations are general in nature and others are specific recommendations based on DPH's 14 December 2007 letter conditionally accepting ITT Industries' WEDECO LBX 1000 UV disinfection system.

RESPONSE: The TWDRs have been revised to include some of DPH's general recommendations and a provision requiring the City to satisfy the acceptance conditions specified by DPH for the UV disinfection system used at the ST/WRF. Regional Water Board staff are concerned that including model-specific requirements in the WDRs may preclude the City from using other DPH-approved UV disinfection systems without going through a administratively intensive permit reopening process. TWDRs Provision VI.C.4.b has been revised as follows (changes in bold):

i. The Discharger shall provide continuous, reliable monitoring of flow, UV transmittance**, UV intensity, UV dose**, UV power, and turbidity.

ii. The Discharger shall operate the UV disinfection system to provide a minimum UV dose of 80 millijoules per square centimeter (mJ/cm^2) at **all times**, unless otherwise approved by DPH.

iii. The UV transmittance (at 254 nanometers) in the wastewater shall not fall below 65 percent of maximum at any time**, unless otherwise approved by DPH**.

iv. The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and to check the efficacy of the cleaning system.

v. The quartz sleeves shall be cleaned at fixed intervals to ensure the minimum required UV dose delivery is consistently achieved. Cleaning intervals shall not be established based on the presence of coliform organisms.

vi. Lamps shall be replaced per the manufacturer's recommendation, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.

vii. The Discharger shall comply with all of DPH's acceptance conditions for the UV disinfection system in use at the ST/WRF.

viii. Prior to initial discharge to Discharge Points 001, 002, or REC-001, the Discharger shall submit to the Executive Officer a copy of a letter from DPH stating that all the UV disinfection system pre-operation acceptance conditions specified by DPH have been satisfied.

CENTRAL VALLEY CLEAN WATER ASSOCIATION (CVCWA)

CVCWA – COMMENT 1: CVCWA maintains it is not necessary or required to achieve Title 22, CCR performance standards for UV disinfection or turbidity for discharges to surface waters. CVCWA requests that TWDRs Provisions VI.C.4.b.ii and VI.C.4.b.iii for the UV disinfection system be modified to state that they only apply to recycled water discharges (i.e., Discharge Point REC-001), not surface water discharges. CVCWA also requests that the turbidity effluent limitations for Discharge Points 001 and 002 (TWDRs Effluent Limitation IV.A.1.f.) be eliminated as they are based on technology, and the Regional Water Board should not be including technology based limitations that are more stringent than the water quality objective necessary to protect beneficial uses.

RESPONSE: The requested modifications and deletions have not been made. Pursuant to California Water Code, Section 13377, the Regional Water Board must issue waste discharge requirements that include, among other things, effluent standards or limitations necessary for the protection of beneficial uses. In addition, the Basin Plan states that discharges to ephemeral streams "will not be considered a permanent solution unless it is accomplished in such a manner as to safeguard the public health . . . ." The beneficial uses of the surface waters to which the Clovis ST/WRF will be discharging include water contact recreation and unrestricted agricultural supply. As described in the Fact Sheet (Section IV.C.3.e.), it is reasonable to conclude that the public health risk in indirect use situations will be acceptable if the treatment process and results are the same as, or comparable to, what Title 22, CCR requires for the same public exposure in direct reuse. DPH's "Uniform Guidelines for the Disinfection of Wastewater" recommends disinfected tertiary treatment for surface water discharges under conditions similar to Fancher Creek

and the Diversion Channel from Big Dry Creek Reservoir to Little Dry Creek (Diversion Channel). As exposure under these conditions is similar to the exposure under direct uses where Title 22, CCR requires disinfected tertiary treatment, it is appropriate to apply Title 22, CCR disinfected tertiary treatment turbidity and total coliform requirements for discharges to Discharge Points 001 and 002, as recommended by DPH.

As detailed in the TWDRs Fact Sheet (Section VII.B.4.a.), the UV disinfection system requirements are included in the TWDRs as recommended by DPH. These requirements are deemed necessary to ensure the UV system reliably removes pathogens to a level that does not pose an unacceptable public health risk under the known discharge conditions.

CVCWA – COMMENT 2: CVCWA states that the Basin Plan requires compliance with a maximum contaminant level (MCL) of 10 mg/L for nitrate (as nitrogen). CVCWA requests that the total nitrogen effluent limitation of 10 mg/L be replaced by a 10 mg/L nitrate (as nitrogen) effluent limitation.

RESPONSE: The requested change has not been made. The total nitrogen effluent limitation included in the TWDRs is based on the designed treatment level of the proposed treatment process (i.e., technology-based) and determined to represent the best practicable treatment or control of the discharge. In addition, replacing the total nitrogen effluent limitation with a nitrate effluent limitation does not limit the unoxidized forms of nitrogen that can covert to nitrate under the aerobic conditions expected to exist in the receiving waters.

FRESNO IRRIGATION DISTRICT (FID)

FID – COMMENT 1: FID comments that the discharge to Fancher Creek will be subject to an agreement between the City and FID. The agreement will be completed prior to ST/WRF discharge.

RESPONSE: Comment noted.