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April 29, 2013

Mr. Scott Hatton
Regional Water Quality Control Board
Central Valley Region
1685 E Street
Fresno, CA 93706

RE: CUTLER-OROSI JOINT POWERS WASTEWATER AUTHORITY

Dear Scott:

On behalf of the Cutler-Orosi Joint Powers Wastewater Authority (Authority), we do hereby submit comments relative to tentative Waste Discharge Order R5-2013-XXXX and Time Schedule Order No. R5-2013-XXXX proposed to be adopted by the Regional Water Quality Control Board (RWQCB). The comments are as follows:

1. Copper Limitation. The Authority has previously responded to the preliminary establishment of a copper limitation by the RWQCB in a letter dated January 2, 2013. The Authority prepared an additional letter dated February 12, 2013, that further outlined a proposed schedule to conduct a Water Effects Ratio Study specific to the copper limitation. The Authority reserves the right to request a revision to the initial limitation on copper based upon the outcome of the Water Effects Ratio Study. It should be noted that the copper level in each of the water supply sources for each of the dischargers to the Authority's facilities exceeds the proposed limitation. It should also be noted that the recent NPDES issued for Wawona Foods, located immediately upstream of the Authority's discharge to Sand Creek, does not contain a limitation on copper in their discharge;

2. Recycled Water Specifications. The proposed recycled water specifications are a significant change to the 1997 waste discharge order recycling specifications. We request staff consideration of keeping the recycling specifications as required by the 1997 discharge order requirements (DWR No. 97-106). Attached, as Appendix A, is the support for our request;

3. Groundwater Quality Monitoring.

   A. Existing and Proposed Background Monitor Wells(s). Under the "Findings" section, we do not find a summary of some of the reports that

were required under Waste Discharge Requirement Order No. R5-2006-0092 and the staff's use of report conclusions. In particular, the "Hydrogeologic Investigation Report and Groundwater Monitoring Well Installation Workplan," dated July, 2007, was approved by the Regional Water Quality Control Board on February 23, 2009. The following excerpts from the report are found on pages I-9 and I-12 and state, "Given the increasing trend in concentrations of Electrical Conductivity (EC) and Total Nitrogen in Monitor Well A, it is impossible to determine the exact level of impact the wastewater treatment facility's effluent has on groundwater. It is recommended to add an additional upgradient monitoring well. To adequately characterize the background water quality, it is recommended to add an additional monitoring well set (a shallow well and a deep well), be installed upgradient from the wastewater treatment plant storage ponds. It is also recommended to install a shallow well at the Monitoring Well A location. A third set of monitoring wells are recommended to be required by the Regional Water Quality Control Board of Wawona Packing Company, LLC, just downgradient of their packing plant." Please note that, since 2007, based on aerial photographs dated August 27, 2012, Wawona Packing Plant has added two (2) additional ponds. Those ponds are located inbetween the proposed background monitor well locations and the Authority's facilities. Given the recent changes upstream of the Authority's facilities, the Authority is not confident the location of the proposed background monitor wells, including the proposed construction methods of the monitoring wells and analytical analysis of the groundwater quality, will comply with the provisions of Water Code Section 13267 which states, in part, "The burden, including costs of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports." Before the installation of additional background monitor wells, the Authority requests from the RWQCB a regional solution to monitor the groundwater upstream of the Authority's facilities with participation by other dischargers in this effort;

B. Frequency of Groundwater Quality Testing. Under Attachment E – Monitoring and Reporting Program, starting on page E-16, Table E-8c., groundwater monitoring requirements are maintained at the same minimum sampling frequency as the current Monitoring and Reporting Program. The Authority requests that the RWQCB consider reducing the sampling frequency of certain parameters in keeping with the SWRCB's December 5, 2011, Agenda Item No. 7, "Third Annual Update on Efforts to Assist Small and/or Disadvantaged Communities in Meeting their Wastewater Needs." "Priority Concern/Cost Driver No. 2: High Monitoring Costs, Particularly for Groundwater." This request was

submitted to the RWQCB in the Authority's "2012 Groundwater Monitoring Annual Report"; and

4. Permitted Flow Rate. The Tentative Waste Discharge Orders state that permitted flow has been reduced to 1.5 mgd because of limitations to the existing reclaimed recycled water acreage and the prohibition to discharge into Sand Creek after May 1st and before November 1st. No documentation has been provided to the Authority to support this limitation, nor has a request been made of the Authority to establish a discharge limitation. This appears to be an unsupported limitation.

Under separate letter, the Authority has submitted a request to add three (3) additional monitor wells in order to adequately characterize the groundwater contours under the Authority's treated effluent storage ponds.

If you have any questions regarding these comments, please contact the undersigned.

Very truly yours,

Dennis R. Keller
Consulting Civil Engineer

DRK:je

Enclosure

cc: Mr. Leonard Encinas, Chief Plant Operator
Mr. Nathan D. Ide, Attorney at Law

APPENDIX A

RECYCLED WATER SPECIFICATIONS

COMMENTS TO ORDER No. R5-2013-XXXX
AND TIME SCHEDULE ORDER R5-2013-XXXX

CUTLER – OROSI JOINT POWERS WASTEWATER AUTHORITY

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MEMORANDUM

DATE: April 25, 2013

TO: Scott Hatton
Regional Water Quality Control Board

FROM: Dennis R. Keller
Keller/Wegley Engineering

SUBJECT: Cutler-Orosi Joint Powers Wastewater Authority - Recycled Water Specifications

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On page F-43 of the proposed discharge order, the rationale for the recycled water specifications states, "Treated wastewater discharged for reclamation is regulated under this Order to protect the beneficial uses of groundwater and to meet the requirements of CCR, Title 22." The rationale did not reference any other requirement. Attached for your use are copies of Title 22, Section 60310. Use Area Requirements and WDR No. 97-107, Recycled Water Specifications.

Tentative Order R5-2013-XXXX (Tentative WDR), Recycled Water Specifications, on pages 14-16 requires certain requirements and buffer zones that are not listed in the California Code of Regulations (CCR), Title 22. If the Authority is required to meet the proposed recycled water specifications, the 001 disposal capacity of the Regional Facilities will be significantly reduced. Table A presents a comparison of certain recycled water specifications as presented in the draft Discharge Order (R5-2013-XXXX), the Discharge Order existing in 2006 (R5-2006-0092) and the Discharge Order existing in 1997 (97-106). In addition, Table A shows the Title 22 requirements and the impact on the Authority's dischargers if the proposed recycled water specifications are implemented. We find that the Tentative Recycled Water Specifications (TRWS) exceed the requirements of Title 22 and will have major ramifications on the Use Area and other facilities as follows:

1. Title 22 requirements are silent regarding "when" to apply recycled water. The TRWS prohibition of irrigating in the reclaimed Use Area 24 hours before precipitation occurs is not practical. It is very difficult to predict accurately when the rainfall is to occur and, in addition, this provision does not take into account

whether or not the Use Area's soil is saturated. Please note that WDR 97-106 prohibited applying reclaimed water in the Use Area during rainfall when the soils are saturated. A one (1) inch rainfall, significant for this area, does not satisfy an irrigation cycle during which time six (6) to ten (10) inches of water are applied;

2. Title 22 does not call for a buffer between a water course and the Use Area. Field "A" Use Area will be significantly reduced if a 50 foot buffer between the Use Area and any water course (irrigation ditch or Sand Creek) as required by the TRWS;

3. Title 22 does not have any buffer requirement for irrigation wells. Fields "B", "C" and "D" Use Areas will be significantly reduced if a 150 foot buffer between the Use Area and an irrigation well if the TRWS are implemented;

4. Title 22 does not have a buffer requirement for irrigation wells and recycled water impoundment. Title 22 does require a buffer between a domestic water supply well and the recycled water impoundment. If the Authority's non-potable water well is considered by the RWQCB to be subject to the 150 foot buffer, then either the non-potable water well will need to be abandoned and a new well drilled or the pond embankment will need to be reshaped to satisfy the proposed WDR 150 foot buffer requirement;

5. Title 22 does not have a buffer requirement between the Use Area and property lines. Fields A and D have irrigation alfalfa valves within 10 feet of property lines and which will be required to be relocated. Fields D and E are adjacent to a property line and their Use Area will need to be reduced to meet the TRWS buffer requirement; and

6. Title 22 does not have a buffer requirement between the Use Area and public roads. Fields B, C and E are adjacent to public roads and their Use Area will need to be reduced to meet the TRWD buffer requirement.

We worked closely with the RWQCB in 1997 on these issues and the specific dimensions of setbacks for Authority facilities. When compared to the Title 22 requirements, the 1997 specifications are in agreement. The specifications after 1997 are much more restrictive and also are outside the requirements of Title 22.

We request that the proposed Recycling Water Specifications be modified to agree with the Recycled Water Specifications in Order No. 97-106.

California Health Laws Related to Recycled Water

"The Purple Book"

Excerpts from the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations

Last Update: June 2001

The document is meant to be an aid to staff of the Drinking Water Program within the Department of Health Services Division of Drinking Water and Environmental Management. It should not be relied upon by the regulated community as the State of California's representation of the law, since the published codes are the only official representations of the law.

Published codes are available on the Internet at http://www.leginfo.ca.gov/ (statutes) and http://ccr.oal.ca.gov/ (regulations). They are also available at law libraries -- call your County Bar Association for the nearest location.

Every effort has been made to assure the accuracy of this compilation. Readers who find and error or who are aware of an omission should contact Jeff Stone of DHS' Recycled Water Unit at jstone1@dhs.ca.gov.

(9) Commercial car washes, including hand washes if the recycled water is not heated, where the general public is excluded from the washing process.

(b) Recycled water used for the following uses shall be at least disinfected secondary-23 recycled water:

(1) Industrial boiler feed,

(2) Nonstructural fire fighting,

(3) Backfill consolidation around nonpotable piping,

(4) Soil compaction,

(5) Mixing concrete,

(6) Dust control on roads and streets,

(7) Cleaning roads, sidewalks and outdoor work areas and

(8) Industrial process water that will not come into contact with workers.

(c) Recycled water used for flushing sanitary sewers shall be at least undisinfected secondary recycled water.

ARTICLE 4. USE AREA REQUIREMENTS.

60310. Use area requirements

(a) No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

(1) A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.

(2) The well contains an annular seal that extends from the surface into the aquitard.

(3) The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

(4) The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

(5) The owner of the well approves of the elimination of the buffer zone requirement.

(b) No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.

(c) No irrigation with, or impoundment of, disinfected secondary-2.2 or disinfected secondary-23 recycled water shall take place within 100 feet of any domestic water supply well.

(d) No irrigation with, or impoundment of, undisinfected secondary recycled water shall take place within 150 feet of any domestic water supply well.

(e) Any use of recycled water shall comply with the following:

(1) Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency.

(2) Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

(3) Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

(f) No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.

(g) All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording : "RECYCLED WATER - DO NOT DRINK". Each sign shall display an international symbol similar to that shown in figure 60310-A. The Department may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Department that the alternative approach will assure an equivalent degree of public notification.

(h) Except as allowed under section 7604 of title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.

(i) The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibbs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.

9. Deposition of materials that cause nuisance conditions or adversely affect beneficial uses.

10. The fecal coliform concentration in any 30-day period to exceed a geometric mean of 200 MPN/100 ml or cause more than 10% of total samples to exceed 400 MPN/100 ml.

11. The natural concentration of dissolved solids to change unreasonably, considering careful use of water resources.

12. A violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the CWA and regulations adopted thereunder.

E. Groundwater Limitations

The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality, except conductivity. Regarding conductivity, the Discharger shall not cause groundwater to exceed an incremental increase in conductivity greater than 20 µmhos/cm over the most recent five-year period.

F. Recycled Water Specifications

1. The direct reuse of recycled water shall be limited to irrigation of fodder, fiber, and seed crops.

2. Recycled water application rates shall not exceed that amount shown to be feasible in the irrigation management plan using accepted crop management practices, and shall not cause a violation of Groundwater Limitations.

3. The Discharger shall not irrigate recycled water during periods of rainfall when the soils are saturated.

4. Stormwater runoff from the irrigation fields shall not be discharged to any surface water drainage course within 30 days of the last application of recycled water.

5. There shall be no irrigation or impoundment of recycled water within 150 feet of any domestic well or 50 feet of any irrigation well unless it is demonstrated to the satisfaction of the Executive Officer that less distance is justified.

6. Areas irrigated with recycled water shall be managed to prevent breeding of mosquitos. More specifically:

   a. Tail water must be returned to the irrigation reservoirs and all applied irrigation water must infiltrate completely within a 48-hour period.

   b. Ditches must be maintained free of emergent, marginal, and floating vegetation.

   c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitos shall not be used to store wastewaters.

G. Provisions

1. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that without treatment are essentially free of pollutants.

2. Use of recycled water must comply with the provisions of Title 22. Further, the Discharger must obtain written approval from the Executive Officer prior to use of recycled water for uses other than construction and those listed in Recycled Water Specification F.1.

3. If recycled wastewater is used for construction purposes, it shall comply with the most current edition of "Guidelines for Use of Recycled Water for Construction Purposes," published by the State Department of Health Services.

4. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)," dated 1 March 1991, which are attached hereto and part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provision(s)".

5. The Discharger shall comply with the attached Monitoring and Reporting Program No. 97-106, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer. When requested by USEPA, the Discharger shall complete and submit Discharge Monitoring Reports. The submittal data shall be no later than the submittal data specified in the Monitoring and Reporting Program for Self Monitoring Reports.

TABLE A
COMPARISON OF DEFINED RECYCLED WATER SPECIFICATIONS
CUTLER-OROSI JOINT POWERS WASTEWATER AUTHORITY

ITEM	WDR Order No.			Title 22(D)	Impact on Authority
	R5-2013-XXXX(A)	R5-2006-0092(B)	97-106(C)		
1. When to irrigate with recycled water	Prohibited 24 hours before precipitation (E)	None	Prohibited during rainfall when soils are saturated	None	(F)
2. Buffer between use area and water course	50 feet	50 feet	None	None	(G)
3. Buffer between Use Area and well					
• Domestic well	150 feet	100-150 feet	150 feet	150 feet	(H)
• Irrigation well	150 feet	100 feet	50 feet	None	(I)
4. Buffer between wells and impoundment of recycled water					
• Domestic well	150 feet	None	None	150 feet	(J)
• Irrigation well	150 feet	None	None	None	(J)
5. Buffer between Use Area and property lines	25 feet	25 feet	None	None	(K)
6. Buffer between Use Area and public roads	30 feet	30 feet	None	None	(L)

Notes:

A) Reference: Page 14-16 of tentative WDR's. On page F-43, the rationale for reclamation specifications states, "Treated wastewater discharged for reclamation is regulated under this Order to protect the beneficial uses of groundwater and to meet the requirements of CCR, Title 22;"

B) Reference: Page 19-21 of WDR R5-2006-0092;

C) Reference: Pages 9-10 of WDR 97-106;

D) Reference: Section 60310 Use Area requirements;

E) Specification prohibits discharge of recycled water to Use Area during precipitation events and for at least 24 hours after cessation of a precipitation event, or when soils are saturated;

F) Difficult to measure. Specification requires accurate foreknowledge of rainfall patterns. The Authority currently does not apply recycled water to the Use Area during rainfall when the soils are saturated;

G) The Authority has about 250 feet of Use Area bordering a water course that is less than 50 feet from the water course (Field A);

H) Authority is in compliance;

I) There is an existing irrigation well located about 75 feet southwest of Reclamation area "D" and the return pump. The Authority will need to relocate the return pump and reduce the size of Field "D". An existing irrigation well along Avenue 404 will reduce the Use Area to both fields B and C;

J) The Authority has a non-potable water well less than 75 feet from the south pond. The non-potable well may need to be relocated or the pond may be reduced in size. Unsure how RWQCB will categorize the Authority's existing non-potable well;

K) The Authority has about 4,600 lineal feet of Use Area adjacent to property lines that will require reduction of crops planted and/or relocation of alfalfa valves; and

L) The Authority has about 5,000 lineal feet of Use Area adjacent to the public road right-of-way and is less than 30 feet from the public road right-of-way that will require reduction of crops planted and/or relocation of alfalfa valves.