

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0135

WATER RECYCLING REQUIREMENTS  
FOR  
DANIEL AND JOYCE SOUZA  
SOUZA FARMS RECYCLING PROJECT  
FRESNO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. Daniel and Joyce Souza, jointly referred to as Souza Farms (hereafter User) leases cropland owned by B. H. Smith, Jr. and Ellen Eldora Plann, to recycle undisinfected secondary-treated wastewater from the Cities of Fresno and Clovis (hereafter Producer) Wastewater Treatment Facility (WWTF) on 350 acres (hereafter Use Area). The Use Area is in Section 34 of T14S, R19E, MDB&M, as shown in Attachment A, which is attached hereto and part of this Order by reference.
2. The User and Producer submitted a Report of Water Recycling (RWR), dated 25 April 2001, pursuant to section 13522.5 of the California Water Code (CWC). On 1 August 2001, pursuant to Resolution No. 77-69, the User received a conditional waiver of recycling requirements. The conditional waiver expires on 27 July 2002.
3. The purpose of this Order is to issue wastewater recycling requirements to ensure, in part, the discharge is consistent with water quality plans and policies and to prescribe requirements that are effective in protecting existing and potential beneficial uses of area receiving waters.
4. The Producer's WWTF is on property that covers 3,290 acres in the lower reaches of the Fresno Irrigation District (FID) service area in Sections 20, 21, 22, 27, and 33 of T14S, R19E, MDB&M, as shown in Attachment A.
5. Waste Discharge Requirements Order No. 5-01-254 for the Producer currently prescribes the terms and conditions for discharges of undisinfected secondary-treated wastewater to ponds and cropland owned by City of Fresno and named individuals (hereafter use areas). Current average daily flows at the WWTF are approximately 68 million gallons per day (mgd), about 76,000 acre-feet per year (af/yr). Of this amount, 4,000 to 7,000 af/yr of effluent is recycled directly on surrounding use areas. This Order will allow the Producer to recycle an additional 1,800 af/yr of effluent.
6. Order No. 5-01-254 characterizes the WWTF effluent and municipal source water as follows:

<u>Constituent</u>	<u>Units</u>	<u>Average</u>	<u>Minimum</u>	<u>Maximum</u>
Effluent 5-day biochemical oxygen demand (BOD <sub>5</sub> )	mg/L	26	8	53
Total dissolved solids (TDS)	mg/L			

<u>Constituent</u>	<u>Units</u>	<u>Average</u>	<u>Minimum</u>	<u>Maximum</u>
Effluent 5-day biochemical oxygen demand (BOD <sub>5</sub> )	mg/L	26	8	53
Total dissolved solids (TDS)	mg/L			
Source water		240	220	250
Effluent		440	340	500
Conductivity at 25°C (EC)	µmhos/cm			
Source water		350	--	--
Effluent		780	690	870
Effluent chloride	mg/L	72	60	107
Effluent sodium	mg/L	81	74	100
Effluent bicarbonate alkalinity (as CaCO <sub>3</sub> )	mg/L	208	164	255
Effluent total nitrogen	mg/L	17	11.2	22.3

7. The User will furrow and flood irrigate only fodder and fiber crops such as alfalfa, wheat, oats and silage corn.
8. Using an average total nitrogen concentration of 17 mg/L and recycled water volume of 1,800 af/yr (or 587 million gallons) the annual nitrogen loading, if uniformly applied to 350 acres is approximately 240 lbs/acre/year. The *Western Fertilizer Handbook* cites annual nitrogen demands of 480 lbs/acre for alfalfa, 175 lbs/acre for wheat, 115 lbs/acre for oats, and 250 lbs/acre for silage corn. The User reports planting wheat and oats during the winter and silage corn during the spring, which should uptake any remaining excess nitrogen not utilized by the winter wheat and oats. The User's application of effluent and nitrogen as described is less than the crop nutrient requirements.

### STATE RECYCLING POLICIES AND REGULATIONS

9. Domestic wastewater contains pathogens harmful to humans that are typically measured by means of total or fecal coliform, as indicator organisms. California Department of Health Services (DHS), which has primary state-wide responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations (CCR), section 60301 et seq., (hereafter Title 22) for the use of recycled water and has developed guidelines for specific uses. Revisions of the water recycling criteria in Title 22 became effective on 2 December 2000. The revised Title 22 expands the range of allowable uses of recycled water, establishes criteria for these uses, and clarifies some of the ambiguity contained in the previous regulations.
10. Section 60323 of Title 22 requires recyclers of treated municipal wastewater to submit an engineering report detailing recycled water use, contingency plans, and safeguards.
11. Section 13523 of the California Water Code provides that a regional board, after consultation with and in accordance with recommendations from DHS as necessary to protect the public health,

safety, or welfare, shall prescribe water recycling requirements for wastewater used or proposed to be used as recycled water.

12. The State Water Resources Control Board adopted the "Policy and Action Plan for Water Reclamation in California" on 6 January 1997. This policy requires the State Water Resources Control Board and Regional Water Quality Control Boards to encourage recycling and reuse of water in water-short areas of the State.
13. The 1988 Memorandum of Agreement (MOA) between DHS and the State Water Resources Control Board on the use of recycled water establishes basic principles relative to the agencies and the regional boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California.
14. The Producer submitted an engineering report, titled *Reclamation System Overview, Title 22 Report* (hereafter Engineering Report), dated 1 February 2001, to DHS pursuant to Title 22 for recycling undisinfectated secondary-treated water on various use areas. The Producer submitted an amended Engineering Report, dated 12 October 2001, to include the subject Use Area.

#### **HYDROLOGY, SOILS, AND LAND USE**

15. The Use Area lies within the Fresno Hydrologic Area (No. 551.30), which is within the Kings River Basin, as depicted on interagency hydrologic maps prepared by the California Department of Water Resources (DWR) in August 1986.
16. The Use Area is not within a 100-year floodplain, and all storm water runoff is reportedly contained on-site. Incidental on-site runoff (e.g., runoff along the canal banks), drains into FID's Dry Creek or Houghton Canals.
17. Dry Creek Canal originates in the City of Fresno and flows seasonally downstream of the Use Area. Houghton Canal flows seasonally downstream of the Use Area and originates at a junction with Dry Creek Canal in the City of Fresno. Dry Creek Canal has an undetermined terminus southwest of the Use Area. Houghton Canal has an undetermined terminus west of the Use Area.
18. Areal soils consist of unconsolidated alluvial deposits of interbedded layers of sand, gravel, silt, sandy clay, clay and localized cobble zones.
19. The Use Area is in a semiarid region. Average annual precipitation and evapotranspiration are about 11 inches and 62 inches, according to information published by DWR.
20. Areal groundwater comprises the north portion of an essentially closed groundwater basin (Tulare Lake Basin) and flows southwesterly under unconfined conditions from the foothills east of Fresno westward to a northwest-trending line through Kerman and Raisin City. West of that line,

groundwater occurs under both unconfined and semiconfined conditions. Extensive groundwater pumpage near the cities of Fresno and Raisin City have caused local changes in groundwater flow direction.

21. The Producer monitors area groundwater via a groundwater monitoring well network currently comprised of 22 wells in the WWTF and Use Area vicinity. Groundwater in the WWTF and Use Area vicinity occurs in an unconfined aquifer at depths ranging from 30 to 60 feet below ground surface (bgs).

### **BASIN PLAN AND REGULATORY CONSIDERATIONS**

22. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for waters of the Basin, and incorporates by references plans and policies adopted by the State Water Resources Control Board. These requirements implement the Basin Plan.
23. Water in the Tulare Lake Basin is in short supply, requiring importation of surface waters from other parts of the State. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recycleable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water.
24. The Dry Creek and Houghton Canals carry irrigation deliveries from the Kings River and Friant Kern Canal, both waters of the United States. They also carry urban storm water runoff and surface waters from upgradient ephemeral streams.
25. The Basin Plan identifies beneficial uses of valley floor waters, such as the Dry Creek and Houghton Canals, as municipal and domestic, agricultural, industrial service, and industrial process supply; water contact and noncontact water recreation; warm freshwater, wildlife, and rare, threatened, or endangered species habitat; and groundwater recharge.
26. Area groundwater is part of a regional aquifer, which has been designated by the U.S. Environmental Protection Agency (EPA) as a sole source aquifer.
27. The Basin Plan identifies existing and potential beneficial uses of area groundwater as domestic, industrial, and agricultural supply.
28. The use of municipal wastewater for irrigation at agronomic rates will have a comparable impact on groundwater as fresh water extracted and used for irrigation of the same crop. The Basin Plan encourages beneficial reuse of wastewater to conserve freshwater resources; agronomic application rates of wastewater cause comparable impact as widespread freshwater irrigation practices.

### ANTIDegradation

29. State Water Resources Control Board (SWRCB) Resolution No. 68-16 (hereafter Resolution 68-16 or the “Antidegradation” Policy) requires maintenance of all high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in water quality policies (e.g., quality that exceeds water quality objectives).
30. Assimilative capacity is available in the underlying soil and groundwater, considering limited dilution, to allow for some degradation and not unreasonably threaten present and anticipated beneficial use of such water, or result in groundwater that exceeds or threatens to exceed water quality objectives set forth in the Basin Plan. Compliance monitoring (i.e., of recycled water use and agronomic uptake of applied nutrients) is essential to assure the effectiveness of treatment and control measures in protecting groundwater. Limited degradation of groundwater underlying use areas for EC to facilitate water recycling is consistent with maximum benefit to the people of the State.
31. The conditional discharge as permitted herein is consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16. As permitted, the use of recycled water will not unreasonably affect present and anticipated beneficial uses of groundwater and will not result in water quality less than that described in the Basin Plan.
32. Pursuant to CWC section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
33. Section 13267 of the CWC states, in part, that:

In conducting an investigation specified in [section 13267] subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. 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. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.
34. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2002-0135 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

### CEQA

35. On date, the City of Fresno certified a mitigated negative declaration for the proposed recycling project in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) and the State CEQA Guidelines. The Regional Board has reviewed this document and concurs with its findings and recommendations. The proposed Order includes terms and conditions that are protective of water quality and avoid adverse water quality impacts as a result of the subject discharge.

### PUBLIC NOTICE

36. DHS, the Fresno County Health Department, and the local mosquito abatement district were consulted and their recommendations regarding public health aspects for this use of recycled water were considered.
37. The Producer, User and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
38. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
39. In a public meeting, all comments pertaining to the discharge were heard and considered.

**IT IS HEREBY ORDERED** that pursuant to California Water Code (CWC) sections 13523.1, 13263, and 13267, Daniel and Joyce Souza, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

#### **A. Prohibitions**

1. Discharge of untreated or partially treated wastewater directly to the Use Area is prohibited.
2. Cross-connection between any potable water supply and piping containing recycled water is prohibited. No physical connection shall exist between recycled water piping and any domestic water supply well, or between recycled water piping and any irrigation well that does not have an air gap or reduced pressure principle device.
3. Application of recycled water so as to cause runoff to and degradation of any water body or wetland is prohibited.
4. Application of recycled water so as to cause escape from the Use Area as an airborne spray that would visibly wet vegetation or any other surface is prohibited.

5. Use of recycled water as a domestic or animal water supply is prohibited.

**B. Water Recycling Specifications**

1. The recycled water shall remain within the designated conveyance facilities and the approved Use Area, as defined in Finding No. 1, at all times and shall be managed to minimize erosion and runoff from the Use Area.
2. Use of recycled water as permitted by this Order shall comply with all the terms and conditions of the most current Title 22 provisions.
3. The User of recycled water shall provide for appropriate backflow protection for potable water supplies as specified in Title 17, CCR, section 7604, or as specified by DHS.
4. Recycled water shall not be applied to the Use Area during periods when the soil is saturated.
5. Application of wastewater and commercial fertilizer to the Use Area shall be at reasonable agronomic rates considering the crop, soil, climate, and irrigation management system. The annual nutrient loading to the Use Area, including the nutritive value of organic and chemical fertilizers and of the recycled water, and the volume of recycled water shall not exceed the crop demand.
6. The Discharger shall maintain the following setback distances from areas irrigated with recycled water:

<u>Setback Distance (feet)</u>	<u>To</u>
25	Property Line
30	Public Roads (nearest right-of-way line)
50	Drainage courses (nearest high-water line)
100	Irrigation wells
150	Domestic wells

7. Recycled water shall be limited to the following uses:
  - a. Non food-bearing trees (Christmas tree farms are included in this category provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting or allowing access by the general public);
  - b. Fodder and fiber crops and pasture for animals not producing milk for human consumption;
  - c. Seed crops not eaten by humans;
  - d. Food crops that must undergo commercial pathogen destroying processing before being consumed by humans; and

- e. Ornamental nursery stock and sod farms provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting, retail sale, or allowing access by the general public.
8. The perimeter of all areas irrigated with recycled water shall be graded to prevent ponding along public roads or other public areas.
9. Areas irrigated with recycled water shall be managed to prevent breeding of mosquitoes. More specifically:
  - a. All applied recycled water must infiltrate completely within a 48-hour period.
  - b. Ditches conveying recycled water not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.
  - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
10. Recycled water shall be managed to minimize contact with workers.
11. All water recycling equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. The recycled water piping system shall not include any hose bibbs.
12. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting recycled water and those transporting domestic supply, with the domestic supply above the recycled water pipeline.
13. Recycled water use shall cease during any period that the prohibitions, specifications or limitations in this Order cannot be met.
14. Public contact with recycled water shall be precluded through such means as fences, signs, or acceptable alternatives. Signs with proper wording (shown below) of a size no less than four inches high by eight inches wide shall be placed at all areas of public access and around the perimeter of all areas used for effluent disposal or conveyance to alert the public of the use of recycled water. All signs shall present the international symbol similar to that shown in Attachment B and present the following wording:

“RECYCLED WATER - DO NOT DRINK”

“AGUA DE DESPERDICIO RECLAMADA - POR FAVOR NO TOME”

### **C. Provisions**

1. The User shall submit technical reports as directed by the Executive Officer.

2. The User shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as *Standard Provision(s)*. For the purposes of this Order, “discharger” and “permittee” as used in Standard Provisions shall mean “User,” “disposal” shall mean “reclamation,” and “disposal area” as well as “facility” shall mean “use area.”
3. The User shall comply with the attached Monitoring and Reporting Program No.R5-2002-0135 and any revisions thereto as ordered by the Executive Officer.
4. The use of recycled water shall comply with the provisions of Title 22. Further, the User must obtain written approval from the Executive Officer prior to use of recycled water for uses other than those listed in Water Recycling Requirement B.7.
5. The User shall ensure that the sale of approved grain crops as a food crop for human consumption is prohibited.
6. The User shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Producer or User, respectively, to achieve compliance with these water recycling requirements.
7. The User shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the Use Area's pipelines and equipment.
8. The Producer and User shall assure that all above ground equipment, including pumps, piping, canals, and valves, etc., which may at any time contain recycled water, are adequately and clearly identified with appropriate warning signs.
9. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Producer and/or User from liability under Federal, State, or local laws, and do not create a vested right to continue reclamation.
10. If any condition or criteria set forth in this Order conflicts or is inconsistent with any requirement set forth in any State regulation, the more stringent condition or criterion shall apply.
11. Regional Board staff may conduct annual inspections and/or audits of the reclamation project and conduct periodic spot field inspections of approved use areas.

12. All conditions of these waste discharge requirements must be complied with at all times. Violations may result in enforcement action, including Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
13. In the event of any change in control or ownership of land or waste discharge facilities described herein, the User shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

14. To demonstrate compliance with Water Recycling Specifications B.2 and B.9 (a), the User shall submit an irrigation management plan by **10 January 2003**. Alternately, the Producer may prepare and submit an irrigation management plan that addresses compliance with said requirements.

The irrigation management plan shall describe the acreage of various types of crops to be grown and harvested annually, crop water use, and nitrogen uptake data. The plan must include a monthly water balance, with storage requirements, and a nitrogen balance (taking into consideration all sources of nitrogen), and must demonstrate that reclamation can be accomplished in accordance with accepted irrigation practices and without contributing significant additional nitrogen to groundwater. The plan shall also include a map showing locations of all domestic and irrigation wells that are close to the Use Area, areas of public access, location and wording of public warning signs. The plan shall describe how setback distances of Water Recycling Specification B.6 will be maintained. Moreover, the plan shall be subject to the review and approval of the Executive Officer. The User shall comply with the approved plan.

15. The Regional Board will review this Order periodically and will revise requirements when necessary.
16. A copy of this Order shall be available at the Use Area and the User shall ensure that key operating personnel are familiar with its contents.
17. The User must comply with all conditions of these water recycling requirements. Violations may result in enforcement action, including Regional Board or court orders requiring

corrective action or imposing civil monetary liability, or in revision or rescission of these water recycling requirements by the Board.

I, THOMAS R. PINKOS, Acting Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 19 July 2002.

---

THOMAS R. PINKOS, Acting Executive Officer

### **Order Attachments**

Monitoring and Reporting Program  
Attachment A: Location Map  
Attachment B: International Symbol for Nonpotable Water  
Attachment C: Recommended Recycled Water Monitoring Form  
Information Sheet

AMS:JLK

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0135

FOR

DANIEL AND JOYCE SOUZA  
SOUZA FARMS RECYCLING PROJECT  
FRESNO COUNTY

**CROP AND RECYCLED WATER MONITORING**

The User shall report the type of crop(s) irrigated and amounts of water and/or recycled water applied to the crop(s) (in acre-feet) and amounts of chemical fertilizer (in pounds of nitrogen per acre). The monitoring report shall include a map showing the areas that received recycled water and chemical fertilizers, crops planted in those areas, and the quantity of recycled water and nitrogen applied to each use area. The User shall report on crop and recycled water monitoring in accordance with the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January to March	1 May
April to June	1 Aug
July to September	1 Nov
October to December	1 Feb

The User shall utilize the form presented in Attachment C (or variation thereof in concurrence with Regional Board staff) for reporting the use area monitoring data.

**By 1 February of each year**, the User shall submit a letter report to the Executive Officer containing the names and telephone numbers of persons to contact regarding the use of recycled water.

The User may also be requested to submit an annual report to the Regional Board with tabular summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

The User shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

\_\_\_\_\_  
THOMAS R. PINKOS, Acting Executive Officer

\_\_\_\_\_  
19 July 2002

(Date)

ARP:JLK

## INFORMATION SHEET

WATER RECYCLING REQUIREMENTS ORDER NO. R5-2002-0135  
DANIEL AND JOYCE SOUZA  
SOUZA FARMS RECYCLING PROJECT  
FRESNO COUNTY

B. H. Smith, Jr. and Ellen Eldora Plann own 350 acres of cropland (hereafter Use Area) leased by Daniel and Joyce Souza, jointly referred to as Souza Farms (hereafter User) to recycle secondary undisinfectated wastewater from the Cities of Fresno and Clovis Wastewater Treatment Facilities (WWTF). The Use Area is on the southeast corner of the WWTF property boundary and is operated by Souza Farms.

The Producer's WWTF is an 88-mgd-capacity secondary treatment WWTF that serves the cities of Fresno and Clovis; the Pinedale Water District and Pinedale Utilities District, both of which are within the city limits of Fresno; and some areas within Fresno County not within the city limits of Fresno or Clovis. The City of Fresno (Producer) operates the WWTF. Included within the 3,290-acre WWTF property are 1,660 acres of effluent disposal ponds; a 145-acre winery stillage disposal site and about 770 acres of cropland on which local growers recycle WWTF effluent under lease agreements with the Producer.

Dedicated pumps and piping convey the Producer's effluent to various use areas. A stand pipe on the northwest corner of the Use Area will deliver to the User effluent that it will apply via newly installed piping. This will allow the User to flood irrigate the field from east to west. Crops grown by the User are fodder and fiber crops such as alfalfa, wheat, oats and silage corn.

The California Department of Health Services (DHS) has established statewide recycling water criteria effective 2 December 2000 in Chapter 3, Division 4, Title 22, California Code of Regulations (CCR), section 60301 et seq. (hereafter Title 22).

Areal soils consist of unconsolidated alluvial deposits of interbedded layers of sand, gravel, silt, sandy clay, clay and localized cobble zones. Average annual precipitation and evapotranspiration are about 11 inches and 62 inches, according to information published by DWR. Groundwater in the WWTF and Use Area vicinity occurs in an unconfined aquifer at depths ranging from 30 to 60 feet below ground surface (bgs). Water in the Tulare Lake Basin is in short supply, requiring importation of surface waters from other parts of the State. The Basin Plan encourages recycling on irrigated crops wherever feasible. The beneficial uses of underlying groundwater are domestic, industrial, and agricultural supply.

The Order, as proposed, would require the User comply with Title 22 requirements. Title 22, section 60304(d), stipulates restrictions on the use of undisinfectated secondary recycled water. It would also require the User to comply with these restrictions, including restricting the use of undisinfectated secondary treated municipal wastewater on crops permitted by Title 22, section 60304(d)(3)-(7) (e.g., fiber, fodder, seed crops, and food crops that must undergo pathogen destroying processing prior to human consumption).

The Order, as proposed, would require the User to implement specific measures relating to the use of recycled water. These include (a) posting of warning signs around use areas to inform the public about the use of recycled water, (b) maintaining setback distances between recycled water use areas and domestic/irrigation wells, (c) ensuring that air gaps are installed on wells (if necessary), (d) requiring that

INFORMATION SHEET – ORDER NO. R5-2002-0135  
DANIEL AND JOYCE SOUZA  
SOUZA FARMS RECYCLING PROJECT  
FRESNO COUNTY

-2-

recycled water be applied at hydraulic and agronomic rates considering the crop, soil, climate, fertilizers applied, and irrigation management system.

The Order, as proposed, would require the Producer to monitor the quality of recycled water and require the User to monitor its application in accordance with the proposed Order's Monitoring and Reporting Program. Specifically, the proposed Order would require the User to report quarterly on the type of crop(s) irrigated and amounts of recycled water applied to the crop(s) (in acre-feet), and amounts of chemical fertilizer applied (in pounds of nitrogen per acre); inspect Use Area on at least a quarterly basis to ensure that water recycling is in compliance with the proposed Order (e.g., setback distances between irrigation/domestic wells and recycled water applications); and provide the Regional Board an Annual Recycled Water Quality Report (provided by Producer and may be included in User Annual Report if required) with recommendations for soil amendment application rates if the sodium adsorption ratio of applied recycled water adversely impacts the permeability of use area soils, if appropriate.

The discharge as permitted herein is consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16. The proposed Order requires that recycled water and chemical fertilizers be applied at rates not exceeding crop agronomic rates. Compliance monitoring (i.e., of recycled water use and agronomic uptake of applied nutrients) is essential to assure the effectiveness of treatment and control measures in protecting groundwater.

On date, the City of Fresno certified a mitigated negative declaration for the proposed recycling project in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) and the State CEQA Guidelines. Regional Board staff has reviewed this document and recommends the Regional Board concur with its findings and recommendations. The proposed Order includes terms and conditions that are protective of water quality and avoid adverse water quality impacts as a result of the subject discharge.

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if applicable laws and regulations change, but the mere possibility that such laws and regulations may change is not sufficient basis for reopening the Order. The CWC requires that water recycling requirements implement all applicable requirements.

ARP:JLK:7/19/2002