

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2007-0152

WASTE DISCHARGE REQUIREMENTS  
FOR  
INTERSTATE-5 UTILITY COMPANY  
WASTEWATER TREATMENT FACILITY  
KERN COUNTY

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

1. The Interstate-5 Utility Company, a California corporation (hereafter Discharger) owns and operates a wastewater treatment facility (WWTF). The WWTF provides sewerage for about eight service stations, four fast food restaurants, two truck washing facilities, four motels, and one residence.
2. The WWTF is along Interstate Five and Highway 58, approximately three miles east of the City of Buttonwillow, in Section 16, T29S, R24E, MDB&M, as shown on Attachment A, which is attached hereto and made part of this Order by reference.
3. Waste Discharge Requirements (WDRs) Order No. 98-005, adopted on 23 January 1998, restricted the monthly average discharge flow to 0.190 mgd. The WDRs prescribed effluent limitations on a monthly basis for 5-day biochemical oxygen demand (BOD<sub>5</sub>) and settleable solids (SS).
4. The purpose of this Order is to rescind WDRs Order No. 98-005 and prescribe requirements that are consistent with Regional Water Board plans and policies.

**Wastewater Treatment Facility**

5. The WWTF consists of the wastewater collection system; influent pump station; headworks with a grinder; two extended aeration package treatment plants (Treatment Units 1 and 2) operated in parallel followed by a third package treatment plant (Treatment Unit 3); and three evaporation and percolation ponds (Ponds 1 through 3). Treatment Units 1 through 3 may be operated in parallel, but typical operation is described above.
6. Typically, effluent from Treatment Unit 3 is discharged to Pond 1 (0.8 acres), which overflows into Pond 2 (0.9 acres). However, effluent from the secondary clarifiers for Treatment Units 1 and 2 also have the capability of discharging directly to Pond 1. Pond 3 is about 8 acres and 800 feet north of Ponds 1 and 2. Pond 3 is rarely used for effluent disposal.
7. Undisinfected secondary treated wastewater is discharged from Ponds 1 through 3 on 23-acres (Use Area) of pasture owned by the Discharger. The pasture is used for grazing horses and non-milking cattle.

8. The Discharger flood or spray irrigates the Use Area as necessary. The Use Area is graded to allow excess applied effluent to flow back into Ponds 1 and 2, preventing off-site discharges.
9. Ponds 1 through 3 and the Use Area are fenced to preclude public access. Attachment B, which is attached hereto and made part of this Order by reference, depicts a general plan view and process flow diagram of the WWTF.
10. Currently, wasted sludge from the secondary clarifier is pumped to an aerobic digester chamber for further treatment and then pumped and hauled offsite for disposal at an authorized facility. Historically, the Discharger dried the sludge onsite and then applied it to areas surrounding the WWTF.
11. Fluctuations in flow occur from the variance in traffic during peak holiday and summer travel.
12. Self-monitoring data from April 2006 to March 2007 and results from a June 2007 Regional Water Board staff inspection characterize the discharge as follows:

| <u>Constituent/Parameter</u>   | <u>Units</u> | <u>Influent</u>  | <u>Effluent</u>   | <u>% Removal<sup>1</sup></u> |
|--------------------------------|--------------|------------------|-------------------|------------------------------|
| Monthly Average Discharge Flow | mgd          | NS <sup>2</sup>  | 0.10 <sup>3</sup> | --                           |
| Conventional Pollutants        |              |                  |                   |                              |
| Settleable Solids              | mL/L         | --               | <0.1              | --                           |
| BOD <sup>4</sup>               | mg/L         | 240              | 48                | 80                           |
| TSS <sup>5</sup>               | mg/L         | 300 <sup>6</sup> | <20 <sup>6</sup>  | >90                          |
| Salts                          |              |                  |                   |                              |
| Chloride                       | mg/L         | --               | 160 <sup>6</sup>  | --                           |
| Boron                          | mg/L         | --               | 0.22 <sup>6</sup> | --                           |
| Sodium                         | mg/L         | --               | 160 <sup>6</sup>  | --                           |
| EC <sup>7</sup>                | µmhos/cm     | --               | 1100 <sup>6</sup> | --                           |
| Nitrogen Forms                 |              |                  |                   |                              |
| Nitrate as Nitrogen            | mg/L         | --               | <0.3 <sup>6</sup> | --                           |
| TKN <sup>8</sup>               | mg/L         | --               | 50 <sup>6</sup>   | --                           |
| Total Nitrogen <sup>9</sup>    | mg/L         | --               | 50 <sup>6</sup>   | --                           |

<sup>1</sup> Percent removal (% removal)

<sup>2</sup> Not sampled (NS)

<sup>3</sup> Reported incorrectly in Discharger SMRs by an order of magnitude.

<sup>4</sup> 5-day biochemical oxygen demand (BOD)

<sup>5</sup> Total suspended solids (TSS)

<sup>6</sup> Based on one-sample taken during a June 2007 Regional Water Board staff inspection.

<sup>7</sup> Electrical conductivity at 25°C (EC)

<sup>8</sup> Total Kjeldahl nitrogen (TKN)

<sup>9</sup> Calculated by summing the concentrations of nitrate as nitrogen and TKN, and assuming the concentration of nitrite is negligible.

13. The EC of the WWTF effluent is about 800  $\mu\text{mhos/cm}$  over source water, based on one effluent sample. Insufficient data exists to adequately characterize the effluent for EC.

### **Site-Specific Conditions**

14. The WWTF is in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation in the discharge area are about 5.69 inches and 108 inches, respectively, according to information published by California Department of Water Resources (DWR).
15. Areal soils are Garces silty loam and Panoche clay loam, according to the United States Department of Agriculture Natural Resources Conservation Service. These soils drain well and are saline-alkali. Percolation rates within the upper five feet of soils are about 1.4 feet/day, according to tests conducted by the Discharger.
16. The WWTF is not within a 100-year floodplain according to Federal Emergency Management Agency maps.
17. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System general industrial storm water permit for the WWTF because all storm water runoff is retained onsite and does not discharge to a water of the United States.
18. Land use in the WWTF vicinity is primarily agricultural with several acres of native vegetation surrounding the WWTF. The primary crops grown within five miles of the WWTF include cotton, wheat, alfalfa, corn (forage), barley, grasses, almonds, and to a lesser extent carrots and grains according to DWR land use data published in 1998. Irrigation water is supplied by both groundwater and surface waters. Some salt sensitive crops (e.g., carrots, almonds) are grown in the area.

### **Groundwater Considerations**

19. In the discharge vicinity, groundwater is about 100 feet bgs and flows generally north to northeasterly, with a perched groundwater table at about 20 feet bgs according to information in the Kern County Water Agency's *Water Supply Report 1999* (Water Supply Report), dated May 2003. In the discharge vicinity, the "modified E-clay" layer occurs about 350 to 400 feet bgs and is about 20 feet thick, according to *Geology of Fresh Ground-Water Basin, Central Valley, California, with Texture Maps and Sections*, by R. W. Page (U. S. Geological Survey Professional Paper 1401 – C, Washington, 1986). Regional groundwater data from the Department of Water Resources (DWR) show varying quality of first encountered groundwater with respect to EC (941 to 4,400  $\mu\text{mhos/cm}$ ) and nitrate as N (<0.2 to 27 mg/L). The Water Supply Report shows EC (converted from TDS) in the unconfined aquifer ranging from about 850 to 1100  $\mu\text{mhos/cm}$ . However, groundwater data within the area is limited.

20. The Discharger obtains its source water from two onsite wells owned by the Discharger. The wells are about 600 feet southeast of the WWTF. The source water is of good quality according to data obtained from the State Water Board's Geotracker database. Excerpts of this data are presented below.

| <u>Constituent/Parameter</u> | <u>Units</u> | <u>Range</u> |
|------------------------------|--------------|--------------|
| Arsenic                      | µg/L         | 4.2 – 11     |
| Chloride                     | mg/L         | 11 – 19      |
| EC                           | µmhos/cm     | 300 – 301    |
| Nitrate (as N)               | mg/L         | <0.2 – 5     |
| TDS                          | mg/L         | 170 - 180    |

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

21. The Water Quality Control Plan for the Tulare Lake Basin, 2nd Edition, (hereafter Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the basin, and incorporates by reference plans and policies of the State Water Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these waste discharge requirements implement the Basin Plan.
22. Water in the Tulare Lake Basin is in short supply, requiring importation of surface water from other parts of the State. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable 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.
23. The WWTF is in Detailed Analysis Unit (DAU) No. 255 within the Kern County Basin hydrologic unit. The Basin Plan designates the beneficial uses of groundwater in this DAU as municipal and domestic supply, agricultural supply, industrial service supply, and wildlife habitat [supply].
24. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22. The Basin Plan's incorporation of these provisions by reference is prospective, and includes future changes to the incorporated provisions as the changes take effect. The Basin Plan recognizes that the Regional Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
25. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with

designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

26. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:
- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500  $\mu\text{mhos/cm}$ . When the source water is from more than one source, the EC shall be a weighted average of all sources.
  - b. Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or boron content of 1.0 mg/L.
- These effluent limits are considered best practicable treatment or control (BPTC).

27. The list of crops in Finding 18 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but is representative. Crops sensitive to salt and boron are currently being grown in the area are primarily due to the importation of high quality surface water. Additional monitoring is necessary to determine the characteristics of the effluent.
28. The Basin Plan requires municipal WWTFs that discharge to land to comply with treatment performance standards for BOD<sub>5</sub> and TSS. The Basin Plan allows flexibility in the standards based on site-specific conditions, such as the potential for nuisance or to degrade groundwater.

### **Antidegradation Analysis**

29. State Water Resources Control Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution No. 68-16) prohibits degradation of groundwater unless it has been shown that:
- a. The degradation is consistent with the maximum benefit to the people of the State;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
  - d. The discharger employs BPTC to minimize degradation.

30. The discharge is an existing discharge and will not change in character or volume from that allowed by WDRs Order No. 92-035. The overall mass of constituents, and therefore, the potential to impact water quality, remain unchanged.

### **Treatment and Control Practices**

31. The WWTF described in Findings 5 through 10, provides treatment and control of the discharge that incorporates:
- a. low salinity source water;
  - b. recycles effluent;
  - c. secondary treatment;
  - d. appropriate biosolids disposal practices; and
  - e. an operation and maintenance (O&M) manual.
32. This Order establishes groundwater limitations for the WWTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

### **Water Recycling Criteria**

33. 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 statewide responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations, 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.
34. A 1988 Memorandum of Agreement (MOA) between DHS and the State Water Resources Control Board (State Water Board) on the use of recycled water establishes basic principles relative to the agencies and the regional water 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.
35. State Water Board Resolution No. 77-1, Policy with Respect to Water Recycling in California, encourages recycling projects that replace or supplement the use of fresh water, and the Water Recycling Law (California Water Code Section 13500-13529.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.

36. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable 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.
37. Title 22, Section 60303 provides exceptions to the statewide criteria and requirements for water recycling if public access is precluded. The WWTF qualifies for this exception, as the entire facility is fenced with a locked gate.

### **Other Regulatory Considerations**

38. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in Title 40, Code of Federal Regulations, Part 503, Standards for the Use or Disposal of Sewage Sludge, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA. The RWD states that all biosolids will be hauled to a separate permitted facility.
39. As the discharge consists of treated domestic sewage and incidental discharges from treatment and storage facilities associated with a domestic wastewater treatment plant, and as these discharges are regulated by waste discharge requirements consistent with applicable water quality objectives, the WWTF and its discharge is exempt from containment pursuant to Title 27, Section 20090(a).

### **CEQA**

40. The Discharger is not increasing discharge flow or changing the nature and character of its discharge, therefore the issuance of this Order is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended).

### **General Findings**

41. 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.
42. 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.
43. The Regional Water Board will review this Order periodically and will revise requirements when necessary.
44. California Water Code Section 13267(b) states that: "In conducting an investigation specified in 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."

45. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2007-0152 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the WWTF that discharges the waste subject to this Order.

#### **Public Notice**

46. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
47. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that, Waste Discharge Requirements Order No. 98-005 is rescinded and that, pursuant to Sections 13263 and 13267 of the California Water Code, the Interstate Five Utility Company and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

#### **A. Prohibitions**

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated wastes, except as allowed by *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, E.2 is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in California Water Code Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

## B. Effluent Limitations

1. The monthly average discharge flow shall not exceed 0.190 mgd.
2. The effluent discharge to the Ponds shall not exceed the following limitations:

| <u>Constituent</u>            | <u>Units</u> | <u>Monthly Average</u> | <u>Daily Maximum</u> |
|-------------------------------|--------------|------------------------|----------------------|
| BOD <sub>5</sub> <sup>1</sup> | mg/L         | 40                     | 80                   |
| TSS <sup>2</sup>              | mg/L         | 40                     | 80                   |

<sup>1</sup> Five day biochemical oxygen demand (BOD<sub>5</sub>)

<sup>2</sup> Total suspended solids (TSS)

3. The annual average electrical conductivity at 25 °C (EC) of the discharge shall not exceed 1,000 µmhos/cm calculated on a monthly basis.

## C. Discharge Specifications

1. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. Public contact with effluent (treatment works, Ponds, or Use Area) shall be precluded through such means as fences, signs (in accordance with Title 22, California Code of Regulations (CCR) Section 60310(g)), or acceptable alternatives.
3. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.
4. Disposal ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
5. On or about **1 October** of each year, available disposal pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification C.4.
6. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
  - b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.

- c. Dead algae, vegetation and other debris shall not accumulate on the water surface.
  - d. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.
7. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.

#### **D. Recycling Specification**

The following specifications apply to the Use Area under the ownership or control of the Discharger. Other use areas are covered by separate water recycling requirements.

- 1. Use of recycled water shall be limited to flood irrigation of fodder, fiber, seed crops not eaten by humans or for grazing of non-milking cattle and shall comply with the provisions of Title 22.
- 2. The Discharger will 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     |
| 50                             | Drainage courses |
| 100                            | Irrigation wells |
| 150                            | Domestic wells   |

- 3. No physical connection shall exist between recycled water piping and any domestic water supply or domestic well, or between recycled water piping and any irrigation well that does not have an air gap or reduce pressure principle device.
- 4. The perimeter of the Use Area shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties not owned or controlled by the Discharger.
- 5. Areas irrigated with recycled water shall be managed to prevent nuisance conditions or breeding of mosquitoes. More specifically:
  - a. All applied irrigation water must infiltrate completely within a 48-hour period;

- b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and
  - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
6. Recycling of WWTF effluent shall be at reasonable agronomic rates considering the crop, soil, climate, and irrigation management plan. The annual nutrient loading of reclamation areas, including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed crop demand.

#### **E. Sludge Specifications**

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation.

- 1. Sludge and solid waste shall be removed from screens, sumps, aeration basins, ponds, clarifiers, etc. as needed to ensure optimal plant operation.
- 2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property.
- 3. Any handling and storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.
- 4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.
- 5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water quality control board or State Water Board or a local (e.g., county) program authorized by a regional water quality control board. In most cases, this means the General Biosolids Order (State Water Board Water Quality Order No. 2004-12-DWQ, "General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities"). For a biosolids use project to be

authorized by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

#### **F. Pretreatment Requirements**

1. The Discharger shall implement the necessary controls to ensure incompatible wastes are not introduced to the treatment system. These include, at a minimum: (a) wastes that create a fire or explosion hazard, or corrosive structural damage to the treatment works; (b) solid or viscous wastes in amounts that cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works; (c) petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through; (d) pollutants that result in the presence of toxic gases, vapors, or fumes within the treatment works; and (e) any trucked or hauled pollutants, except at points predesignated by the Discharger.
2. The Discharger shall implement the controls necessary to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
  - a. Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or
  - b. Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

#### **G. Groundwater Limitations**

1. Release of waste constituents from any treatment or storage component associated with the WWTF shall not cause or contribute to groundwater:
  - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater.
    - (i) Nitrate as nitrogen of 10 mg/L.
    - (ii) Total coliform organisms of 2.2 MPN/100 mL.
    - (iii) For constituents identified in Title 22, the MCLs quantified therein.
  - b. Containing taste or odor-producing constituents, or toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

## H. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provision(s).
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. R5-2007-0152, which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger self-monitoring reports.
3. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger shall not allow pollutant-free wastewater to be discharged into the Facility collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.
5. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the Order.
6. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Regional Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the

reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the appropriate Regional Water Board office.
9. 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 address and telephone number of the persons responsible for contact with the Regional Water 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. If approved by the Executive Officer, the transfer request will be submitted to the Regional Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
10. As a means of discerning compliance with Discharge Specification C.3, the dissolved oxygen content in the upper zone (1 foot) of effluent in disposal ponds shall not be less than 1.0 mg/L for three consecutive sampling events. Should the DO be below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board and propose a remedial approach to resolve the low DO results **within 30 days**.
11. The Discharger shall maintain and operate all ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain in each pond permanent markers with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.

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I, PAMELA C. CREEDON, 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 26 October 2007.

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PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Site Location Map
- B. Plan View Map
- Monitoring and Reporting Program No. R5-2007-0152
- Information Sheet
- Standard Provisions (1 March 1991)

ARP

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-0152  
FOR  
INTERSTATE-5 UTILITY COMPANY  
WASTEWATER TREATMENT FACILITY  
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless and until the Regional Water Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Regional Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions). The results of analyses performed in accordance with specified test procedures, taken more frequently than required at the locations specified in this MRP, shall be reported to the Regional Water Board and used in determining compliance.

Field test instruments (such as pH) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are calibrated prior to each use;
3. Instruments are serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

In addition to details specified in Standard Provision C.3 records of monitoring information shall also include the following:

1. Method detection limit (MDL);
2. Reporting limit (RL) (i.e., a practical quantitation limit or PQL); and
3. Documentation of cation/anion balance for general minerals analysis of supply water, and groundwater samples.

All laboratory results shall be reported down to the MDL. Non-detected results shall be reported as less than the MDL (<MDL). Results above the MDL, but below the concentration of the lowest calibration standard for multipoint calibration methods or below the reporting limit for other methods shall be flagged as estimated.

All analyses shall be performed in accordance with the latest edition of *Guidelines Establishing Test Procedures for Analysis of Pollutants*, promulgated by EPA (40 CFR 136) or other procedures approved by the Executive Officer, provided the methods have method detection limits equal to or lower than the analytical methods specified in this MRP. In reporting data, the Discharger shall indicate whether any analysis was performed using a method not in conformance with EPA's Guidelines. Analyses may also comply with the methods and holding

times specified in: *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020, 1983); *Methods for Determination of Inorganic Substance in Environmental Samples* (EPA/600/R-93/100, 1993); *Standard Methods for the Examination of Water and Wastewater*, 20th Edition (WEF, APHA, AWWA); and *Soil, Plant and Water Reference Methods for the Western Region*, 2003, 2nd Edition, 2003.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

### DISCHARGE MONITORING

The Discharger shall collect effluent samples at a point in the system following treatment and before discharge to Ponds 1 through 3. Time of collection of a grab sample shall be recorded. Effluent monitoring shall include the following:

| <u>Constituent/Parameter</u>   | <u>Units</u>      | <u>Type of Sample</u> | <u>Sampling Frequency<sup>1</sup></u> |
|--------------------------------|-------------------|-----------------------|---------------------------------------|
| Monthly Average Daily Flow     | mgd               | Estimate <sup>2</sup> | 1/Month                               |
| pH                             | s.u. <sup>3</sup> | Grab                  | 1/Week                                |
| EC <sup>4</sup>                |                   |                       |                                       |
| Concentration                  | µmhos/cm          | Grab                  | 1/Week                                |
| Monthly Average                | µmhos/cm          | Grab                  | 1/Month                               |
| BOD <sub>5</sub> <sup>5</sup>  |                   |                       |                                       |
| Concentration                  | mg/L              | Grab                  | 1/Week                                |
| Monthly Average                | mg/L              | Calculated            | 1/Month                               |
| TSS <sup>6</sup>               |                   |                       |                                       |
| Concentration                  | mg/L              | Grab                  | 1/Week                                |
| Monthly Average                | mg/L              | Calculated            | 1/Month                               |
| Nitrogen Forms                 |                   |                       |                                       |
| Nitrate (as N)                 | mg/L              | Grab                  | 1/Quarter <sup>7,8</sup>              |
| TKN <sup>9</sup>               | mg/L              | Grab                  | 1/Quarter <sup>7,8</sup>              |
| Total Nitrogen                 | mg/L              | Calculated            | 1/Quarter <sup>7,8</sup>              |
| General Minerals <sup>10</sup> | mg/L              | Grab                  | 1/Year <sup>11</sup>                  |

<sup>1</sup> If results of monitoring a pollutant appear to indicate either the failure to achieve the design treatment goals of the wastewater treatment facility or potential upset of the treatment process, but monitoring frequency is not sufficient to validate the results, the frequency of sampling shall be increased to confirm the magnitude and duration of such treatment failures, if any, and aid in identification and resolution of the problem.

<sup>2</sup> Flow estimates may be obtained from water meter readings. Explain all assumptions and the method for determining flow.

<sup>3</sup> pH standard units (s.u.)

<sup>4</sup> Electrical conductivity at 25°C.

MONITORING AND REPORTING PROGRAM NO. 5F-2007-0152  
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<sup>5</sup> 5-day biochemical oxygen demand

Footnotes Next Page

Footnotes Continued

<sup>6</sup> Total suspended solids

<sup>7</sup> January, April, July, and October

<sup>8</sup> Monitoring may be discontinued after two years and/or eight sample points are determined.

<sup>9</sup> Total Kjeldahl Nitrogen (TKN)

<sup>10</sup> General Minerals as referred to in this program shall include the constituents in the General Minerals Analyte List presented below.

<sup>11</sup> In October

**General Minerals Analyte List<sup>1</sup>**

|                                     |                                   |           |
|-------------------------------------|-----------------------------------|-----------|
| Alkalinity (as CaCO <sub>3</sub> )  | Carbonate (as CaCO <sub>3</sub> ) | pH        |
| Arsenic                             | Chloride                          | Potassium |
| Bicarbonate (as CaCO <sub>3</sub> ) | EC                                | Sodium    |
| Boron                               | Hardness (as CaCO <sub>3</sub> )  | Sulfate   |
| Calcium                             | Magnesium                         | TDS       |

<sup>1</sup> General Minerals analyte lists may vary depending on the laboratory, but shall include at least the above analytes and properties. An anion cation balance shall accompany results.

**POND MONITORING**

Ponds 1 through 3 shall be sampled systematically for the parameters specified below. Disposal pond monitoring shall include at least the following:

| <u>Constituent/Parameter</u> | <u>Units</u>      | <u>Type of Sample</u> | <u>Sampling Frequency</u> |
|------------------------------|-------------------|-----------------------|---------------------------|
| DO <sup>1,2</sup>            | mg/L              | Grab <sup>3</sup>     | 1/Week                    |
| Freeboard                    | Feet <sup>4</sup> | Observation           | 1/Week                    |

<sup>1</sup> Dissolved oxygen (DO)

<sup>2</sup> To address potential for the creation of objectionable odors, the DO content in the upper zone (one foot) of either effluent storage reservoir should not be less than 1.0 mg/L for three consecutive sampling events. If results of monitoring indicate DO concentrations less than 1.0 mg/L, but monitoring frequency is not sufficient to validate the results, the frequency of sampling shall be increased to confirm the magnitude and duration of such low concentrations of DO, if any, and aid in identification and resolution of the problem.

<sup>3</sup> Samples shall be collected at a depth of one foot from the storage reservoirs, opposite the inlet, and analyzed for DO. Samples shall be collected between 0700 and 0900 hours.

<sup>4</sup> Freeboard shall be monitored to the nearest tenth of a foot.

In addition, the Discharger shall inspect the condition of Ponds 1 through 3 once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the disposal pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.). A **summary** of the entries made in

the log during each month shall be submitted along with the monitoring report the following month.

### SOURCE WATER MONITORING

The Discharger's municipal source water supply shall be monitored as follows:

| <u>Constituent/Parameter</u> | <u>Units</u> | <u>Measurement</u> | <u>Frequency</u>    |
|------------------------------|--------------|--------------------|---------------------|
| EC <sup>1</sup>              | µmhos/cm     | Grab               | 1/Year <sup>2</sup> |

<sup>1</sup> Report as a flow-weighted average from all supply wells and include copies of supporting calculations with monitoring reports.

<sup>2</sup> In October

### SLUDGE MONITORING

To ensure that industrial and other discharges to the wastewater treatment facility are not interfering with treatment process, the Discharger shall collect a composite sample of sludge annually, as set forth by Title 40 Code of Federal Regulations (CFR) Part 503.16. Any Notice of Necessary Information (NANI) form prepared for submittal to the United States Environmental Protection Agency shall be forwarded to the Regional Water Board.

Composite samples shall be collected in accordance with the Environmental Protection Agency's *POTW Sludge Sampling And Analysis Guidance Document* (EPA/ 833B89100, August 1989) and test for metals:

|            |         |          |
|------------|---------|----------|
| Arsenic    | Copper  | Nickel   |
| Cadmium    | Lead    | Selenium |
| Molybdenum | Mercury | Zinc     |

The control of pathogens and the reduction of vector attraction shall be achieved in accordance with the Environmental Protection Agency's *Control of Pathogens and Vectors In sewage Sludge* (EPA/625-R-92/013, July 2003).

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling, application, and disposal activities. The frequency of entries is discretionary; however, a log should be complete enough to serve as a basis for part of the annual report.

### USE AREA MONITORING

The amounts of water and/or recycled water (in acre-feet) applied to the Use Areas and amounts of chemical fertilizers (in pounds of nitrogen per acre) shall be measured and reported quarterly. The monitoring report shall include a map showing the Use Area, crops planted in those areas, and the quantity of recycled water, irrigation water and commercial

fertilizer nitrogen applied to each. To calculate the amount of nitrogen from the effluent, use the most recent average nitrogen concentration.

## REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions. Daily, weekly, monthly, and quarterly data shall be reported **in quarterly** monitoring reports.

Monitoring data and/or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. When reports contain laboratory analyses performed by the Discharger and the chief plant operator is not in the direct line of supervision of the laboratory, reports must also be signed and certified by the chief of the laboratory.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the discharge monitoring report.

### A. Quarterly Reports

Daily, weekly, monthly, and quarterly monitoring data shall be reported in quarterly monitoring reports. Quarterly monitoring reports shall be submitted to the Regional Water Board **by the 1<sup>st</sup> day of the second month after the calendar quarter** (i.e., the 1<sup>st</sup> Quarter Report is due by 1 May, 2<sup>nd</sup> Quarter Report is due by 1 August, and the 3<sup>rd</sup> Quarter Report is due 1 November). Quarterly monitoring reports shall include all monitoring data required in the monthly monitoring schedule, and the data from quarterly monitoring events.

### B. Annual Reports

An Annual Report shall be prepared as a fourth quarter monitoring report. The Annual Report will include all monitoring data required in the quarterly schedule plus the results of any annually sampled constituents (general minerals, selected metals, etc). The Annual Report shall be submitted to the Regional Board **by 1 February of the year following the year the samples were collected**. In addition to the data normally presented, the Annual Report shall include the following:

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal;
2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations;

3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4);
4. A statement whether the current operation and maintenance manual, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy;
5. The results of an annual evaluation conducted pursuant to Standard Provisions E.4 and a figure depicting monthly average discharge flow for the previous five calendar years;
6. A summary of sludge monitoring, including:
  - a. Annual sludge production in dry tons and percent solids;
  - b. A schematic diagram showing sludge handling facilities and solids flow diagram; and
  - c. A description of disposal methods, including the following information related to the disposal methods used at the WWTF. If more than one method is used, include the percentage of sludge production disposed of by each method.
    - i. For **landfill disposal**, include (a) the Order numbers that regulate the landfill(s) used, (b) the present classifications of the landfill(s) used, and (c) the names and locations of the facilities receiving the sludge.
    - ii. For **land application**, include: (a) the locations of the site(s), and (b) the Order number of any WDRs that regulates the site(s).
    - iii. For **incineration**, include: (a) the names and location of the site(s) where sludge incineration occurs, (b) the Order numbers of WDRs that regulate the site(s), (c) the disposal method of ash, and (d) the names and locations of facilities receiving ash (if applicable); and
    - iv. For **composting**, include: (a) the location of the site(s), and (b) the order numbers of any WDRs that regulate the site(s).
7. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

All technical reports required herein must be overseen and certified by a California registered civil engineer, certified engineering geologist, or certified hydrogeologist in accordance with California Business and Professions Code, sections 6735, 7835, and 7835.1.

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

A transmittal letter shall accompany each self-monitoring report. The letter shall discuss any violations during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report

describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

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

Ordered by: \_\_\_\_\_

PAMELA C. CREEDON, Executive Officer

26 October 2007

\_\_\_\_\_  
(Date)

ARP

## INFORMATION SHEET

ORDER NO. R5-2007-0152  
INTERSTATE -5 UTILITY COMPANY WWTF  
KERN COUNTY

### **Background**

The Interstate-5 Utility Company (Discharger) owns and operates a wastewater collection, treatment, and disposal facility (WWTF) to provide sewerage services to eight gas stations, three fast food restaurants, four motels, two truck washing facilities, and one residence at the junction of Interstate Five and Highway 58. The WWTF has an average daily flow of 0.11 million gallons per day (mgd).

Waste Discharge Requirements (WDRs) Order No. 98-005 adopted by the Regional Water Board on 23 January 1998, limits the discharge to 0.19 mgd. The WDRs establish effluent limits on a monthly basis for 5-day biochemical oxygen demand (BOD<sub>5</sub>), and settleable solids (SS).

The WWTF consists of the wastewater collection system; influent pump station; headworks with a grinder; two extended aeration package treatment plants (Treatment Units 1 and 2) operated in parallel followed by a third package treatment plant (Treatment Unit 3); and three evaporation and percolation ponds (Ponds 1 through 3). The Discharger may also operate all Treatment Units in parallel, but typical operation is described above. Pond 1 overflows into Pond 2 and total almost 2 acres. Pond 3 is 8 acres, and 800 feet north of Ponds 1 and 2.

The Discharger is not increasing discharge flow or changing the nature and character of the discharge, but the WDRs need to be updated to reflect its current WWTF and Regional Water Board plans and policies.

### **Water Recycling**

The Discharger recycles undisinfected secondary-treated effluent on approximately 23 acres of pasture (hereafter Use Area) owned by the Discharger for grazing horses and non-milking cattle. The Use Area is graded to collect all tailwater in Ponds 1 and 2, preventing off site discharges. The discharge has not been characterized for total nitrogen.

### **Solids and Biosolids Disposal**

Screenings are ground at the headworks. However, if the grinder is not operating, must be manually removed from the Treatment Units and placed in a dumpster prior to disposal at an offsite landfill. Currently, wasted sludge from the secondary clarifier is pumped to an aerobic digester chamber for further treatment and then pumped and hauled offsite for disposal at an authorized facility. Historically, the Discharger dried the sludge onsite and then applied it to areas surrounding the WWTF.

### **Groundwater Conditions**

Regional groundwater is approximately 100 feet below ground surface and flows generally to the north, northwesterly, with perched groundwater table at about 20 ft bgs. In the discharge vicinity, the "modified E-clay" layer occurs at about 350 to 400 feet bgs. Shallow groundwater in the discharge vicinity varies in quality with respect to salinity (EC 941 to 4,400 µmhos/cm)

and nitrate as N (<0.2 to 27 mg/L). However, groundwater data within the area is limited. The closest monitoring wells are at the Buttonwillow Landfill, about 3 miles northwest of the WWTF. Shallow background monitoring wells at the Landfill show an EC of about 2,500 µmhos/cm.

Generally, water quality is better in the confined aquifer below the E-clay. Wells in the area are likely perforated above and below the E-clay.

The Discharger is currently not required to monitor groundwater, so water quality data within the immediate vicinity of the WWTF in the uppermost groundwater and groundwater just above the E-clay layer is limited.

### **Compliance History**

The Discharger exceeds the effluent limitation for BOD<sub>5</sub> specified in WDRs Order No. 98-005 Discharge Specification B.10. Quarterly SMRs from January 2006 through March 2007 show the following quality.

| <u>Date</u> | <u>BOD<sub>5</sub> (mg/L)</u> | <u>Date</u> | <u>BOD<sub>5</sub> (mg/L)</u> |
|-------------|-------------------------------|-------------|-------------------------------|
| Jan-06      | 32                            | Sep-06      | 32                            |
| Feb-06      | 80                            | Oct-06      | 50                            |
| Mar-06      | 66                            | Nov-06      | 86                            |
| Apr-06      | NS <sup>1</sup>               | Dec-06      | 23                            |
| May-06      | 13                            | Jan-07      | 32                            |
| Jun-06      | NS                            | Feb-07      | 150                           |
| Jul-06      | 48                            | Mar-07      | 16                            |
| Aug-06      | 33                            |             |                               |

<sup>1</sup> Not sampled

The elevated effluent BOD<sub>5</sub> concentrations are sporadic and may be due, in part, to organic and hydraulic overloading from the fluctuations in flow from the variance in traffic from travel during peak holiday and summer seasons. A recent inspection of the WWTF indicated that overall operation and maintenance of the WWTF could be improved. Currently, only two of the three package plants are operating. The Discharger was issued a Notice of Violation (NOV) on 9 July 2007 for not adequately maintaining the WWTF and for violations of the BOD<sub>5</sub> limitation. Formal enforcement is not be considered at this time, as the most violations can likely be resolved informally, and with some minor improvements.

### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

The Basin Plan indicates that the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Regional Water Board encourages proactive management of waste streams by dischargers to

control addition of salt through use, and has established an incremental EC limitation of 500  $\mu\text{mhos/cm}$  or a maximum of 1,000  $\mu\text{mhos/cm}$ , as the measure of the maximum permissible addition of salt constituents through use.

Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

### **Antidegradation**

The antidegradation directives of State Water Board Resolution No. 68-16 (Resolution No. 68-16), "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with this directive are set forth in the basin plan.

The discharge is an existing discharge and will not change in character or volume from that allowed by WDRs Order No. 92-035. The overall mass of constituents, and therefore, the potential to impact water quality, remain unchanged.

The WWTF provides treatment and control by incorporating low salinity source water; effluent recycling, secondary treatment of the wastewater, appropriate biosolids storage and disposal practices, and an Operation and Maintenance (O&M) manual.

### **Title 27**

Title 27, California Code of Regulations (CCR), Section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are part of the WWTF are considered exempt from Title 27 under section 20090(a), provided that the facilities not result in a violation of any water quality objective. However, residual sludge (for the purposes of the proposed Order, sludge that will not be subjected to further treatment by the WWTF) is not exempt from Title 27. Solid waste (e.g., grit and screenings) that results from treatment of domestic sewage and industrial waste also is not exempt from Title 27. This residual sludge and solid waste are subject to the provisions of Title 27.

Accordingly, the municipal discharge of effluent and the operation of treatment or storage facilities associated with a municipal wastewater treatment plant can be allowed without requiring compliance with Title 27, but only if resulting degradation of groundwater is in accordance with the Basin Plan.

### **CEQA**

The Discharger is not increasing discharge flow or changing the nature and character of the discharge, therefore the issuance of this Order is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended).

### **Proposed Order Terms and Conditions**

#### **Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions**

The proposed Order prohibits discharge to surface waters and water drainage courses.

The proposed Order would carry over the current Order's monthly average daily discharge flow limitation. The proposed Order would prescribe effluent limits for BOD<sub>5</sub> and total suspended solids (TSS). The Basin Plan specifies varying levels of treatment based on site-specific conditions. The proposed Order does not include the Basin Plan's 80 percent removal standard for BOD and TSS, each, as the discharge is a privately owned treatment facility and in an isolated area that poses little risk of nuisance. A minimum BOD and TSS limit of 40 mg/L, each is sufficient to prevent nuisance and for use as an irrigation water on certain types of crops. The secondary treatment technology being implemented will result in an effluent of at least that quality, and will likely be higher than that reflected in the effluent limitations.

The proposed Order would establish an effluent limitation for EC that reflects the Regional Water Board policy for managing the salts within the Tulare Lake Basin. The EC of the effluent (1100 µmhos/cm based on one sample) is, in general less than the receiving water (941 to 4400 µmhos/cm), but slightly greater than source water (380 µmhos/cm) plus 500 µmhos/cm. Although the discharge is primarily domestic wastewater, it is a commercial discharge, and therefore does not have the same elements of a municipal wastewater treatment facility. As a non-municipal WWTF, it should not be expected to meet the salinity standard of 500 µmhos/cm plus source water EC. The Discharger is not required to monitor effluent EC. Based on a single sample collected during an inspection, the effluent EC is greater than the 1000 µmhos/cm. Insufficient data exists to adequately characterize the discharge. Therefore, the WDRs require effluent EC monitoring, and if EC appears to exceed the limit, the Executive Officer may issue a letter pursuant to CWC Section 13267 requiring the Discharger to submit salinity reduction evaluation.

The discharge requirements regarding dissolved oxygen and freeboard are consistent with Regional Water Board policy for the prevention of nuisance conditions, and are applied to all such facilities.

The proposed WDRs would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedances of these objectives or natural background water quality, whichever is greater.

### **Monitoring Requirements**

Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

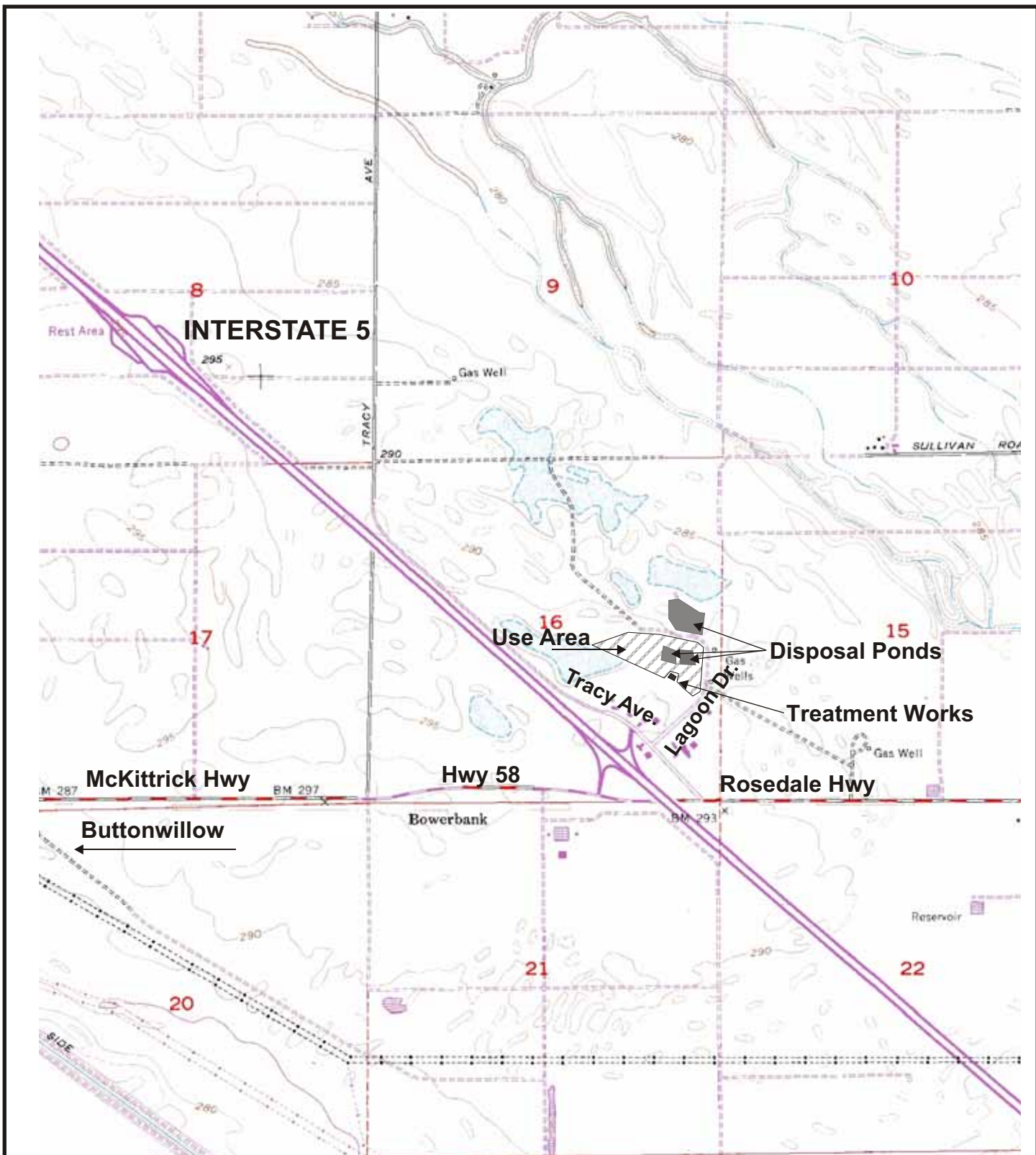
The proposed Order includes monitoring of the effluent, ponds, sludge, use area, and water supply. The monitoring is necessary to evaluate water quality and the potential extent of the degradation from the discharge.

The Discharger is currently not required to monitor nitrogen; therefore, there is very little data on nitrogen concentrations. Nitrogen monitoring is necessary to determine the nitrogen loading rates to the Use Area. The proposed monitoring and reporting program require effluent monitoring of total nitrogen quarterly for the first two years to obtain a statistically representative sample (e.g., eight data points). Once the effluent is characterized, nitrogen monitoring would no longer be required.

### **Reopener**

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. The proposed Order would set limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

ARP



Map Source:  
 BUTTONWILLOW 7.5 Minute USGS Quadrangle  
 Section 1, T27S, R21E, MDB&M



SCALE  
 1 INCH = 2,000 FEET

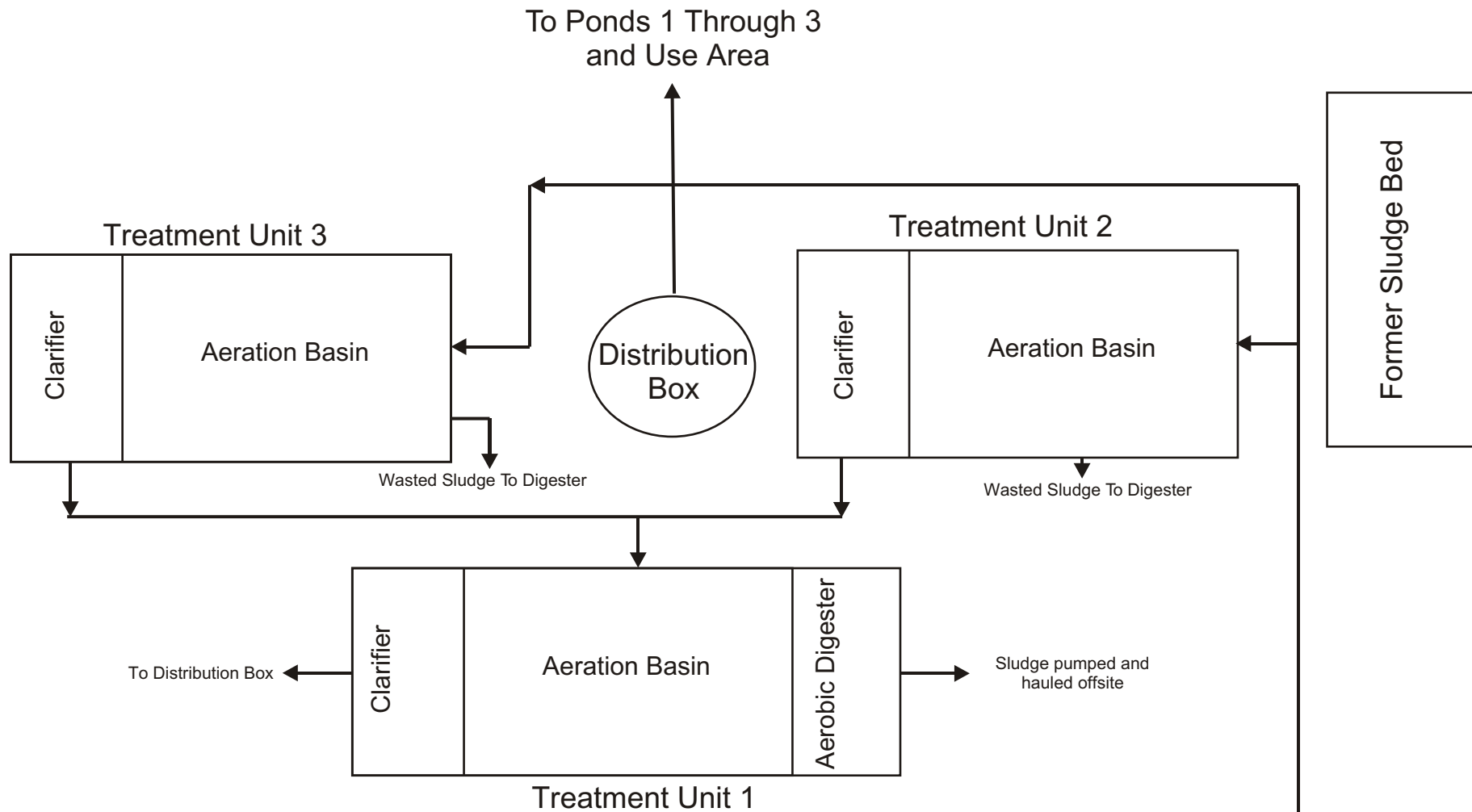
\*WWTF and street locations approximate

## SITE LOCATION MAP

ORDER NO. R5 -2007-0152

WASTE DISCHARGE REQUIREMENTS  
 FOR  
 INTERSTATE-5 UTILITY COMPANY  
 WASTEWATER TREATMENT FACILITY  
 KERN COUNTY

**ATTACHMENT A**



## PLAN VIEW AND PROCESS FLOW DIAGRAM

ORDER NO. R5-R5-2007-0152

WASTE DISCHARGE REQUIREMENTS  
FOR  
INTERSTATE-5 UTILITY COMPANY  
KERN COUNTY