

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 98-090

WASTE DISCHARGE REQUIREMENTS
FOR
IVANHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE COUNTY

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

1. Ivanhoe Public Utility District (hereafter Discharger) operates a wastewater treatment facility which serves an approximate population of 4200. Waste Discharge Requirements (WDRs) Order No. 95-013, adopted by the Board on 27 January 1995, prescribes requirements for the discharge of treated wastewater from the facility. The treatment facility is on 10 acres of Discharger owned land (Assessor's Parcel No. (APN) 108-026-14).
2. Treatment is provided by a clarigester and three stabilization ponds, which operate in series. Sludge from the clarigester is dried in a sludge drying bed. The design capacity of the treatment facility is 0.56 million gallons per day (mgd). Based on the Discharger's monitoring reports, current flows average 0.48 mgd. By a letter of 10 February 1998, the Discharger stated that reassessment of flow measurement shows current flows in the range of 0.39 mgd.
3. Treated wastewater from the third stabilization pond is recycled on 61.2 acres of Discharger owned pasture land (APNs 108-027-02, 108-027-03, 108-027-04, and 108-027-10). The pasture land is used for grazing of non-milking cattle.
4. On 14 October 1997, the Discharger submitted a Report of Waste Discharge requesting revised setback distances from the wastewater application area and domestic and irrigation wells. The request was made pursuant to new guidelines from the Department of Health Services, proposed for inclusion in Title 22, California Code of Regulations (CCR), Section 60301 et seq., (hereafter Title 22).
5. Based on the Discharger's self monitoring reports, the characteristics of the wastewater are as follows:

<u>Constituent</u>	<u>Concentration</u>	<u>Units</u>
BOD ₅	47	mg/l
pH	7	pH units
Conductivity ¹	934	µmhos/cm
Total nitrogen	24	mg/l
Total Phosphorus	4.1	mg/l

¹ Specific Electrical Conductance at 25 °C, also EC

WASTE DISCHARGE REQUIREMENTS
IVANHOE PUD
TULARE COUNTY

-2-

6. In February 1997, the Discharger submitted a hydrologic balance report prepared by a California registered civil engineer to demonstrate that sufficient capacity exists at the WWTF for design flow of 0.56 mgd. The Board reviewed and concurred with the conclusions of the report.
7. The facility is in Section 11, T18S, R25E, MDB&M, as shown in Attachment A, which is attached hereto and part of this Order by reference. Surface water drainage is to the St. Johns River, which is about 2 miles south of the facility. The site lies within the Kaweah Delta Hydrologic Area (No. 558.10) in the South Valley Floor Hydrologic Unit, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
8. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. These requirements implement the Basin Plan.
9. The beneficial uses of the St. Johns River, a valley floor water, as identified in the Basin Plan, include industrial and agricultural supply; water contact and non-contact water recreation; warm fresh water habitat; preservation of rare and endangered species; and groundwater recharge.
10. The beneficial uses of underlying groundwater are municipal, industrial, and agricultural supply.
11. Soils in the area are Cajon sandy loam which provide good surface and subsurface drainage.
12. Based on the California Department of Water Resources' (DWR) records, the depth of groundwater in the area is about 70 feet. The EC of the groundwater ranges between 450 and 900 μ mhos/cm, total dissolved solids (TDS) are about 240 mg/l, chlorides are about 10 mg/l, and sulfates are about 4 mg/l.
13. The average annual precipitation in the area is 12 inches and the average annual pan evaporation is about 84 inches, based on DWR records.
14. The Regional Board has considered antidegradation pursuant to State Board Resolution No. 68-16 and finds that the permitted discharge is consistent with those provisions, and is unlikely to cause an increase in groundwater constituents above that of background levels.
15. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, CCR, Section 15301.

WASTE DISCHARGE REQUIREMENTS
IVANHOE PUD
TULARE COUNTY

-3-

16. The California Department of Health Services has established statewide reclamation criteria in Title 22, for the use of reclaimed water and has developed guidelines for specific uses.
17. The Board consulted with the Department of Health Services, the Tulare County Health Department and the appropriate Mosquito Abatement District, and considered their recommendations regarding public health aspects for use of reclaimed water.
18. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 95-013 is rescinded and Ivanhoe Public Utility District, its 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. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated or partially treated waste is prohibited except as allowed in Provision E.2 of Standard Provisions and Reporting Requirements.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510, et seq., or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.
4. The use of untreated or partially treated waste for irrigation is prohibited.
5. Grazing of milking animals within the area irrigated with effluent is prohibited unless such irrigation has ceased for at least thirty days.

B. Discharge Specifications

1. The monthly average daily discharge shall not exceed 0.56 million gallons per day.
2. The discharge shall remain within the designated treatment and disposal area at all times.

WASTE DISCHARGE REQUIREMENTS
 IVANHOE PUD
 TULARE COUNTY

3. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.
4. As a means of discerning compliance with Discharge Specification No. B.3, the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/l.
5. The maximum specific electrical conductance (EC) of the discharge shall not exceed the source water EC plus 500 μ mhos/cm.
6. The treatment facilities and disposal areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
7. The effluent from the third stabilization pond shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD ₅ ¹	mg/l	70	120
Settleable Solids	ml/l	0.2	0.5

¹ Five-day, 20° Celsius biochemical oxygen demand.

8. Ponds shall not have a pH less than 6.5 or greater than 8.5.
9. Ponds shall be managed to prevent breeding of mosquitoes. In particular:
 - a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
10. Pond levees shall be maintained free of obstructions and be of sufficient width (greater than ten feet) to provide reasonable, safe, and effective access to vector control personnel.

WASTE DISCHARGE REQUIREMENTS
IVANHOE PUD
TULARE COUNTY

-5-

11. The ponds, in conjunction with irrigation of pasture land, shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration. 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. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).
12. On or about 10 October of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification B.11

C. Sludge Disposal

1. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.
2. Any proposed change in sludge use or disposal practice shall be reported to the Executive Officer and USEPA Regional Administrator **at least 90 days in advance** of the change.
3. Use and disposal of sewage sludge shall comply with existing federal and state laws and regulations, including permitting requirements and technical standards included in 40 CFR 503.

If the State Water Resources Control Board and the Regional Water Quality Control Boards assume primacy to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger is encouraged to comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

D. Groundwater Limitations

The discharge, in combination with other sources, shall not cause underlying groundwater to contain constituents in concentration statistically greater than background water quality, except conductivity. Regarding conductivity, the Discharger shall not cause underlying groundwater to exceed an incremental increase in conductivity greater than 15 μ mhos/cm over any five-year period.

E. Recycled Water Specifications

1. The recycling of wastewater shall be limited to furrow or flood irrigation of pasture.

WASTE DISCHARGE REQUIREMENTS
IVANHOE PUD
TULARE COUNTY

2. Recycled water shall remain within the designated application area at all times.
3. Recycled water used for irrigation shall be managed to minimize erosion.
4. 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
50	Drainage courses
100	Irrigation wells ¹
150	Domestic wells

¹ A lesser setback distance may be approved by the Executive Officer when a California registered civil engineer or engineering geologist demonstrates, to the satisfaction of the Executive Officer and the California Department of Health Services, that the lesser distance does not result in impacts to the wells either due to special construction features of the wells or due to site conditions. To be valid, approval must be in writing.

5. The perimeter of the application area shall be graded to prevent ponding along public roads or other public areas.
6. Application of recycled water to the application area shall be at reasonable rates considering the crop, soil, climate, and irrigation management system.
7. Areas irrigated with recycled water shall be managed to prevent breeding of mosquitoes. More specifically:
 - a. All applied irrigation water must infiltrate completely within a 48-hour period.
 - b. Ditches must be maintained free of emergent, marginal, and floating vegetation.
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store water.

WASTE DISCHARGE REQUIREMENTS
IVANHOE PUD
TULARE COUNTY

-7-

8. All areas where recycled water is used shall be posted with conspicuous signs that present the following wording in size that can be clearly read by the public:

"RECYCLED WATER - DO NOT DRINK - WASH THOROUGHLY WITH SOAP AND DRINKING WATER IF CONTACT OCCURS." Alternative wording may be accepted on approval by the Executive Officer and concurrence by the California Department of Health Services. Each sign shall display the international symbol comparable to the one shown on Attachment B.

F. Provisions

1. The Discharger shall comply with Monitoring and Reporting Program No. 98-090, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
2. The Discharger 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)."
3. By **31 January 1999**, submit an operation and maintenance (O&M) manual for the WWTF.
4. In the event of any change in control or ownership of land or waste discharge facilities described herein, 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 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 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.

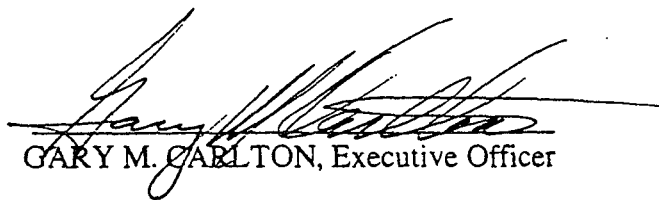
5. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

WASTE DISCHARGE REQUIREMENTS
IVANHOE PUD
TULARE COUNTY

-8-

6. A copy of this Order shall be kept at the discharge facility for reference by wastewater treatment plant operating personnel. Key operating personnel shall be familiar with its contents.
7. If reclaimed water is used for construction purpose, it shall comply with the most current edition of "Guidelines for Use of Reclaimed Water for Construction Purposes". Other uses of reclaimed water not specifically authorized herein shall be subject to the approval of the Executive Officer and shall comply with 22 CCR, Division 4.
8. The Board will review this Order periodically and will revise requirements when necessary.

I, GARY M. CARLTON, 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 17 April 1998.


GARY M. CARLTON, Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 98-090

FOR
IVANHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE COUNTY

INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks and approximately the same time as an effluent sample. Influent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
Flow	mgd	Metered	Continuously
BOD ₅	mg/l	Grab	Annually

¹ Metering shall be by direct measurement of wastewater flow or, alternatively, by calculation from pump operating hours and pump efficiency. If measurement is calculated from pump operating hours and efficiency, the pump efficiency shall be checked at least yearly to ensure accuracy.

EFFLUENT MONITORING

Effluent samples shall be collected at the outlet of the third stabilization pond, just prior to disposal to the reclamation area. Effluent samples shall be representative of the volume and nature of the discharge. Time of collection of a grab sample shall be recorded. Effluent monitoring shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
Flow	mgd	Estimate	Weekly
pH	pH Units	Grab	Weekly
Settleable Solids	ml/l	Grab	Weekly
BOD ₅	mg/l	Grab	Weekly
EC	µmhos/cm	Grab	Weekly

MONITORING AND REPORTING PROGRAM
 IVANHOE PUD WWTF
 TULARE COUNTY

EFFLUENT MONITORING - Continued

<u>Constituent</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
Total Nitrogen	mg/l	Grab	Quarterly
Total Suspended Solids	mg/l	Grab	Annually
Total Dissolved Solids	mg/l	Grab	Annually

POND MONITORING

The freeboard shall be monitored on all ponds to the nearest tenth of a foot. Pond monitoring shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
Dissolved Oxygen ¹	mg/l	Grab	Weekly
Freeboard	feet	Observation	Weekly

¹ Samples shall be collected from each pond near the outlet and analyzed for dissolved oxygen. Samples shall be collected between 0800 and 0900 hours.

Permanent markers shall be placed in the ponds with calibration indicating the water level at design capacity and available operational freeboard.

In addition, the Discharger shall inspect the condition of the ponds once per week and write visual observation in a bound log book. 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 pond surface and their location; whether burrowing animals or insects are present; and the color of the ponds (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.). A copy of the entries made in the log during each month shall be submitted along with the monitoring report the following month. Where the O&M manual indicates remedial action is necessary, the Discharger shall briefly explain in the transmittal what action has been taken or is scheduled to be taken.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the water supply can be obtained. Water supply monitoring shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
EC ¹	µmhos/cm	Grab	Annually

¹ If the source water is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations.

SLUDGE MONITORING

A composite sample of sludge shall be collected annually in accordance with EPA's *POTW SLUDGE SAMPLING AND ANALYSIS GUIDANCE DOCUMENT, AUGUST 1989*, and tested for the following metals:

Arsenic	Copper	Molybdenum	Zinc
Cadmium	Lead	Nickel	
Chromium	Mercury	Selenium	

Sampling records shall be maintained for a minimum of five years. A log shall be kept of sludge quantities generated and handling and disposal activities.

The Discharger shall submit annual reports containing the following:

- a. Annual sludge production in dry tons and percent solids.
- b. A schematic diagram showing sludge handling facilities and solids flow diagram.
- c. Depth of application and drying time for sludge drying beds.
- d. A description of disposal methods, including the following information related to the disposal methods used at the facility. If more than one method is used, include the percentage of annual sludge production disposed by each method.

MONITORING AND REPORTING PROGRAM
IVANHOE PUD WWTF
TULARE COUNTY

-4-

- (1) For **landfill disposal**, include: (a) the Order numbers of WDRs 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 sludge.
- (2) For **land application**, include: (a) the locations of the site(s), (b) the Order numbers of any WDRs that regulate the site(s), (c) the application rate in pounds/acre/year (specify wet or dry), and (d) subsequent uses of the land.
- (3) For **incineration**, include: (a) the names and locations 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).
- (4) For **composting**, include: (a) the location of the sites(s), and (b) the Order numbers of any WDRs that regulate the site(s).

Prior to any disposal or land application of sewage sludge, or removal of sewage sludge from the wastewater treatment plant site, the monitoring and record keeping requirements of 40 CFR 503 shall be met.

REPORTING

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly monitoring reports shall be submitted to the Board by the **20th day of the following month**. Quarterly monitoring shall be reported by the 20th day following the calendar quarter. Annual monitoring reports shall be submitted by **31 January of each year**.

In reporting the 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.

The Discharger may also be requested to submit an annual report to the Board with tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

MONITORING AND REPORTING PROGRAM
IVANHOE PUD WWTF
TULARE COUNTY

-5-

By **31 January of each year**, the Discharger shall submit a written report to the Executive Officer containing the following:

- a. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.
- b. The names and telephone numbers of persons to contact regarding the facility for emergency and routine situations.
- c. A statement certifying when the flowmeter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration (Standard Provision C.4).
- d. A statement whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
- e. The total quantity of sludge disposed of during the previous year and ultimate disposal site(s).

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

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

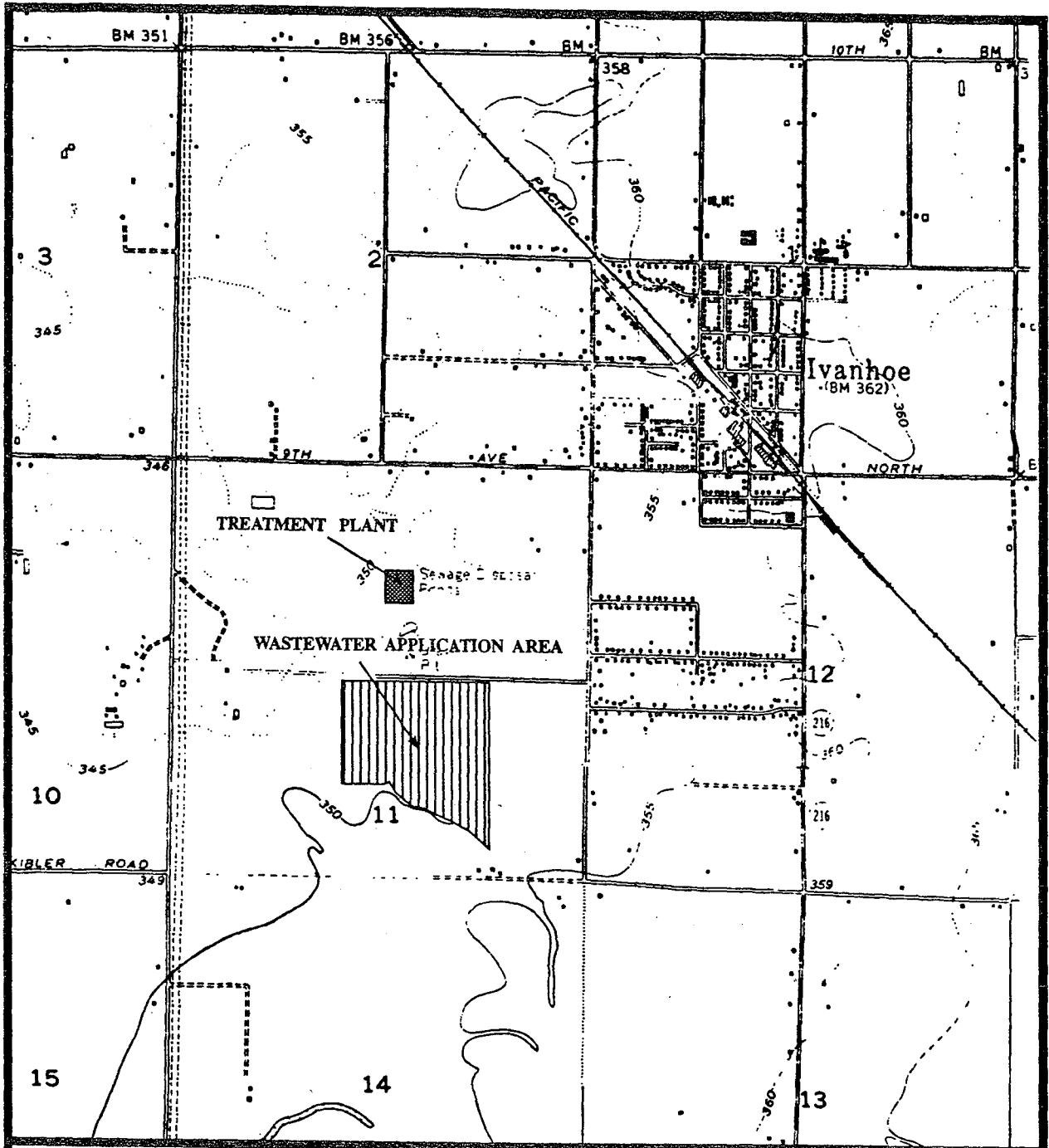
Ordered by:


GARY M. CARLTON, Executive Officer

17 April 1998

(Date)

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ATTACHMENT A
Vicinity Map

**IVANHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
TULARE COUNTY**

Section 11, T18S, R25E, MDB&M
Ivanhoe & Exeter, 7 1/2' USGS Quad

Not to Scale





INFORMATION SHEET

IVANHOE PUBLIC UTILITY DISTRICT WASTEWATER TREATMENT FACILITY TULARE COUNTY

Ivanhoe Public Utility District operates a wastewater treatment facility consisting of a clarigester, three stabilization ponds, and a sludge drying bed. Effluent is recycled on 61.2 acres of pasture land. The pasture land is leased by the PUD for grazing of calves and beef cattle. The facility serves an approximate population of 4200 people. Industries discharging to the treatment facility are primarily citrus packing plants.

Surface water drainage from the facility is to St. Johns River, about 2 miles south of the facility. The beneficial uses of the St. Johns River includes industrial and agricultural supply, water contact and non-contact water recreation, warm fresh water habitat, preservation of rare and endangered species, and groundwater replenishment.

Groundwater in the area is at a depth of about 70 feet. The quality of groundwater is good, with an EC of 450 to 900 $\mu\text{mhos/cm}$. The beneficial uses of the groundwater include municipal, industrial and agricultural supply.

Soils in the area include Cajon sandy loam which provide good surface and subsurface drainage.

Average annual precipitation in the area is about 12 inches and average annual pan evaporation is about 84 inches.

This Order contains discharge specifications to limit nuisances and contains water recycling requirements to prevent health hazards.

This is an existing facility and the action to update waste discharge requirements for this facility is exempt from the provisions of the California Environmental Quality Act, in accordance with Section 15301, Title 14, California Code of Regulations.

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