

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 96-050

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF LEMOORE
WASTEWATER TREATMENT FACILITY
KINGS COUNTY

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

1. The City of Lemoore (hereafter Discharger) submitted a Report of Waste Discharge and a site evaluation report dated 25 October 1990, in support of a proposed flow increase and a change in the method of treatment at its wastewater treatment facility (WWTF). The property of approximately 83 acres (Assessor's Parcel Nos. 024-052-73, 024-052-74, and 024-052-80) is owned by the City of Lemoore.
2. Waste Discharge Requirements Order No. 78-89, adopted by the Board on 28 July 1978, prescribes requirements for a discharge of 2.0 million gallons per day (mgd) from the WWTF to the Westlake Farms main irrigation canal through a six-mile pipeline. The wastewater supplements irrigation of approximately 50,000 acres of crops, including grain for animal feed and cotton on Westlake Farms. No vegetable crops are grown.
3. Order No. 78-89 must be revised to reflect the flow increase, the change in method of waste treatment, and current plans and policies of the Board.
4. The WWTF was completed in September 1974 with the aid of a Clean Water Grant. The completed WWTF consisted of four aerated lagoons, with Hinde diffused air systems, and a fifth pond for storage of stormwater and emergency storage of effluent. Plant improvements that included removal of the Hinde diffused air system and installation of floating aerators were completed in 1990, increasing the plant treatment and hydraulic capacity from 2.0 mgd to 4.4 mgd. The Report of Waste Discharge indicates that the 4.4 mgd capacity is based on influent waste characteristics, treatment pond sizing, and the assumption that an adequately sized outfall line for discharge of treated effluent would be constructed. The existing 12-inch diameter effluent outfall line limits the ability of the WWTF to discharge water to a maximum of 2.5 mgd, below the potential plant treatment and hydraulic capacity of 4.4 mgd.
5. Wastewater includes industrial and domestic components. The domestic wastewater discharge averages 0.50 mgd. The industrial wastewater discharge includes discharges from the Leprino Foods cheese processing plant (0.65 mgd), the Candlewick Yarns

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-2-

textile plant (0.03 to 0.06 mgd), and the S-K Foods tomato processing plant (0.07 to 0.3 mgd). Wastewater from S-K Foods varies seasonally, with peak flows of 0.3 mgd occurring in the months of June through October. Effluent from the industrial and domestic aerated lagoons is combined in the third and fourth ponds of the system (Pond 2 and Pond 3, connected in series) and conveyed via pipeline to the Westlake Canal about 6 miles to the southwest. The total WWTF discharge flow averages 2.2 mgd from November through May of each year and 2.5 mgd from June through October. The plant is currently operating at the maximum flow capacity of the outfall line, 2.5 mgd, for part of the year.

Sludge from the treatment process is contained in the aerated lagoons and has not been removed for disposal since the plant was constructed in 1974. Sludge was transferred from two of the aerated lagoons to the storage pond in 1987.

6. Title 23, California Code of Regulations (CCR), Section 2232, specifies that whenever a publicly owned WWTF will reach capacity within four years, the Board shall notify the Discharger that the Board will consider adopting a time schedule order or other enforcement order unless the Discharger can demonstrate that adequate steps are being taken to address the capacity problem.
7. The WWTF is in Section 15, T19S, R20E, MDB&M, with surface water drainage to the Kings River by sheet flow, as shown in Attachment A, which is attached hereto and part of this Order by reference. The site lies within the Hanford-Lemoore Hydrologic Area (No.551.90), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986. The WWTF is outside of any designated 100-year floodplain.
8. The outfall location for discharge of the effluent is the beginning of the Westlake Canal in Section 25, T19S, R19E, MDB&M, as shown in Attachment B. Pumped groundwater is discharged to the canal and mixed with wastewater effluent about 50 feet downstream of the outfall. In all years except for some drought years, the canal water is supplemented with water from the Kings River provided by the Lemoore Canal Company through an agreement with Westlake Farms. The Westlake canal is full year-round, providing a 2:1 to 25:1 (canal water: effluent) range of dilution, but sometimes provides less (as in three of 24 recent months). In the fall (September through November), undiluted effluent is stored in the canal until irrigation resumes.
9. The Westlake Canal connects with the Blakely Canal (collectively hereafter canals) approximately 8 miles downstream of the effluent outfall. The Blakely Canal originates at Empire Weir No. 2 on the Kings River. Both canals are entirely on Westlake Farms

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-3-

property, have no outlet to other surface waters, and are waters of the State. The Westlake Canal crosses under several county roads where it is accessible to the public. The Blakely Canal parallels State Route 41 for approximately 6 miles. The Westlake Canal is posted at all road access points to indicate that it contains undisinfected wastewater; however, the Blakely Canal downstream of the Westlake Canal is readily accessible to the public along State Route 41 and is not posted to indicate that it contains undisinfected wastewater. The Blakely Canal also receives 0.12 mgd of disinfected wastewater effluent from the Kettleman City Sanitary District WWTF at a downstream location, approximately 7 miles from its connection with the Westlake Canal.

10. The Board adopted a Water Quality Control Plan for the Tulare Lake Basin (hereafter Basin Plan), which designates beneficial uses and contains water quality objectives for all waters of the Basin. These requirements implement the Basin Plan.
11. The canals are considered valley floor waters. As listed in the Basin Plan, the beneficial uses of these waters are industrial and agricultural supply; water contact and non-contact water recreation; warm fresh water habitat; wildlife habitat; preservation of rare and endangered species; and ground water recharge. Unlike other valley floor waters, actual beneficial uses of the canals are limited to agricultural supply, non-contact water recreation, warm fresh water habitat, wildlife habitat, and ground water recharge. The California Department of Fish and Game reports that warm water fish migrate to the canals by way of an upstream connection of the Blakely Canal to the Kings River at Empire Weir No. 2. The Department recommends a chlorine residual limitation of 0.01 mg/l and minimum dissolved oxygen concentration of 5 mg/l in the water of the canals to protect the water water fish population.
12. According to the Department of Water Resources, shallow ground water is unconfined, at a depth of approximately 10 feet below ground surface and of unknown quality. Deeper ground water, at a depth of 83 to 145 feet bgs, is of good quality with electrical conductivity (EC) of 660 to about 1,200 μ mhos/cm. This deeper ground water moves in a southwesterly direction.
13. The beneficial uses of underlying ground water are domestic, industrial, and agricultural supply.

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-4-

14. Soils at the site of the WWTF are sandy loams of the Grangeville series with moderate soil permeabilities. Based on testing of site soils with various mixtures of bentonite clay, 1.5 lbs of bentonite per square foot of wetted area were combined with the upper 4 inches of native soil and compacted in place in each pond to limit seepage losses. A water balance submitted for the ponds indicates seepage from the ponds is minimal.
15. City of Lemoore WWTF is identified as SIC 4952; which would need to obtain a NPDES stormwater permit due to flows greater than 1.0 mgd except that stormwater from the WWTF is contained in an on-site pond.
16. Statewide plans and policies applicable to this discharge and not referenced in the Basin Plan include the "Policy Statement on Wastewater Discharge to Watercourses in Water Deficient Areas, Resolution No. 79-45" and the "Policy with respect to Water Reclamation in California, Resolution No. 77-1".
17. The California Department of Health Services has established statewide reclamation criteria in Title 22, CCR, Section 60301, et seq. (hereafter Title 22) for use of reclaimed water, and has developed guidelines for specific uses. The Board consulted with the Department in developing appropriate conditions for this Order. To protect public health the Department recommends that the wastewater effluent be disinfected prior to discharge to the Westlake Canal such that the median number of coliform organisms does not exceed 23 MPN/100 ml.
18. On 3 January 1989, the City of Lemoore certified a final environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines for a flow of 3.3 mgd. The project as approved will not have a significant effect on water quality.
19. The permitted discharge is consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16.
20. 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.

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

21. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 78-89 is rescinded and the City of Lemoore, 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 other than the irrigation canal specified in Finding No. 8 is prohibited.
2. Bypass or overflow of untreated or partially treated waste is prohibited.
3. Discharge of waste classified as 'hazardous' or 'designated', as defined in Sections 2521(a) and 2522(a) of Title 23, CCR, is prohibited.

B. Discharge Specifications:

1. The monthly average discharge shall not exceed 2.5 mgd.
2. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.
3. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
4. The effluent from the treatment facility shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Maximum</u>
BOD ₅ ¹	mg/l	40	80
Settleable Solids	ml/l	0.2	0.5

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

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

5. Effective 15 February 1997, effluent from the treatment facility shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Median</u>	<u>Maximum</u>
Coliform Organisms	MPN ¹ /100 ml	23	500

¹ Most Probable Number.

6. The dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/l.
7. The discharge shall not have a pH less than 6.0 or greater than 9.0.
8. The maximum electrical conductivity (EC) of the discharge shall not exceed the average EC of the source water plus 500 μ mhos/cm.
9. Ponds shall be managed to prevent breeding of mosquitos. In particular:
- An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
 - Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - Dead algae, vegetation, and debris shall not accumulate on the water surface.
10. Public contact with wastewater at the WWTF and in the canal shall be precluded through such means as fences, signs, or other acceptable alternatives.

C. Sludge Disposal Specifications:

- Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Title 23, CCR, Section 2510, et seq. (Chapter 15) and approved by the Executive Officer.
- Any proposed change in sludge use or disposal practice shall be reported to the Executive Officer at least 90 days in advance of the change.

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-7-

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 accept primacy to implement regulations contained in 40 CFR 503, the Order may be reopened to incorporate appropriate time schedules and technical standards. (The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.)

D. Receiving Water Limitations:

In receiving water, the discharge shall not cause:

1. Concentrations of dissolved oxygen to fall below 5.0 mg/l.
2. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or on the stream bottom.
3. Oils, greases, waxes, floating material (liquids, solids, foams, and scums) or suspended material to create a nuisance or adversely affect beneficial uses.
4. Chlorine to be detected in concentrations equal to or greater than 0.01 mg/l.
5. Toxic substances to increase to concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
6. Esthetically undesirable discoloration.
7. Fungi, slimes, or other objectionable growths.
8. The normal ambient pH to fall below 6.5 or exceed 8.3.
9. The fecal coliform concentration in any 30-day period to exceed a geometric mean of 200 MPN/100 ml or cause more than 10 percent of total samples to exceed 400 MPN/100 ml.
10. Deposition of material that causes nuisance or adversely affects beneficial uses.

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-8-

11. Taste or odor-producing substances to impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to cause nuisance or adversely affect beneficial uses.
12. Violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board pursuant to the CWA and regulations adopted thereunder.

E. Ground Water Limitations:

The discharge, in combination with other sources, shall not cause underlying ground water to contain waste constituents in concentrations statistically greater than background water quality, excepting EC. The incremental increase of EC in any five-year period shall not exceed 15 μ mhos/cm.

F. Provisions:

1. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, ground water, cooling waters, and condensates that are essentially free of pollutants.
2. The Discharger shall comply with Monitoring and Reporting Program No. 96-050, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
3. The Discharger shall comply with all items of 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 commonly referenced as "Standard Provision(s)."
4. By 1 July 1996, the Discharger shall submit a technical report consisting of plans and specifications for compliance with the disinfection requirements of Discharge Specifications No. B.5. The report shall include a time schedule for full compliance by 15 March 1997 and must be prepared by a properly qualified engineer registered in California and experienced in the field of wastewater treatment.

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-9-

5. 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.

6. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or reclamation areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
7. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of or clearance from the State Water Resources Control Board, Division of Water Rights.
8. By 1 July 1996, the Discharger shall submit a technical report for achieving compliance with Title 23, CCR, Section 2232, as described in Finding No. 6. The report shall include plans, specifications, and a time schedule for providing treatment and outfall capacity for anticipated flows through the year 2000. Alternatively, the technical report can include a demonstration of how flow volumes will be prevented from exceeding the existing capacity.

Pursuant to Section 2232, the report shall conform with the following:


- a. The required technical report shall be reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

WASTE DISCHARGE REQUIREMENTS
CITY OF LEMOORE WWTF
KINGS COUNTY

-10-

- b. Public participation shall be required during the preparation of the technical report. The report shall be accompanied by a statement outlining how interested persons were involved in the preparation of the technical report.
9. The Discharger shall use the best practicable, cost-effective control technique currently available to comply with this Order.
10. 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.
11. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
12. The Board will review this Order periodically and will revise requirements when necessary.

I, WILLIAM H. CROOKS, 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 23 February 1996.



WILLIAM H. CROOKS, Executive Officer

LML:lml/fmc

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 96-050

FOR
CITY OF LEMOORE
WASTEWATER TREATMENT FACILITY
KINGS COUNTY

Specific sample station locations shall be established with concurrence of the Board's staff, and a description of the stations shall be submitted to Board and attached to this Program.

INFLUENT MONITORING

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

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
BOD ₅ ¹	mg/l	grab	Monthly
Settleable Solids	ml/l	grab	Monthly

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

EFFLUENT MONITORING

Effluent samples shall be collected prior to discharge to the canal. The following is the effluent monitoring program:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency¹</u>
Flow	mgd	Metered	Continuous
Settleable Solids	ml/l	Grab	2/Week
pH	pH Units	Grab	2/Week
BOD ₅ ²	mg/l	Grab	Weekly
Total Suspended Solids	mg/l	Grab	Weekly
Electrical Conductivity	μmhos/cm	Grab	2/month
Total Coliform Organisms	MPN/100 ml	Grab	2/week

* See footnotes next page

- ¹ If results of monitoring a pollutant appear to violate effluent limitations, but monitoring frequency is not sufficient to validate violation (e.g., the monthly average for BOD), or indicate a violation and potential upset of the treatment process (e.g., less than minimum D.O.), the frequency of sampling shall be increased to confirm the magnitude and duration of violation, if any, and aid in identification and resolution of the problem.
- ² Five-day, 20° Celsius biochemical oxygen demand.
- ³ Sample shall be collected at the outfall to the canal.

SLUDGE MONITORING

When sludge is removed from treatment ponds, but prior to disposal, a composite sample of sludge shall be analyzed, on a dry weight basis, for Total Solids (%), Nitrogen (total, NH₄-N, and NO₃-N), Total phosphorous, Total Potassium, Total PCBs, and totals of specific metals (Pb, Zn, Cu, Ni, Cd, and Ag). Analytical results shall be submitted to the Executive Officer. Analysis of soluble concentration of these specific metals shall be included as needed. If disposal is to land, a technical report analyzing application rates and procedures relative to Department of Health Services' Manual of Good Practices for Landspreading of Sewage Sludge and EPA's Process Design Manual for Land Application of Municipal Sludges and Title 23, California Code of Regulations, Section 2511 (f), shall be completed and submitted to the Executive Officer for approval. The report shall be prepared by a California registered civil engineer experienced in wastewater treatment and disposal.

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

POND MONITORING

The freeboard shall be monitored in each pond to the nearest tenth of a foot. Pond water monitoring shall include the following:

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency</u>
Freeboard	feet	Measurement	Weekly
Dissolved Oxygen ¹	mg/l	Grab	Daily

¹ Samples shall be collected at a depth of one foot from each pond, opposite the inlet, and analyzed for dissolved oxygen. Samples shall be collected between 0800 and 0900 hours.

MONITORING AND REPORTING PROGRAM
 CITY OF LEMOORE WWTF
 KINGS COUNTY

Permanent markers shall be placed in the pond 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 pond (e.g., dark sparkling green, dull green, yellow, grey, 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>Constituents</u>	<u>Unit</u>	<u>Sample Frequency</u>
Electrical Conductivity @ 25°C	μmhos/cm	Quarterly

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

RECEIVING WATER MONITORING

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency</u>
Dissolved Oxygen ¹	mg/l	Grab	Weekly
Electrical Conductivity ¹	μmhos/cm	Grab	Weekly
pH ¹	pH Units	Grab	Weekly
Chlorine Residual ^{1,2}	mg/l	Grab	Weekly
Fecal Coliform Organisms ¹	MPN/100 ml	Grab	Weekly

¹ Samples shall be collected within 300 feet downstream of the point of discharge.

² Samples shall be collected effective 15 February 1997.

REPORTING

Monthly monitoring reports shall be submitted to the Board by the **20th day of the month** following sample collection. Quarterly and annual monitoring results shall be submitted by the **20th day of the month** following each calendar quarter and year, respectively.

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 to illustrate clearly whether the discharge 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 calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

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.

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

- a. The names, titles, certificate grade (if any) and general responsibilities of persons operating and maintaining the wastewater treatment plant.
- b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
- c. A certified statement of when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who did 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).

MONITORING AND REPORTING PROGRAM
CITY OF LEMOORE WWTF
KINGS COUNTY

-5-

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

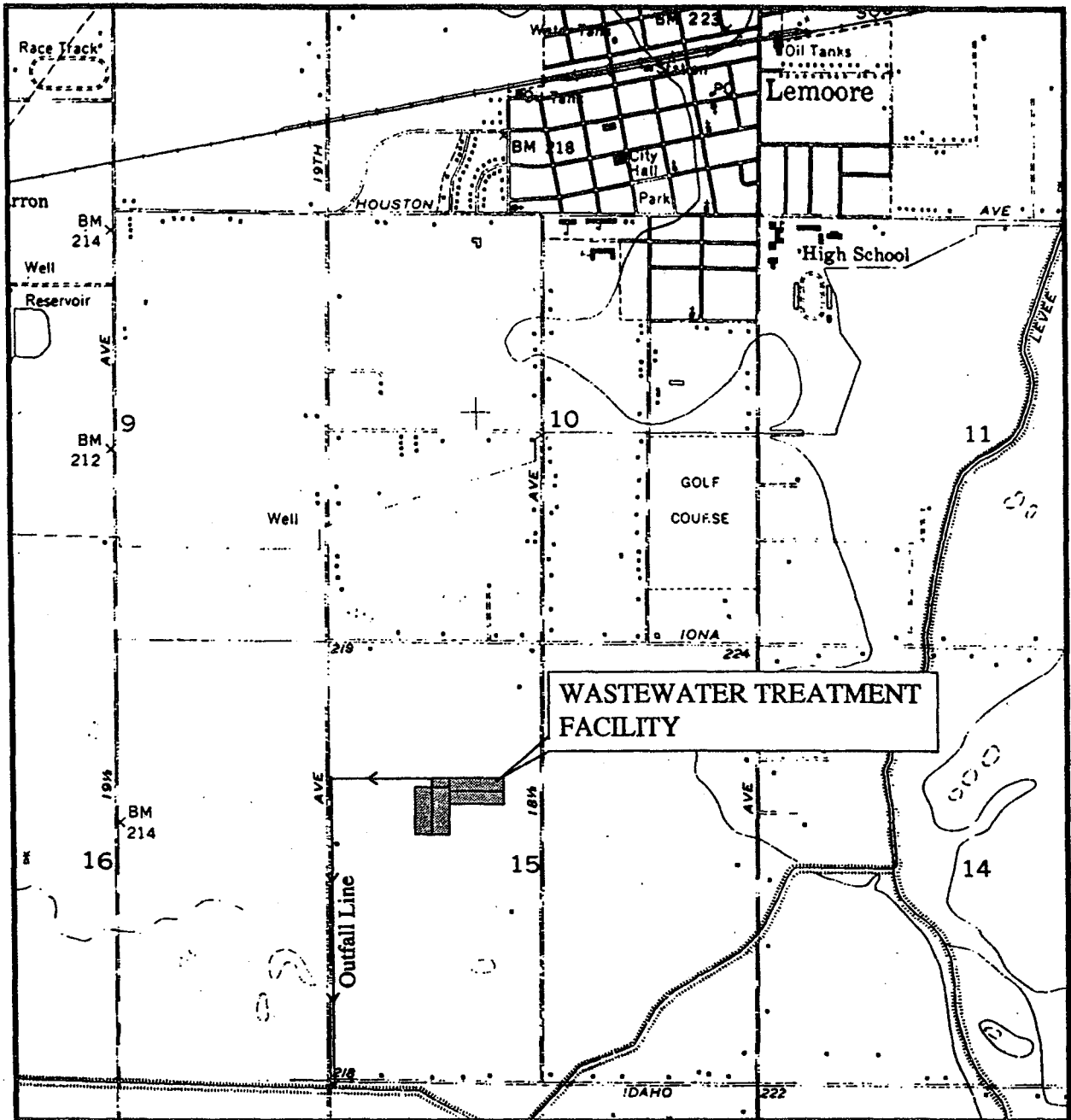
The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: William H. Crooks
WILLIAM H. CROOKS, Executive Officer

23 February 1996

(Date)

LML:lml/fmc



WASTEWATER TREATMENT FACILITY

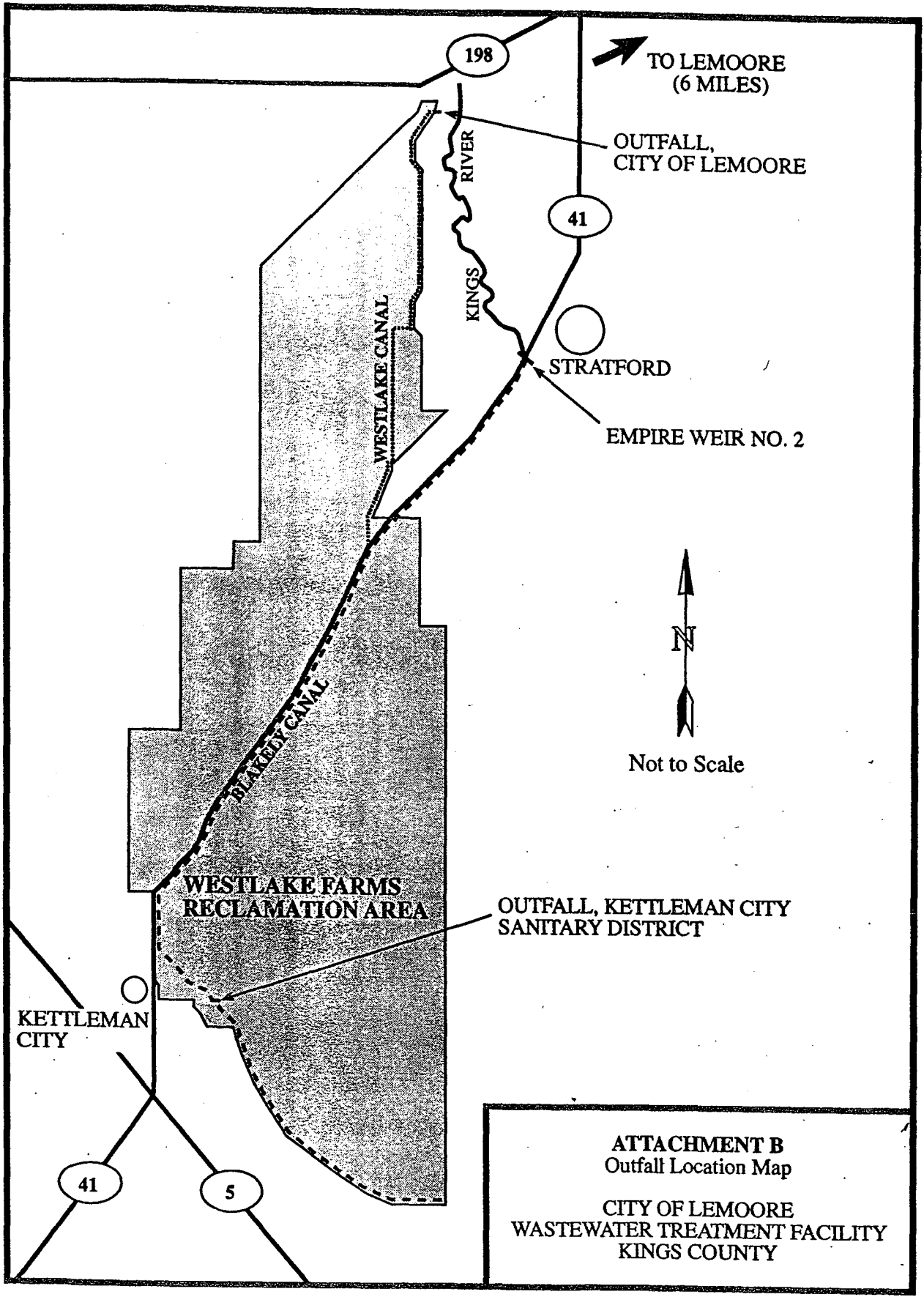


Scale: 1"=2000'

ATTACHMENT A
Vicinity Map

CITY OF LEMOORE
WASTEWATER TREATMENT FACILITY
KINGS COUNTY

Section 15, T19S, R20E, MDB&M
Lemoore, 7 1/2' USGS Quad, 1954



ATTACHMENT B
Outfall Location Map

CITY OF LEMOORE
WASTEWATER TREATMENT FACILITY
KINGS COUNTY

INFORMATION SHEET

CITY OF LEMOORE WASTE WATER TREATMENT FACILITY KINGS COUNTY

The City of Lemoore operates a wastewater treatment facility (WWTF) in Kings County. The WWTF consists of four aerated lagoons, and a fifth pond for storage of stormwater and emergency storage of effluent with plant treatment and hydraulic capacity of 4.4 mgd. The existing 12-inch diameter effluent outfall line limits the ability of the WWTF to discharge water to a maximum of 2.5 mgd, well below the WWTF capacity.

Wastewater includes industrial and domestic components. The domestic wastewater discharge averages 0.50 mgd. The total WWTF discharge flow averages 2.2 mgd from November through May of each year and 2.5 mgd from June through October. The plant is currently operating at the maximum flow capacity of the outfall line.

The wastewater supplements irrigation of approximately 50,000 acres of crops, including cotton and grain for animal feed on Westlake Farms. No vegetable crops are grown. Tentative water reclamation requirements for Westlake Farms are being considered concurrently with this Order.

The outfall location for discharge of the effluent is the beginning of the Westlake Canal. About 50 feet downstream of the outfall the effluent is mixed with irrigation well water. In all years, except for some drought years, the canal water is also supplemented with water from the Kings River provided by the Lemoore Canal Company through an agreement with Westlake Farms. The Westlake Canal is full year-round providing a typical 2:1 to 25:1 (canal water: effluent) range of dilution, but sometimes provides less (as in three of 24 recent months). In the fall (September through November), effluent is not supplemented with well or surface waters and is stored in the canal and not used for irrigation.

The Westlake Canal connects with the Blakely Canal (collectively hereafter canals) approximately 8 miles downstream of the effluent outfall. The Blakely Canal originates at Empire Weir No. 2 on the Kings River. Both canals are entirely on Westlake Farms property, have no outlet to other surface waters, and are waters of the State. The Westlake canal crosses under several county roads where it is accessible to the public. The Blakely Canal parallels State Route 41 for approximately 6 miles.

The Westlake Canal is posted at all road access points to indicate that it contains undisinfected wastewater, however, the Blakely Canal downstream of the Westlake Canal is readily accessible to the public along State Route 41 and is not posted to indicate that it contains undisinfected wastewater. The Blakely canal also receives 0.12 mgd of disinfectant wastewater effluent from the Kettleman City Sanitary District WWTF at a downstream location, approximately 7 miles from its connection with the Westlake Canal.

INFORMATION SHEET- Continued

CITY OF LEMOORE WWTF
KINGS COUNTY

-2-

The California Department of Health Services recommends that the wastewater effluent be disinfected prior to discharge to the Westlake canal such that the median number of coliform organisms does not exceed 23 MPN/100 ml, to protect public health. These requirements include effluent limits for coliform organisms to facilitate protection of public health.

The California Department of Fish and Game reports that warm water fish migrate to the canals by way of an upstream connection of the Blakely canal with the Kings River at Empire Weir No. 2 and recommends a chlorine residual limitation of 0.01mg/l and minimum dissolved oxygen concentration of 5 mg/l in the water of the canals to protect the warm water fish population. These requirements include receiving water limits for chlorine residual and dissolved oxygen that facilitate protection of the warm water fish population.

The Water Quality Control Plan for the Tulare Lake Basin (Basin Plan) specifies that wastewater treatment facilities which discharge in excess of 1 mgd and utilize land disposal (includes irrigation) provide a minimum of secondary treatment. The Basin Plan defines secondary treatment as 80 percent removal of 5-day BOD and suspended solids or reduction to 40 mg/l, whichever is more restrictive. The WWTF provides secondary treatment through aerated lagoons. These requirements include an effluent limitation for BOD.

Algal growth in aerated lagoons, if excessive, may result in elevated suspended solids above 40 mg/l in the final effluent. To assess the WWTF's ability to provide consistent suspended solids removal these requirements include monitoring for total suspended solids. When WWTF flows are proposed to increase above 2.5 mgd, these requirements will be revised and will include an effluent limitation for suspended solids. Prior to revision of the requirements, we will request that the City of Lemoore provide us with a Report of Waste Discharge that includes a demonstration that the existing facility has consistently provided adequate reduction of suspended solids, or alternatively, a plan for new treatment facilities that will provide adequate treatment to comply with the Basin Plan specification for suspended solids.

The canal is considered a valley floor water. The beneficial uses of these waters are industrial and agricultural supply; water contact and non-contact water recreation; warm fresh water habitat; wildlife habitat; preservation of rare and endangered species; and ground water recharge. Unlike other valley floor waters, actual beneficial uses of the canal are limited to agricultural supply, non-contact water recreation, warm fresh water habitat, wildlife habitat, and ground water recharge.

According to the Department of Water Resources, shallow ground water is unconfined, at a depth of approximately 10 feet below ground surface and of unknown quality. Deeper ground water, at a

INFORMATION SHEET- Continued

CITY OF LEMOORE WWTF
KINGS COUNTY

-3-

depth of 83 to 145 feet bgs, is of good quality with electrical conductivity (EC) of 660 to about 1,200 μ mhos/cm. This deeper ground water moves in a southwesterly direction.

The beneficial uses of underlying ground water are domestic, industrial, and agricultural supply.

Soils at the site of the WWTF are sandy loams of the Grangeville series with moderate soil permeabilities. Based on testing of site soils with various mixtures of bentonite clay, 1.5 lbs of bentonite per square foot of wetted area were combined with the upper 4 inches of native soil and compacted in place in each pond to limit seepage losses. A water balance submitted for the ponds indicates seepage from the ponds is minimal.

Surface drainage is to the Kings River by sheet flow. The beneficial uses of the Kings River are agricultural supply; recreation; esthetic enjoyment; navigation; ground water recharge; and preservation and enhancement of fish, wildlife, and other aquatic resources.

Average annual precipitation in the area is approximately 6 inches and average annual evaporation is roughly 60 inches.

The City of Lemoore has certified a final environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines. The project as approved will not have a significant effect on water quality.

LML:lml/fmc:2/23/96