CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 91-192

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF MENDOTA
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

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

1. The City of Mendota (hereafter Discharger) submitted a Report of Waste Discharge for a design average daily dry weather flow of 1.24 mgd, dated 15 July 1986, a technical report on hydraulic capacity, dated November 1987, and on 23 May 1990, a technical report in support of an increase in treatment capacity and improvement in the effluent quality of the existing wastewater treatment facility (WWTF). The property on which the WWTF and the disposal areas (about 180 acres) are located is owned by the Discharger (APN 13-050-30S, 13-050-59S, 13-050-60S, 13-050-58S).

2. Waste Discharge Requirements Order No. 80-191, adopted by the Board on 5 December 1980, prescribes requirements for a discharge of 0.57 mgd from two aeration ponds to four evaporation-percolation ponds. The Discharger has been exceeding the effluent flow limit for the last four years and effluent BOD and pond dissolved oxygen limits for at least the last two years.

3. The Discharger presently discharges approximately 1 mgd of domestic wastewater to two aeration ponds in series and four evaporation-percolation ponds in parallel. Effluent is and will continue to be reclaimed by surface irrigation of seed crops on 100 acres of farm land owned by the Discharger and 250 acres of fodder, fiber, seed crops, vineyards, and orchards owned by Floyd Williams Ranches, for which Water Reclamation Requirements Order No. 83-013 has been issued. The City plans to grow eucalyptus trees on 40 acres of its land.

4. The Mendota Biomass Cogeneration Facility (MBCF), regulated by Waste Discharge Requirements Order No. 89-137, occasionally utilizes up to 0.4 mgd of effluent from the wastewater treatment facility for cooling water. There is no minimum requirement on the amount of wastewater MBCF must use and the WWTF design flow was determined assuming MBCF will not always use reclaimed wastewater.

5. The proposed project includes upgrading the influent lift station, reconstruction of the headworks, installation of a dual power level multicellular (DPMC) mechanical aeration system and separator baffles, and construction of a 30-acre emergency storage basin on the 100 acres owned by the Discharger. Another 30-acre emergency storage basin is planned for construction by the year 2000 to accommodate projected wastewater flows.

6. The Board adopted water quality control plans for the San Joaquin (5C) and Tulare Lake (5D) Basins (hereafter "Basin Plans"), which contain water quality objectives for all waters of these basins. These requirements implement the Basin Plans.

7. The 5D Basin Plan states that the minimum treatment level for WWTFs which discharge more than 1.0 mgd is secondary treatment, which is defined in the Basin Plan as 80 percent removal of BOD and suspended solids, or reduction to 40 mg/l, whichever is more restrictive. The Discharger proposes to comply with secondary treatment standards for BOD, but not with suspended solids because of algae in the ponds; and to provide treatment for a design flow of 1.24 mgd.

8. The WWTF is in the NW 1/4 of Section 29 and the reclamation areas are within the SW 1/4 of Section 29, and NW 1/4 and NE 1/4 of Section 32, T13S, R15E, MDB&M. Surface water drains north to Fresno Slough, as shown in Attachment A, which is attached hereto and part of this Order. In this area, the slough and the San Joaquin River are backed by Mendota Dam on the San Joaquin River to form the Mendota Pool and surface water drainage is to Basin 5C. Hence, surface runoff from the site is considered to Basin 5C. However, the site itself and underlying groundwater lie within the Tulare Lake hydrologic area (No. 551.20), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

9. The Basin Plans identify beneficial uses of areal surface waters as municipal, industrial and agricultural supply; recreation; ground water recharge; warm fresh water habitat; wildlife habitat; and preservation and enhancement of fish, wildlife, and other aquatic resources.

10. The beneficial uses of underlying ground water are domestic, industrial, and agricultural supply. Ground water is approximately 15-20 feet below ground surface and flows to the southwest. The minimum soil separation between the percolation ponds and ground water is 7.5 feet, based on the highest anticipated depth to ground water.

11. The quality of the upper unconfined ground water aquifer is poor. It does not meet secondary drinking water standards for several constituents, including chlorides, sulfates, iron, sodium, manganese, and total dissolved solids. Samples from WWTF test wells indicate the downgradient quality of the upper aquifer (EC = 2000 μmhos) is significantly worse than upgradient water quality (EC = 830 μmhos). The quality of ground water 300 feet below ground surface meets secondary drinking water standards.

12. Digested sludge is dried and piled on-site. In the past, dried sludge has been disposed of by spreading in the City-owned reclamation area as a soil amendment.

13. Soils in the area consist of high plasticity clays at the surface, over interbedded clays, sandy silts, silty sands, and poorly graded sands with permeabilities ranging from medium to low.

14. The discharge for reclamation purposes is subject to reclamation criteria contained in Chapter 3, Division 4, Title 22, California Code of Regulations (CCR), hereafter Title 22.

15. The Fresno County Board of Supervisors has adopted a mitigated Negative Declaration, in accordance with Section 15074 of the California Environmental Quality Act (Public Resource Code, Section 21000, et seq.), and State CEQA Guidelines. The project as approved will not have a significant effect on water quality.

16. 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.

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

IT IS HEREBY ORDERED that Order No. 80-191 is rescinded and the City of Mendota in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following at the above described facility:

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 by Standard Provision E.2.

3. Discharge of waste classified as 'hazardous' or 'designated', as defined in Sections 2521 (a) and 2522 (a) of Title 23, CCR, Section 2510, et seq., (Chapter 15), is prohibited.

B. Discharge Specifications:

1. The discharge shall remain within the designated disposal area (shown on Attachment A) at all times.

2. The monthly average daily dry weather discharge flow shall not exceed 1.24 million gallons.

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 treatment facilities, including aeration and evaporation-percolation ponds, shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

6. The effluent from the treatment facility shall not contain constituents in excess of the following:

Constituent	Units	Monthly Average	Daily Maximum
BOD	mg/l	40	80
Settleable Solids	ml/l	0.2	0.5

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

7. The discharge shall not have a pH less than 6.5 or greater than 9.5.

8. Effective 1 January 1994, the maximum specific electrical conductance of the discharge shall not exceed the weighted monthly average of the source water plus 500 umhos.

9. There shall be no standing water in any subarea of the reclamation area 48 hours after the wastewater is applied to that subarea.

10. Irrigation or impoundment of wastewater shall not occur within 500 feet of any domestic well or within 100 feet of any irrigation well unless it is demonstrated to the satisfaction of the Executive Officer that a lesser distance is justified.

11. Ponds shall be managed to prevent breeding of mosquitos. 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.

12. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

13. The evaporation-percolation ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the nonirrigation season. 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 2 feet (measured vertically).

14. On or about 1 October of each year, all evaporation-percolation ponds shall be emptied sufficiently to store the design volume required in B.13 above.

15. Storm water runoff from the irrigation fields shall not be discharged to any surface water drainage course within 30 days of the last wastewater application.

C. Sludge Disposal:

1. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in manner that is consistent with Chapter 15, and approved by the Executive Officer.

2. Any proposed change in the sludge use or disposal practice shall be reported to the Executive Officer at least 60 days in advance of the change.

3. Use and disposal of sewage sludge shall comply with existing federal and state laws and regulations, and with Clean Water Act (CWA) Section 405(d) technical standards when promulgated.

   If an applicable management practice or numerical limitation for pollutants in sewage sludge is promulgated under Section 405(d) of the CWA after issuance of this Order that is more stringent than the sludge pollutant limit or management practice specified in this Order or in existing federal or state laws or regulations, this order shall be promptly modified to conform to the regulations promulgated under Section 405(d) of the CWA. The Discharger shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d) of the CWA.

D. Ground Water Limitations

The Discharge, in combination with other sources, shall not cause underlying ground water to:

1. Contain waste constituents in concentrations statistically greater than receiving water limits, where specified below, or background water quality where not specified. (For purposes of comparison, background water quality shall be determined when background monitoring provides sufficient data. Quality determined in this manner establishes "water quality protection standards.")

2. Exceed an annual average incremental increase in specific electrical conductivity greater than 4 umhos/cm, based on the most recent five-year period.

3. Contain chemicals, heavy metals, or trace elements in concentrations that adversely affect beneficial uses or exceed maximum contaminant levels specified in 22 CCR, Division 4, Chapter 15.

4. Exceed a most probable number of total coliform organisms of 2.2/100 ml over any seven-day period.

5. Exceed concentrations of radionuclides specified in 22 CCR, Division 4, Chapter 15.

6. Contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

7. Contain concentrations of chemical constituents in amounts that adversely affect agricultural use.

E. Provisions:

✓ 1. The Discharger shall comply with the attached Monitoring and Reporting Program No. 91-192, 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 a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

3. 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 measure have been taken or are being taken to assure full compliance with this Order.

4. Reclaimed wastewater shall meet the criteria contained in Title 22 and, if used in construction, the most current edition of "Guidelines for Use of Reclaimed Water for Construction Purposes," published by the State Department of Health Services. Other uses for reclaimed wastewater shall be subject to the prior approval of the Executive Officer.

✓ 5. The Discharger shall submit to the Board an irrigation management plan for the use of reclaimed wastewater from the wastewater treatment facility , pursuant to the time schedule presented in Provision E.7.i. The irrigation management plan shall address the current and design flows, describe the acreage of various types of crops to be grown and harvested annually, and discuss crop water use and nitrogen uptake data. The plan must include a water balance for current and design flows, and demonstrate that reclamation can be accomplished in accordance with accepted irrigation practices without contributing additional nitrogen in the form of nitrate ion to the ground water. The plan shall also address compliance with Discharge Specifications B.9 to B.13.

6. In complying with Discharge Specification B.8, the Discharger shall review and implement all necessary source control measures. Progress shall be monitored through submittal of the following technical reports:

✓a. A salinity source control program report pursuant to the time schedule in Provision E.7.a. The report shall evaluate the

results of an industrial survey conducted to identify significant contributors of high EC wastewaters to the treatment facility, residential use of self-regenerating water softeners, and other contributors of high EC wastewater. The report must include a summary of test results and average daily flows for each industrial contributor's wastewater, the contribution of shallow high EC ground water, and a detailed description of the source control program proposed by the Discharger to regulate the discharge of salts to the treatment facility.

b. Annual monitoring reports, summarizing progress in reducing the EC of wastewater discharged to the treatment facility and progress towards compliance with Discharge Specification B.8, shall be submitted by 31 January of each year.

7. The Discharger shall comply with the following time schedule to assure compliance with the specifications and provisions of this Order:

Task	Compliance Date
EC Source Control	
a. Submit a work plan for source control program report in accordance with Provison E.6.a	2 Jan 1992
b. Submit complete source control program report in accordance with Provision E.6.a	1 Jun 1992
c. Implement salinity source control program	1 Dec 1992
d. Commence submitting annual progress reports described in Provision E.6.b	31 Jan 1993
Proposed WWTF improvements	
e. Submit Plans and Specifications	1 Nov 1991
f. Begin Construction	1 Dec 1991
g. Complete Construction	15 Apr 1992
h. Full Compliance	1 Apr 1993

Task	Compliance Date
Irrigation Management Plan	
i. Submit proposed irrigation management plan concerning compliance with Provision B.9 to B.13 and report on measures to preclude access	15 Oct 1991
j. Submit final irrigation management plan and implement measures to preclude public access	15 Jan 1991
k. Implement irrigation management plan	15 Feb 1991

The Discharger shall submit to the Board on or before each compliance date not calling for a written report, a report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported for any task, the reason for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Board by letter when it returns to compliance with the time schedule.

8. Based on present growth projections, the Discharger will reach the capacity of its expanded treatment and disposal facility within four years of completing the expansion. Therefore, the Discharger shall submit a written report to the Board **by 15 January 1993** explaining:

   a. Steps that are being taken to maintain flow volumes below allowable capacity and to assure compliance with effluent limits until the Discharger can increase capacity.

   b. The Discharger's projected schedule for increasing capacity.

9. A copy of this Order shall be kept at the discharge facility for reference by the operating personnel. Key operation personnel shall be familiar with its contents.

10. 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.

11. The Discharger shall use the best practicable cost-effective control technique currently available to comply with salinity limits specified in this order.

12. If the Discharger intends to reclaim wastewater on crops other than those specified in the accepted irrigation management plan, it shall first submit a written report demonstrating, to the satisfaction of the Executive Officer, that management of reclaimed water and irrigated properties will assure compliance with the terms of this Order.

13. The Discharger must comply with all conditions of this Order. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of this Order.

14. 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 6 September 1991.

WILLIAM H. CROOKS, Executive Officer

RA:ra/cjs:9/6/91

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 91-192

FOR
CITY OF MENDOTA
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

Composite samples shall be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to the flow. In compositing grab samples, the interval shall not exceed one hour.

INFLUENT MONITORING

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

Constituent	Units	Type of Sample	Frequency
Daily flow	mgd	Continuous	Daily
Settleable Solids	ml/l	Grab	Daily
pH	pH units	Grab	Daily
BOD_5 1/	mg/l	8-hour composite	Monthly

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

EFFLUENT MONITORING

A. Domestic Wastewater Effluent

Effluent samples shall be collected downstream from the final treatment unit just prior to discharge to the evaporation-percolation ponds. Effluent samples should be representative of the volume and nature of the discharge. Time of collection of a grab sample shall be recorded. Effluent monitoring shall include at least the following:

Constituent	Units	Type of Sample	Frequency
Settleable Solids	ml/l	Grab	Daily · 2 monthly $\bar{x}$
pH	pH units	Grab	Daily · 5 daily max

Constituent	Units	Type of Sample	Frequency
Dissolved Oxygen[1/]	mg/l	Grab	Daily
BOD_5[2/]	mg/l	Grab	Weekly 80 daily max
Specific Electrical Conductance @ 25° C.	umhos	Grab	Weekly 40 monthly average max

1/ Dissolved oxygen measurements are to be taken at 1 foot below the surface near the outfall of the irrigation storage reservoir containing treated effluent between the hours of 0800 and 0900.

2/ Five-day, 20° Celsius biochemical oxygen demand.

SOURCE WATER MONITORING

Representative samples shall be collected from the source wells which supply water for the City of Mendota service area. The following shall constitute the source water monitoring program.

Constituent	Units	Type of Sample	Frequency
Specific Electrical Conductance @ 25° C.[1/]	umhos/cm	Grab	Monthly

1/ The electrical conductance (EC) shall be reported as a flow weighted average of the EC's of all City supply wells in use. Supporting calculations to determine the weighted average shall be provided with the report.

GROUND WATER MONITORING

The following verification monitoring sampling shall be implemented at the facility as part of the Verification Monitoring Program to Determine the vertical and areal extent of noncompliance with the "water quality protection standards".

By **15 November 1991,** the Discharger shall submit a work plan for a ground water monitoring network consisting of one or more background monitoring wells and three or more downgradient wells. All well locations and construction features are subject to the prior approval of the Executive Officer and must be sufficient to monitor potential impacts of the disposal operation on the uppermost ground water aquifer. By **(four months after approval of the groundwater monitoring network)**, the Discharger shall implement the approved monitoring network.

The downgradient wells shall constitute "points of compliance (POC)". In conjunction with background monitoring, monitoring of POC's will enable one to determine the areal and vertical extent of noncompliance with water quality protection standards. **The ground water surface elevation (in feet and hundredths, M.S.L.) in all wells shall be measured on a quarterly basis** and used to determine the gradient and direction of ground water flow. This information shall be displayed on a water flow net diagram for the site. Water samples shall be collected from wells in the approved monitoring network and analyzed as follows:

Constituent	Units	Type of Sample	Sampling Frequency
Specific Electrical Conductance @ 25° C.	umhos/cm	Grab	Quarterly
pH	pH units	Grab	Quarterly
Standard Minerals[1/]	mg/l	Grab	Quarterly

[1/] Standard mineral analyses shall include calcium, carbonate, chloride, iron, magnesium, nitrate, potassium, sodium, sulfate, and total dissolved solids.

If the Discharger, through the verification monitoring program, or the Board verifies that water quality protection standards have been exceeded at or beyond the POC's, the Discharger shall notify the Board, or acknowledge the Board's findings, and submit a technical report within 90 days. The report must contain a plan and time schedule for implementing a corrective action program designed to achieve compliance with water quality protection standards.

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:

Cadmium	Copper	Nickel
Chromium	Lead	Zinc

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 completed enough to serve as a basis for part of the annual report.

WATER QUALITY PROTECTION STANDARDS

Monthly samples shall be collected from background monitoring wells for one year and analyzed for the parameters specified in "Ground Water Monitoring," above. Data from these analyses shall be reported to the Board by **1 October 1992** for use in determining water quality protection standards for ground water at the site.

If subsequent sampling of background monitoring wells indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the facility, the Discharger may request modification of these water quality protection standards.

FREEBOARD MONITORING

The freeboard shall be monitored on the oxidation ponds and the storage reservoir in use to the nearest one-half foot.

REPORTING

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 a manner that clearly illustrates whether the discharge is complying with waste discharge requirements.

Influent and effluent monitoring shall be submitted to the Regional Board by the **15th day of the month following the month of sampling.**

The Ground Water Monitoring Reports shall be submitted quarterly by **15 April, 15 July, 15 October, and 15 January of each year.**

The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Board.

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 employed at the wastewater treatment plant (Standard Provision E.1.).

b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

c. A statement certifying when the flow meters and other monitoring instruments and devices were last calibrated, including identification of who did the calibrating (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 revised and last reviewed for adequacy.

e. The total quantity of sludge disposed of during the previous year and ultimate disposal site(s).

f. A summary report on the irrigation site management operation after the conclusion of each season. The report shall discuss total water application over the season; the total wastewater applied; the total nutrient loading from wastewater, sludges, and chemical fertilizers; and amount of nutrients removed through harvest of the crop. In short, the report shall present a mass balance relative to pollutants of concern and hydraulic loading.

The Discharge may also be requested to submit an annual report to the Board with both 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 compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

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

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

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

6 September 1991
(Date)

RA:ra/cjs:9/6/91

INFORMATION SHEET

CITY OF MENDOTA
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

Mendota is a rural agricultural community that operates a WWTF less than 100 feet south of Fresno Slough and about 20 feet west of the Mendota SWDS. The WWTF is presently governed by WDRs Order No. 80-191. The facility was designed to treat 0.57 mgd of domestic waste generated by the City and currently discharges about 1 mgd. The WWTF consists of an influent lift station, barminutor, Parshall flume, two aeration ponds in series, and four evaporation-percolation ponds.

The WWTF has a long history of treatment and disposal capacity problems during winter months due to poor percolation rates, reduced evaporation rates, and rainfall. The Discharger has violated Discharge Specification B.3 (flow limits) of existing WDRs (Order No. 80-191) for the last four years. The has also violated Discharge Specifications B.5 and B.6 (effluent BOD and DO in the treatment and disposal ponds) for at least the last two years. On 7 November 1987, the City submitted a Report of Waste Discharge and a technical report on treatment and hydraulic capacity for expansion of the WWTF to 1.24 MGD.

In the interim, the Discharger initiated reclamation on 100 acres of seed crops on its land and on Floyd Williams Ranches, which owns and controls reclamation on 250 acres under Water Reclamation Requirements Order No. 83-013. In December 1989, the reclamation contract with Floyd Williams Ranches was extended to 1999. The City plans to grow eucalyptus trees on 40 acres. Fodder, fiber, seed crops, vineyard, and orchards are grown on the remaining land. Surface irrigation is used to irrigate all the above-mentioned crops.

Composite influent and effluent sampling of wastewater performed during September and October 1990 showed average influent and effluent BOD, total suspended solids, and EC concentrations of 132 ppm, 173 ppm, 3,375 umhos/cm and 46.5 ppm, 77 ppm, and 3,250 umhos/cm, respectively. The pH of the influent and effluent wastewater was between 7.3 and 7.6.

Effluent EC exceeds the recommended secondary MCL by a factor of about 3.6. The effluent EC concentration has increased significantly since 1987, when it was about 1,410 umhos/cm. Between July 1989 and June 1990, the effluent EC concentration increased by 500 umhos/cm. The City has not identified significant contributors of high EC wastewater to the treatment facility, but it recently raised concerns that nearby ground water extraction by the Bureau of Reclamation may be causing an increase in EC of its water supply.

Depth to ground water at the WWTF is about 15-20 feet and minimum separation between the bottom of the most northerly evaporation-percolation pond (Pond No. 2) and ground water is about 7.5 feet. The direction of ground water flow is generally southwest. Average precipitation and evaporation rates are 9.5 and 55 inches per year, respectively.

Soils in the area away from the slough consist of high plasticity clays at the surface over interbedded clays, sandy silts, silty sands, and poorly graded sands. These soils have permeabilities ranging from medium to low.

The quality of the upper layer of ground water in the area is poor. Ground water samples were collected and analyzed from two test wells (SP-N and SP-W), each 25 feet deep, and a 311-foot well (Fordel well) within 500 feet of the WWTF. The Fordel and the SP-N wells are upgradient and well SP-W is downgradient from the WWTF. Concentrations of chloride, sulfate, EC, total dissolved solids, manganese, and iron in shallow ground water are 99 mg/l, 53 mg/l, 830 umhos/cm, 470 mg/l, 0.86 mg/l, and 0.35 mg/l upgradient of the WWTF and 260 mg/l, 390 mg/l, 2,000 umhos/cm, 1,200 mg/l, 0.37 mg/l, and 0.08 mg/l downgradient.

Concentrations of manganese and iron in shallow ground water upgradient from the WWTF exceed secondary MCLs by factors of 17 and 1.2. Concentrations of chloride, sulfate, EC, total dissolved solids, and manganese in shallow ground water downgradient from the WWTF exceed the secondary MCLs by factors of 1.1, 1.56, 2.2, 2.4, and 7, respectively.

The results of samples collected from the Fordel well show that the deeper aquifer is of good quality. The concentrations of chloride, iron, manganese, sulfate, and EC in the deeper ground water are 66 ppm, 0.1 ppm, 0.012 ppm, 19 ppm, 475 umhos/cm, respectively.

The Fresno County Board of Supervisors adopted a mitigated Negative Declaration, in accordance with Section 15074 of the California Environmental Quality Act (Public Resource Code, Section 2100, et seq.), and State CEQA Guidelines. The Project as approved will not have a significant effect on water quality if operated in accord with the proposed Order.

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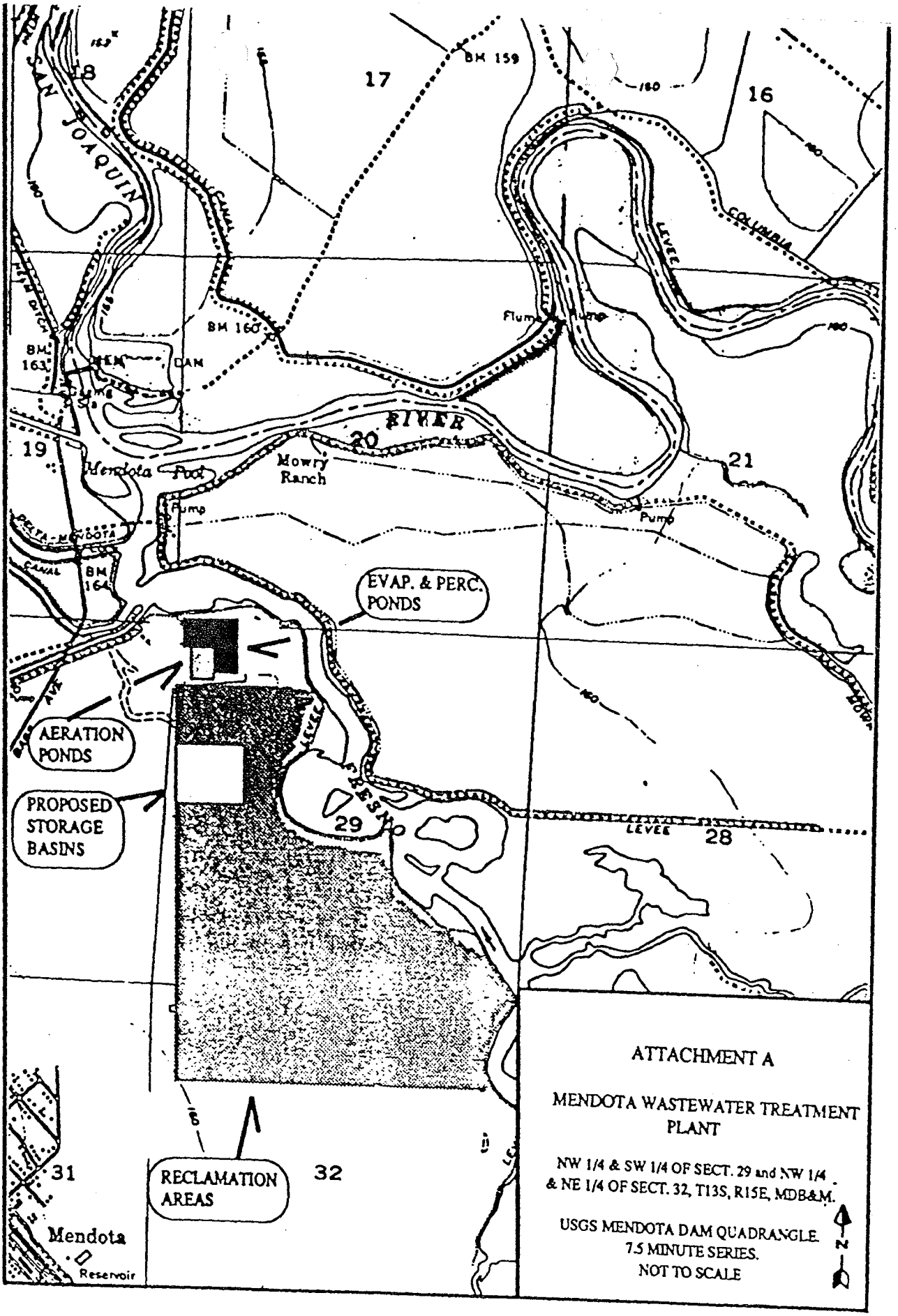
SAN JOAQUIN
BM 159
17
16
18
COLUMBIA
LEVEE
Pump
BM 160
BM 163
DAM
RIVER
20
19
21
Mowry Ranch
Mendota Pool
Pump
DELTA-MENDOTA CANAL
BM 164
EVAP. & PERC. PONDS
AERATION PONDS
PROPOSED STORAGE BASINS
FRESNO
29
28
LEVEE
31
32
RECLAMATION AREAS
Mendota
Reservoir
ATTACHMENT A
MENDOTA WASTEWATER TREATMENT PLANT
NW 1/4 & SW 1/4 OF SECT. 29 and NW 1/4 & NE 1/4 OF SECT. 32, T13S, R15E, MDB&M.
USGS MENDOTA DAM QUADRANGLE.
7.5 MINUTE SERIES.
NOT TO SCALE
N