

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION

ORDER NO. 93-030

WASTE DISCHARGE REQUIREMENTS  
FOR  
BIG BEAR AREA REGIONAL WASTEWATER AGENCY  
EXPORT OF RECLAIMED WASTEWATER TO LUCERNE VALLEY  
Lucerne Valley - San Bernardino County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Big Bear Area Regional Wastewater Agency (hereinafter referred to as the discharger) owns and operates a wastewater treatment facility at 139 E. Big Bear Boulevard, P.O. Box 517, Big Bear City, CA 92314. The discharge has been subject to Waste Discharge Requirements (Board Order No. 90-026). This Board Order updates Board Order No. 90-026.
2. The discharger is currently discharging an annual average daily flow of 2.2 million gallons-per-day (MGD) of treated effluent from a secondary wastewater treatment plant, for irrigation of fodder, fiber, and seed crops at the southeast corner of the intersection of Highway 247 and Camp Rock Road in Lucerne Valley (Section 14, T4N, R1E, SBB&M, as indicated on the attached site map). The plant has a design treatment capacity of 3.2 MGD and a hydraulic capacity of 9.6 MGD. The treatment plant is located outside the boundary of the Colorado River Basin Region, at the east end of the Big Bear Valley, on the South Shore of Baldwin Lake, 122 Palomino Drive, Big Bear City, California.
3. The treatment plant process is extended aeration with preliminary treatment consisting of a bar screen and an aerated grit chamber. Biological treatment is accomplished in two oxidation ditches, and is followed by secondary clarification in three clarifiers. Sludge treatment is accomplished by a dissolved air flotation unit and a belt filter press. Sludge disposal is contracted out to a private individual who uses the sludge to produce a soil amendment. Grit and screening wastes are disposed of at the Big Bear landfill. The secondary treated plant effluent is discharged to the wastewater reclamation and irrigation site in Lucerne Valley through a 16.5 mile outfall line. During the summer months about 340 acres is irrigated for fodder and fiber crops. An additional 140 acres is available for irrigation. There is a concrete reservoir located one mile south of the irrigation site to ensure proper operating pressure for the irrigation system. The treatment plant effluent is discharged into two earthen reservoirs for percolation and evaporation when the water is not being used for irrigation. The two earthen reservoirs have a combined capacity of 299 acre-feet.
4. The ground water below the discharge site in October 1991 ranged from 150 to approximately 200 feet below ground surface. Three ground water monitoring wells have been installed at the discharge site.

5. The discharger reports that there are no industrial wastes being discharged to the wastewater treatment plant.
6. The discharger reports that no sewage sludge is discharged at the irrigation site and no grazing animals are allowed access to the site.
7. There are no domestic wells within 500 feet of the disposal site described in Finding No. 2.
8. The Water Quality Control Plan for the Colorado River Basin Region of California was adopted May 15, 1991 and designates the beneficial uses of ground and surface waters in this Region.
9. The beneficial uses of ground waters in the Lucerne Hydrologic Unit are:
  - a. Municipal supply (MUN)
  - b. Industrial supply (IND)
  - c. Agricultural supply (AGR)
10. The California Department of Health Services has established statewide reclamation criteria in Title 22, California Code of Regulations, Section 60301, et seq. (hereafter Title 22) for the use of reclaimed water and has developed guidelines for specific uses.
11. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency on November 16, 1990 (40 Code of Federal Regulations (CFR) Parts 122, 123, and 124). In conformance with these regulations, the California Water Resources Control Board adopted a general permit for storm water discharges associated with industrial activities, Water Quality Order No. 91-13-DWQ (as amended by Water Quality Order 92-12-DWQ), NPDES No. CAS000001, on September 17, 1992. Industrial facilities, including sewage treatment plants, are required to obtain NPDES permits for their storm water discharges. The discharger filed their Notice of Intent for the General Storm Water permit on March 27, 1992.
12. The Board has notified the discharger and all known interested agencies and persons of its intent to update waste discharge requirements for this discharge.
13. The Board in a public meeting heard and considered all comments pertaining to this discharge.
14. In accordance with Section 15301, Chapter 3, Title 14 of the California Code of Regulations, the issuance of these waste discharge requirements, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.).

IT IS HEREBY ORDERED, that Board Order No. 90-026 is rescinded and in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, the discharger shall comply with the following:

A. Discharge Specifications

1. Wastewater used for irrigation or discharged to infiltration basins shall not contain constituents in excess of the following limits:

<u>Constituents</u>	<u>Units</u>	<u>30 Day<sup>1</sup> Average</u>	<u>Maximum<sup>2</sup></u>
Total Dissolved Solids (TDS)	mg/L <sup>3</sup>	525	565
Chloride (CL)	mg/L	60	80
Sulfate (SO <sub>4</sub> )	mg/L	60	80
Fluoride (F)	mg/L	1.6	2.0
Boron (B)	mg/L	---	0.75
Biochemical Oxygen Demand (BOD)	mg/L	30	45
Suspended Solids	mg/L	30	45
Settleable Matter	ml/L <sup>4</sup>	---	0.5

2. The storage, delivery, or use of reclaimed water shall not individually or collectively, directly or indirectly, result in a pollution or nuisance, or adversely affect water quality, as defined in the California Water Code.
3. Wastewater used for irrigation or discharged to the infiltration basins shall not cause degradation of water quality in the ground water beneath the discharge site.
4. Reclaimed wastewater used to irrigate crops shall meet the requirements of Wastewater Reclamation Criteria, Division 4, Title 22, California Code of Regulations.
5. Wastewater used for irrigation or discharged to the infiltration basins shall be confined to lands owned or controlled by the discharger.
6. A minimum depth of freeboard of two (2) feet shall be maintained at all times in all basins and reservoirs.

B. Prohibition

1. The application of sewage sludge to the disposal site is prohibited without prior written approval from the Regional Board's Executive Officer.

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<sup>1</sup> 30-Day or Monthly Average.

<sup>2</sup> Maximum on any one test.

<sup>3</sup> mg/L - milligrams per Liter

<sup>4</sup> ml/L - milliliters per Liter

2. The discharge of any wastewaters to any surface waters or surface drainage courses is prohibited.

C. Provisions

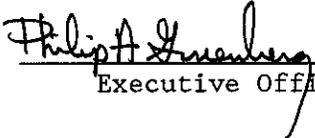
1. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.
2. Prior to any modifications in this facility which would result in material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the discharger shall report all pertinent information in writing to the Regional Board; and obtain revised requirements before any modifications are implemented.
3. The discharger's wastewater treatment plant shall be supervised and operated by persons possessing certification of appropriate grade pursuant to Chapter 4, Division 4, Title 23 of the California Code of Regulations.
4. The discharger shall comply with "Monitoring and Reporting Program No. 93-030", and future revisions thereto, as specified by the Regional Board's Executive Officer.
5. The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the discharger to achieve compliance with the condition of this Board Order. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls and appropriate quality assurance procedures.
6. The discharger shall ensure that all site operating personnel are familiar with the content of this Board Order.
7. Facilities shall be available to keep the plant in operation in the event of commercial power failure.
8. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
9. An on-site supervisor responsible for the operation of the reclaimed wastewater system shall be designated. The supervisor shall be responsible for the installation, operation and maintenance of the irrigation system, enforcement of Board Order, prevention of potential hazards, maintenance of the distribution system, and for the distribution of the reclaimed wastewater in accordance with this Board Order.

The designated supervisor shall report any non-compliance with this Board Order to the Regional Board. This information shall be provided orally to the Regional Board within 24 hours from the time the on-site supervisor becomes aware of the circumstances. A written submission shall also be provided to the Regional Board within five days of the time the on-site supervisor becomes aware of the circumstances.

The written submission shall contain:

- a. A description of the non-compliance and its cause;
- b. The period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
- c. Steps taken or planned to reduce, eliminate and prevent recurrence of the non-compliance.

I, Philip A. Gruenberg, 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, Colorado River Basin Region, on May 19, 1993.

  
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Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 93-030  
FOR  
BIG BEAR AREA REGIONAL WASTEWATER AGENCY  
EXPORT OF RECLAIMED WASTEWATER TO LUCERNE VALLEY  
Lucerne Valley - San Bernardino County

Location of Discharge: Lucerne Valley; Section 14, T4N, R1E, SBB&M

RECLAIMED WASTEWATER MONITORING

Representative samples of the reclaimed wastewater shall be taken at the location of beneficial reuse or at the treatment facility. The samples shall be analyzed for the following constituents:

<u>Constituents</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Suspended Solids	mg/L <sup>1</sup>	24-Hr. Composite	Weekly
20°C BOD <sub>5</sub>	mg/L	24-Hr. Composite	Weekly
Settleable Matter	ml/L <sup>2</sup>	Grab	Daily
Quantity of Discharge	MGD <sup>3</sup>	-	Daily <sup>4</sup>
Electrical Conductivity (EC X 10 <sup>6</sup> at 25°C)	Micromhos/cm	Grab	Daily
pH	-	Grab	Daily
Sulfate (SO <sub>4</sub> )	mg/L	24-Hr. Composite	Weekly
Chloride (CL)	mg/L	24-Hr. Composite	Weekly
Boron (B)	mg/L	24-Hr. Composite	Weekly
Fluoride (F)	mg/L	24-Hr. Composite	Weekly
Total Dissolved Solids	mg/L	24-Hr. Composite	Weekly
Calcium (Ca)	mg/L	24-Hr. Composite	Quarterly
Magnesium (Mg)	mg/L	24-Hr. Composite	Quarterly
Sodium (Na)	mg/L	24-Hr. Composite	Quarterly
Potassium (K)	mg/L	24-Hr. Composite	Quarterly
Arsenic (As)	mg/L	24-Hr. Composite	Quarterly
Barium (Ba)	mg/L	24-Hr. Composite	Quarterly
Cadmium (Cd)	mg/L	24-Hr. Composite	Quarterly
Chromium (Total Cr)	mg/L	24-Hr. Composite	Quarterly
Copper (Cu)	mg/L	24-Hr. Composite	Quarterly
Iron (Fe)	mg/L	24-Hr. Composite	Quarterly
Lead (Pb)	mg/L	24-Hr. Composite	Quarterly

<sup>1</sup> mg/L - milligrams per Liter

<sup>2</sup> ml/L - milliliters per Liter

<sup>3</sup> MGD - Millions Gallons per Day

<sup>4</sup> For each day with average monthly flow calculated.

<u>Constituents</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Manganese (Mn)	mg/L	24-Hr. Composite	Quarterly
Mercury (Hg)	mg/L	24-Hr. Composite	Quarterly
Selenium (Se)	mg/L	24-Hr. Composite	Quarterly
Silver (Ag)	mg/L	24-Hr. Composite	Quarterly
Zinc (Zn)	mg/L	24-Hr. Composite	Quarterly
Carbonate (CO <sub>3</sub> )	mg/L	24-Hr. Composite	Quarterly
Bicarbonate (HCO <sub>3</sub> )	mg/L	24-Hr. Composite	Quarterly
Total Phosphate (PO <sub>4</sub> )	mg/L	24-Hr. Composite	Quarterly
Nitrate (NO <sub>3</sub> )	mg/L	24-Hr. Composite	Quarterly
Total Nitrogen	mg/L	24-Hr. Composite	Quarterly
Volatile Organic Compounds (EPA Methods 601 and 602)	µg/L <sup>5</sup>	Grab	Annually

#### GROUND WATER MONITORING

Ground water samples shall be collected from the three ground water monitoring wells at the disposal site and analyzed for the following constituents:

<u>Constituents</u>	<u>Unit</u>	<u>Sampling Frequency</u>
Total Dissolved Solids	mg/L	Annually
pH	mg/L	Annually
Sulfate (SO <sub>4</sub> )	mg/L	Annually
Chloride (Cl)	mg/L	Annually
Boron (B)	mg/L	Annually
Fluoride (F)	mg/L	Annually
Calcium (Ca)	mg/L	Annually
Magnesium (Mg)	mg/L	Annually
Sodium (Na)	mg/L	Annually
Potassium (K)	mg/L	Annually
Arsenic (Ap)	mg/L	Annually
Barium (Ba)	mg/L	Annually
Cadmium (Cd)	mg/L	Annually
Chromium (Total Cr)	mg/L	Annually
Copper (Cu)	mg/L	Annually
Iron (Fe)	mg/L	Annually
Lead (Pb)	mg/L	Annually
Manganese (Mn)	mg/L	Annually
Mercury (Hg)	mg/L	Annually

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<sup>5</sup> µg/L - micrograms per Liter

<u>Constituents</u>	<u>Unit</u>	<u>Sampling Frequency</u>
Selenium (Se)	mg/L	Annually
Silver (Ag)	mg/L	Annually
Zinc (Zn)	mg/L	Annually
Carbonate (CO <sub>3</sub> )	mg/L	Annually
Bicarbonate (HCO <sub>3</sub> )	mg/L	Annually
Total Phosphate (PO <sub>4</sub> )	mg/L	Annually
Nitrate (NO <sub>3</sub> )	mg/L	Annually
Total Nitrogen	mg/L	Annually
Volatile Organic Compounds (EPA Methods 601 & 602)	µg/L	Annually

### REPORTING

Daily and weekly monitoring shall be reported monthly. Monthly monitoring reports shall be submitted to the Regional Board by the 15th day of the following month. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year. Annual reports shall be submitted by January 15 of each year. Samples collected for annual analysis should be collected during November of every year.

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

The collection, preservation and holding times of all samples shall be in accordance with EPA-approved methods. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.

The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the waste management unit is operating in compliance with waste discharge requirements.

Each report shall contain the following treatment:

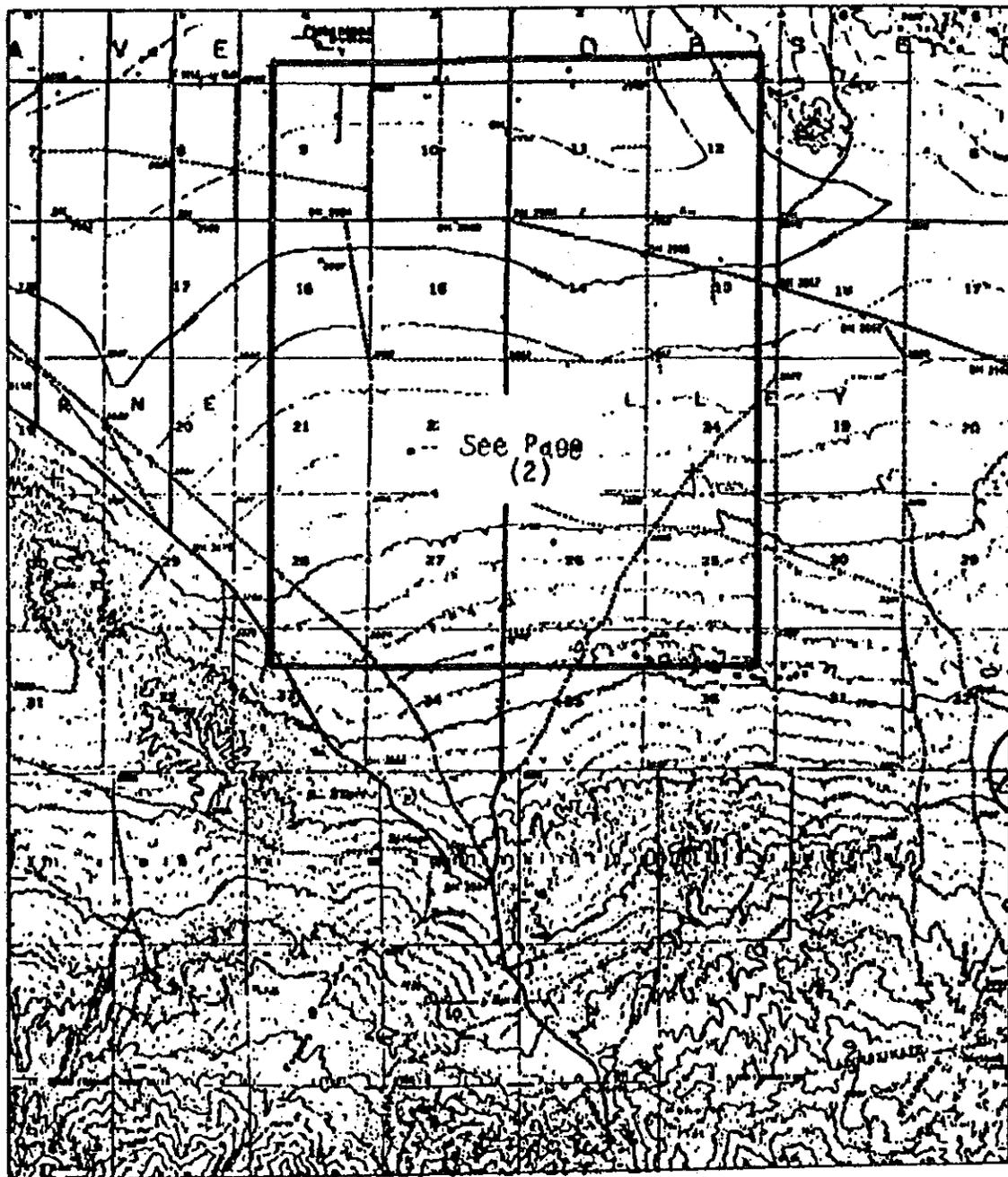
"I declare under the penalty of law that this document and all the attachments are true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

Submit monitoring reports to:

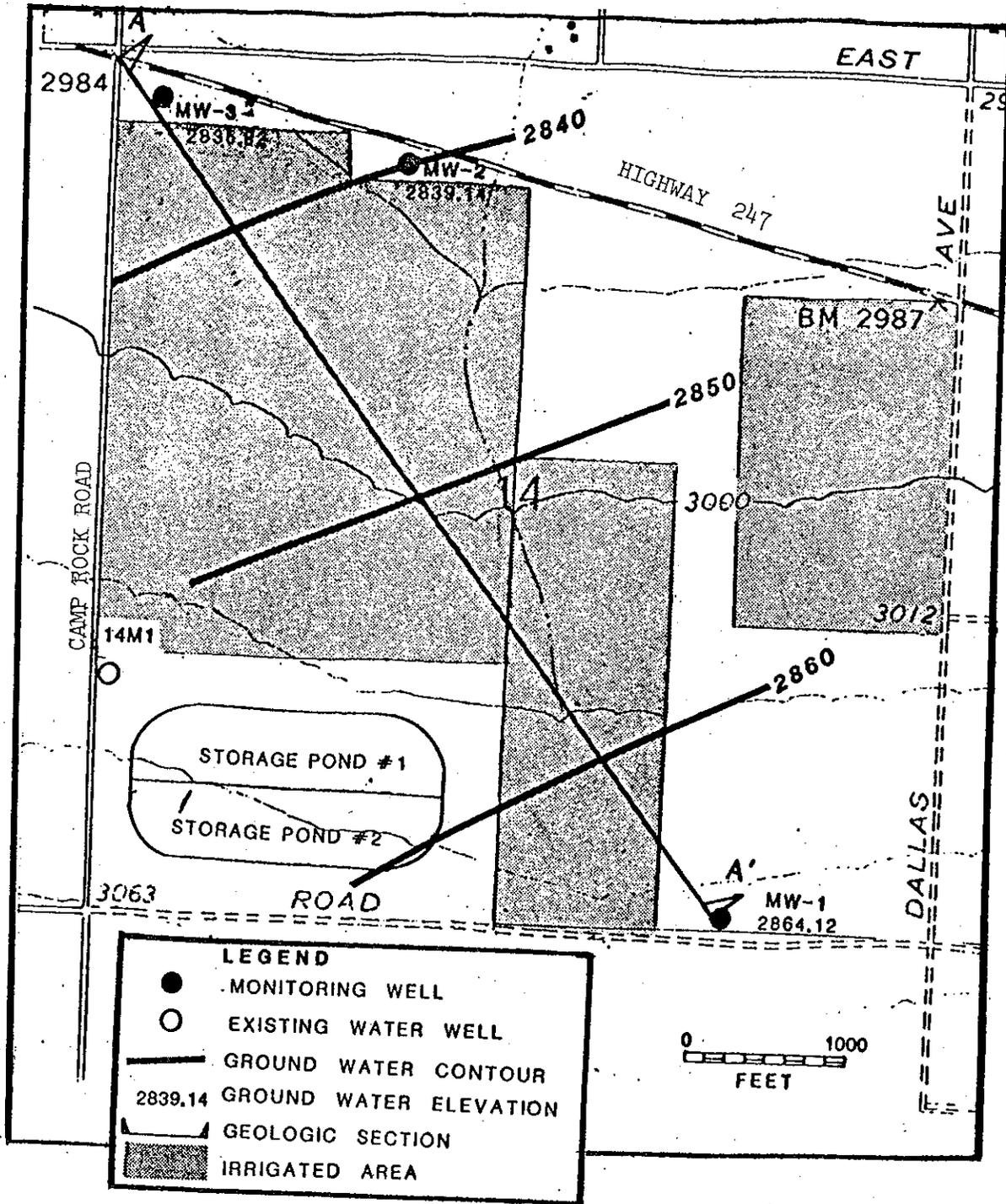
California Regional Water Quality Control Board  
Colorado River Basin Region  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, CA 92260

ORDERED BY: Philip A. Greenberg  
Executive Officer

May 19, 1993  
Date



**SITE MAP**  
**BIG BEAR AREA REGIONAL WASTEWATER AGENCY**  
**Export of Reclaimed Wastewater to Lucerne Valley**  
**Lucerne Valley - San Bernardino County**  
**Section 14, T4N, R1E, SBB&M**  
**USGS Lucerne Valley 7.5 Minute Topographic Map**  
**Board Order No. 93-030**



**SITE MAP**  
 BIG BEAR AREA REGIONAL WASTEWATER AGENCY  
 EXPORT OF RECLAIMED WASTEWATER TO LUCERNE VALLEY  
 Lucerne Valley - San Bernardino County  
 Section 14, T4N, R1E, SBB&M