

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 90-026

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 also referred to as the discharger), 139 E. Big Bear Boulevard, P.O. Box 517 Big Bear City, CA 92314, verified as accurate the updated information given below on December 29, 1989.
2. The discharger is currently discharging an annual average daily flow of 2.2 million gallons-per-day (mgd) of non-chlorinated treated effluent from a secondary wastewater treatment plant, for irrigation of fodder, fiber, and seed crops in Lucerne Valley, in 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 8 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 pretreatment 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 wasting and disposal are handled by a dissolved air flotation unit and a belt filter press. Disposal of sludge is done at a local county landfill along with the grit and screenings. The secondary treated plant effluent is discharged to the wastewater reclamation and irrigation site in Lucerne Valley through a 16.5 mile outfall line. Currently about 340 acres is being irrigated for alfalfa crop. At the irrigation site, there is a concrete reservoir to ensure a proper operating pressure for the irrigation system, and two earthen reservoirs with a combined capacity of 299 acre-feet. The plant effluent is discharged to these reservoirs for percolation and evaporation when it is not being used for irrigation.
4. The discharger reports that there are no industrial wastes being discharged to the wastewater treatment plant.
5. The discharger reports further, that no sewage sludge is discharged at the irrigation site and no grazing animals (cattle and goats) are allowed access to the site.

*revised
by: 93-030
5/19/93*

6. This discharge has been subject to waste discharge requirements adopted in Board Order No. 85-011.
7. There are no domestic wells within 500 feet of the disposal site.
8. The Water Quality Control Plan for the Colorado River Basin Region of California 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 purpose of this Board Order is to update waste discharge requirements adopted in Board Order No. 85-011.
11. The Board has notified the discharger and all known interested agencies and persons of its intent to update waste discharge requirements for this discharge.
12. The Board in a public meeting heard and considered all comments pertaining to this discharge.
13. 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 the discharger shall comply with the following specifications:

A. Discharge Specifications

1. The treatment or disposal of wastes at this facility shall not cause pollution or nuisance as defined in Section 13050(1) and 13050(m) of Division 7 of the California Water Code.
2. Reclaimed wastewater shall meet the requirements of Wastewater Reclamation Criteria, Title 22, Division 4, California Code of Regulations as to particular use. Reclaimed wastewater used for the surface or spray irrigation of fodder, fiber and seed crops shall have a level of quality no less than that of primary effluent where primary effluent is the effluent from a wastewater treatment process which provides removal of sewage solids so that it contains not more than 0.5 milliliter per liter per hour of settleable solids as determined by an approved laboratory method.
3. Wastewater used for irrigation or discharged in infiltration basins shall be confined to lands owned or controlled by the discharger.

4. 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.
5. The discharge shall not approach closer than 500 feet to any water well, unless approved by the San Bernardino County Department of Environmental Health Services, except that monitoring wells may be located within the site.
6. A minimum depth of freeboard of two (2) feet shall be maintained at all times in the infiltration basins.
7. Sewage sludge from the discharger's wastewater treatment plant shall not be discharged at the disposal site without the prior written approval of the Executive Officer.
8. Representative samples of 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>Average</u> ¹	<u>Maximum</u> ²
Total Dissolved Solids	mg/l	525	565
Chloride (Cl)	mg/l	60	80
Sulfate (SO ₄)	mg/l	60	80
Fluoride (F)	mg/l	1.0	1.4
Boron (B)	mg/l	-	0.75
20°C BOD ₅	mg/l	30	50
Suspended Solids	mg/l	30	50
Settleable Matter	ml/l	-	0.5

B. Provisions

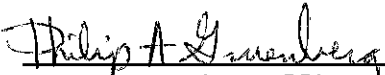
1. The discharger's wastewater treatment plant shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Chapter 4, Subchapter 14, Title 23, California Code of Regulations.
2. Prior to any substantial changes in the quality of wastewater being discharged to this facility, or modification of treatment methods which would result in material change in the quality or quantity of wastewater discharged, or any material change in the location of the discharge, the discharger shall report thereon to this Regional Board.
3. The discharger shall comply with "Monitoring and Reporting Program No. 90-026", and future revisions thereto, as specified by the Regional Board's Executive Officer.

¹ 30-Day or Monthly Average.

² Maximum on any one test.

IT IS FURTHER ORDERED that Board Order No. 85-011 be superseded by this Board Order.

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 March 14, 1990.



Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 90-026
FOR

BIG BEAR AREA REGIONAL WASTEWATER AGENCY
Export of Reclaimed Wastewater to Lucerne Valley
Lucerne Valley - San Bernardino County

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

A. RECLAIMED WASTEWATER MONITORING

Representative samples of the reclaimed wastewater shall be taken at the location of beneficial reuse or at the treatment facilities. Said samples shall be monitored as follows:

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
1. Suspended Solids	mg/l	24-Hr. Composite	Weekly
2. 20°C BOD ₅	mg/l	24-Hr. Composite	Weekly
3. Settleable Matter	ml/l	Grab	Daily
4. Quantity of Discharge	MGD	-	Daily ¹
5. Electrical Conductivity (EC X 10 ⁶ at 25°C)	Micromhos/cm	Grab	Daily
6. pH	-	Grab	Daily
7. Sulfate (SO ₄)	mg/l	24-Hr. Composite	Weekly
8. Chloride (Cl)	mg/l	24-Hr. Composite	Weekly
9. Boron (B)	mg/l	24-Hr. Composite	Weekly
10. Fluoride (F)	mg/l	24-Hr. Composite	Weekly
11. Total Dissolved Solids	mg/l	24-Hr. Composite	Weekly
12. Calcium (Ca)	mg/l	24-Hr. Composite	Quarterly
13. Magnesium (Mg)	mg/l	24-Hr. Composite	Quarterly
14. Sodium (Na)	mg/l	24-Hr. Composite	Quarterly
15. Potassium (K)	mg/l	24-Hr. Composite	Quarterly
16. Arsenic (As)	mg/l	24-Hr. Composite	Quarterly
17. Barium (Ba)	mg/l	24-Hr. Composite	Quarterly
18. Cadmium (Cd)	mg/l	24-Hr. Composite	Quarterly
19. Chromium (Total Cr)	mg/l	24-Hr. Composite	Quarterly
20. Copper (Cu)	mg/l	24-Hr. Composite	Quarterly
21. Iron (Fe)	mg/l	24-Hr. Composite	Quarterly
22. Lead (Pb)	mg/l	24-Hr. Composite	Quarterly
23. Manganese (Mn)	mg/l	24-Hr. Composite	Quarterly
24. Mercury (Hg)	mg/l	24-Hr. Composite	Quarterly
25. Selenium (Se)	mg/l	24-Hr. Composite	Quarterly
26. Silver (Ag)	mg/l	24-Hr. Composite	Quarterly

¹ For each day with average monthly flow calculated.

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
27. Zinc (Zn)	mg/l	24-Hr. Composite	Quarterly
28. Carbonate (CO ₃)	mg/l	24-Hr. Composite	Quarterly
29. Bicarbonate (HCO ₃)	mg/l	24-Hr. Composite	Quarterly
30. Total Phosphate (PO ₄)	mg/l	24-Hr. Composite	Quarterly
31. Nitrate (NO ₃)	mg/l	24-Hr. Composite	Quarterly
32. Total Nitrogen	mg/l	24-Hr. Composite	Quarterly
33. Endrin	µg/l	24-Hr. Composite	Annually
34. Lindane	µg/l	24-Hr. Composite	Annually
35. Methoxychlor	µg/l	24-Hr. Composite	Annually
36. Toxaphene	µg/l	24-Hr. Composite	Annually
37. 2,4-D	µg/l	24-Hr. Composite	Annually
38. 2,4,5-TP Silvex	µg/l	24-Hr. Composite	Annually

B. GROUND WATER MONITORING

Ground water at the disposal site shall be monitored by sampling the three (3) proposed ground water monitoring wells (one upgradient and two downgradient wells) in accordance with the following:

<u>Constituent</u>	<u>Unit</u>	<u>Sampling Frequency</u>
1. Total Dissolved Solids	mg/l	Annually
2. pH	mg/l	Annually
3. Sulfate (SO ₄)	mg/l	Annually
4. Chloride (Cl)	mg/l	Annually
5. Boron (B)	mg/l	Annually
6. Fluoride (F)	mg/l	Annually
7. Calcium (Ca)	mg/l	Annually
8. Magnesium (Mg)	mg/l	Annually
9. Sodium (Na)	mg/l	Annually
10. Potassium (K)	mg/l	Annually
11. Arsenic (Ap)	mg/l	Annually
12. Barium (Ba)	mg/l	Annually
13. Cadmium (Cd)	mg/l	Annually
14. Chromium (Total Cr)	mg/l	Annually
15. Copper (Cu)	mg/l	Annually
16. Iron (Fe)	mg/l	Annually
17. Lead (Pb)	mg/l	Annually
18. Manganese (Mn)	mg/l	Annually
19. Mercury (Hg)	mg/l	Annually
20. Selenium (Se)	mg/l	Annually
21. Silver (Ag)	mg/l	Annually
22. Zinc (Zn)	mg/l	Annually
23. Carbonate (CO ₃)	mg/l	Annually
24. Bicarbonate (HCO ₃)	mg/l	Annually
25. Total Phosphate (PO ₄)	mg/l	Annually

<u>Constituent</u>	<u>Unit</u>	<u>Sampling Frequency</u>
26. Nitrate (NO ₃)	mg/l	Annually
27. Total Nitrogen	mg/l	Annually
28. Endrin	µg/l	Annually
29. Lindane	µg/l	Annually
30. Methoxychlor	µg/l	Annually
31. Toxaphene	µg/l	Annually
32. 2,4-D	µg/l	Annually
33. 2,4,5-TP Silvex	µg/l	Annually

C. REPORTING

Monthly and weekly monitoring reports shall be submitted to the Regional Board by the last 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 the following year.

Submit monitoring reports to:

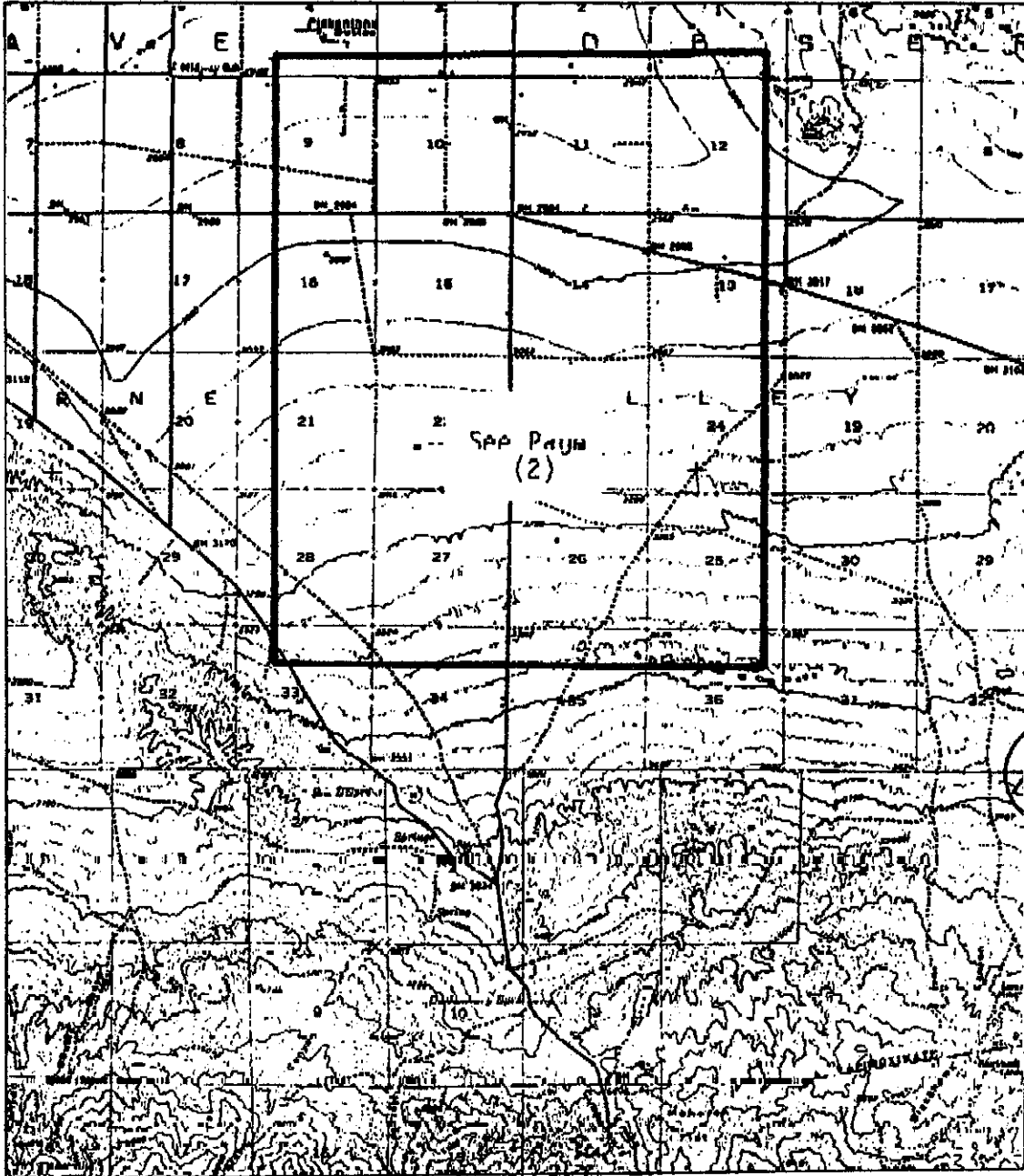
California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

ORDERED BY:

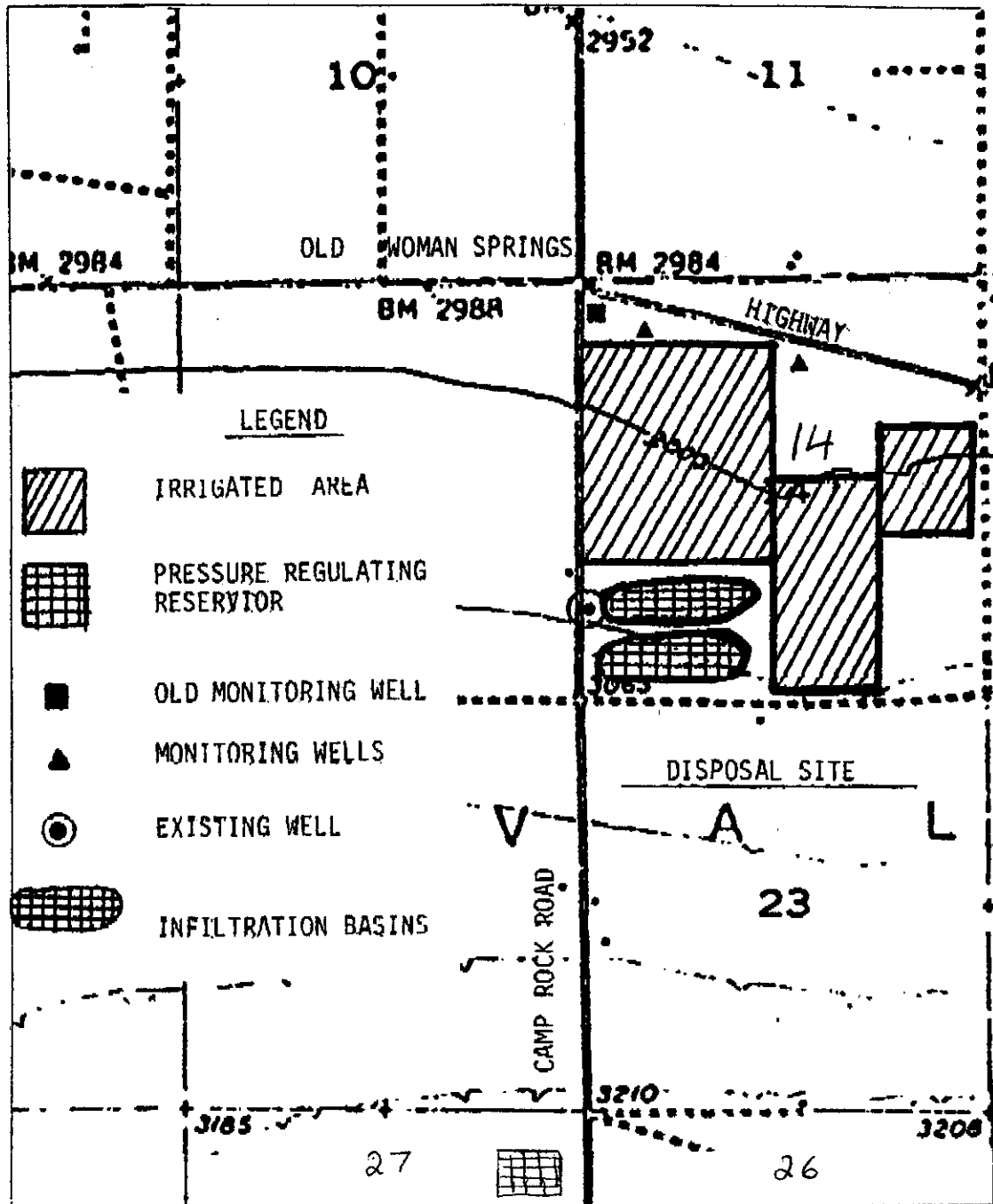
Philip A. Greenberg
Executive Officer

March 14, 1990

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



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