

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

ORDER NO. 01-156

WASTE DISCHARGE REQUIREMENTS
FOR
BIG BEAR AREA REGIONAL WASTEWATER AGENCY, OWNER/OPERATOR
EXPORT OF RECYCLED WATER TO LUCERNE VALLEY
Lucerne Valley – San Bernardino County

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

1. Big Bear Area Regional Wastewater Agency (hereinafter referred to as the discharger), P. O. Box 517, Big Bear City, California 92314, submitted an application to update its Waste Discharge Requirements (WDRs) for the export and disposal of recycled water to Lucerne Valley. The Waste Discharge Requirements are for the disposal system to and application site in Lucerne Valley.
2. The discharger owns a wastewater collection, treatment and disposal system (hereinafter referred to as facility) and provides sewerage service to the City of Big Bear Lake, Big Bear City Community Services District, and County Service Area 53-B. The wastewater treatment plant is located at 122 Palomino Drive, Big Bear City, California 92314, and has a design treatment capacity of 4.8 million gallons-per-day (MGD) and a hydraulic capacity of 9.2 MGD. The treatment plant, collection system and some of the disposal area is located outside the boundary of the Colorado River Basin and is regulated by the Santa Ana Regional Water Quality Control Board.
3. Approximately 2.36 MGD of undisinfected secondary recycled water (as defined in Title 22 California Code of Regulations Section 60301.900)) is discharged for irrigation of fodder and fiber crops on approximately 340 acres. An additional 140 acres is available for irrigation. The 480 acres is owned by the discharger and is located in Section 14, T4N, R1E, SBB&M.
4. The wastewater treatment plant consists of preliminary treatment, secondary treatment, and an irrigation disposal system.
 - a. Preliminary Treatment. Untreated wastewater flows to the preliminary treatment system, which consists of a bar screen, aerated grit chamber with grit washer, and a flow bypass channel. These process units are to remove screenings, rag material, and grit.
 - b. Secondary Treatment. Effluent flows by gravity from the preliminary treatment system to the oxidation ditches (three (3) ditches in parallel) for secondary (biological) treatment. The number of ditches in operation depends on the seasonal fluctuations of the influent flow. The effluent from the oxidation ditches flows into a system of three (3) secondary clarifiers for removal of floatable and settleable solids/materials. The secondary treated effluent flows to two (2) cement-lined balancing chambers and then flows to equalization storage ponds until pumped for offsite irrigation disposal.

- c. Offsite Irrigation Disposal. The secondary treated water is pumped from the main pump building (5.2 MGD) or auxiliary pump building (9.2 MGD) approximately 16.5 miles to an offsite open 2.26 million gallon concrete-lined reservoir (undisinfected secondary recycled water reservoir). This reservoir is located one mile south of the irrigation site. The secondary treated water in the reservoir gravity flows through an outfall line connected to the irrigation system. In the event of an overflow at the concrete-lined reservoir, the secondary treated water flows by gravity to earthen basins located adjacent to the irrigation site. Undisinfected secondary water has been approved by the Department of Health Services for use for irrigation at this site.
5. The distance from the well, designated as 14 M1, to the nearest storage pond is 180 feet.
6. The ground water below the discharge site in November 2000 ranged from 130 to approximately 172 feet below ground surface. Three ground water monitoring wells have been installed at the discharge site.
7. There are no significant industrial wastes being discharged to the wastewater treatment plant.
8. No sewage sludge is discharged at the irrigation site.
9. The grazing of sheep on the irrigation site has been allowed under certain conditions as outlined in a letter from Regional Board staff dated November 15, 1994 and under conditions shown in the specifications.
10. This discharge has been regulated by Waste Discharge Requirements adopted in Board Order No. 93-030.
11. The State Department of Health Services has established statewide reclamation criteria in Title 22, California Code of Regulations, and Section 60301, et. seq. (hereinafter Title 22) for the use of recycled water and has developed guidelines for specific uses.
12. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan) was adopted on November 17, 1993, and designates the beneficial uses of ground and surface waters in this Region.
13. The beneficial uses of ground waters in the Lucerne Hydrologic Unit are:
 - a. Municipal supply (MUN)
 - b. Industrial supply (IND)
 - c. Agricultural supply (AGR)
14. Federal regulations for storm water discharges were promulgated by the United States Environmental Protection Agency (USEPA) (40 CFR Parts 122, 123, and 124). The regulations require specific categories of facilities which discharge storm water associated with industrial activity to obtain National Pollutant Discharge Elimination System (NPDES) permits and to implement Best Conventional Pollutant Technology (BCT) to reduce or eliminate industrial storm water pollution.
15. The State Water Resources Control Board (SWRCB) adopted Order No. 97-03-DWQ (General Permit No. CAS000001), specifying waste discharge requirements for discharges of storm water associated with industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent by industries to be covered under the Permit. The discharger filed a Notice of Intent for the General Storm Water Permit on March 27, 1992.

16. 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.)
17. The Board has notified the discharger and all known interested agencies and persons of its intent to update waste discharge requirements for this discharge and has provided them with an opportunity for a public meeting and an opportunity to submit comments.
18. The Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, that Board Order No. 93-030 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. Effluent Limitations

1. Wastewater effluent discharged from the treatment plant for irrigation shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>30-Day Arithmetic Mean Discharge Rate¹</u>	<u>7-Day Arithmetic Mean Discharge Rate²</u>	<u>Maximum</u>
20° C BOD ⁵ ³	mg/L ⁴	30	45	-----
Total Suspended Solids	mg/L	30	45	-----
Chloride	mg/L	60		80
Sulfate	mg/L	60		80
Boron	mg/L	----		0.75

2. Groundwater samples collected from irrigation monitoring wells shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Annual Arithmetic Mean Discharge Rate⁵</u>	<u>Maximum</u>
Fluoride	mg/L	1.6	2.0

¹ 30 Day Mean-The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days as specified in the Monitoring and Reporting Program.

² 7 Day Mean-The arithmetic mean of pollutant parameter values of samples collected in a period of 7 consecutive days as specified in the Monitoring and Reporting Program.

³ BOD⁵ - Biochemical Oxygen Demand

⁴ mg/L - milligrams per Liter

⁵ Annual Mean-The arithmetic mean of pollutant parameter values of samples collected in a period of 365 consecutive days as specified in the Monitoring and Reporting Program.

3. The 30-day average daily dry weather discharge flow for irrigation shall not exceed 4.8 MGD.
4. The effluent discharge values for pH shall not be below 6.0 or above 9.0.
5. The increase in concentration of total dissolved solids (TDS) in the wastewater discharged to the treatment basins over that contained in the Big Bear water supply to the community shall not exceed 400 mg/L. If the TDS limitation is exceeded, the discharger shall develop and implement appropriate mitigation measures, which are acceptable to the Regional Board's Executive Officer.

B. Specifications

1. Both treated and untreated wastewater shall be prevented from entering surface water bodies.
2. The treatment or disposal of wastes from the facility shall not cause pollution or nuisance as defined in Section 13050 of Division 7 of the California Water Code.
3. A minimum depth of freeboard of two (2) feet shall be maintained at all times in the overflow earthen basins and concrete-lined reservoir.
4. Public contact with non-disinfected wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives. The non-disinfected wastewater is not approved for off-site distribution. Conspicuous signs shall be posted in a prominent location in each area where non-disinfected wastewater is stored on-site. Each sign or label with "Non-disinfected wastewater - No body contact or drinking" wording shall be displayed as well as the international warning symbol.
5. The discharge shall not cause degradation of any water supply.
6. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.
7. The overflow earthen basins and concrete-lined reservoir shall be maintained so they will be kept in aerobic conditions.
8. As a means of discerning compliance with discharge Specifications No. 6 and No. 7 for discharge to wastewater treatment ponds, the dissolved oxygen content in the upper zone (one foot) of the concrete reservoir and earthen basins shall not be less than 1.0 mg/L.
9. On-site wastes, including windblown spray from recycled water application, shall be strictly confined to the lands specifically designated for the disposal operation, and on-site irrigation practices shall be managed so there is no runoff of effluent from irrigated areas.
10. No irrigation with, or impoundment of, undisinfected secondary recycled water shall take place within 150 feet of any domestic water supply well.
11. No spray irrigation of any recycled water shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground or schoolyard.
12. Except as allowed under Section 7604 of Title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.

13. Undisinfected secondary recycled water, as defined in Title 22, Section 60301.900 is limited only for irrigation in the following applications:
 - a. Orchards where the recycled water does not come into contact with the edible portion of the crop,
 - b. Vineyards where the recycled water does not come into contact with the edible portion of the crop,
 - c. Non food-bearing trees (Christmas tree farms are included in this category provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting or allowing access by the general public),
 - d. Fodder and fiber crops and pasture for animal not producing milk for human consumption,
 - e. Seed crops not eaten by humans,
 - f. Food crops that must undergo commercial pathogen-destroying processing before being consumed by humans, and
 - g. Ornamental nursery stock and sod farms provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting, retail sale, or allowing access by the general public.
14. No recycled water used for irrigation, or soil that has been irrigated with recycled water, shall come into contact with edible portions of food crops eaten raw by humans.
15. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in pollution, or adversely affect water quality, as defined in the California Water Code.
16. The delivery or use of recycled water shall be in conformance with the reclamation criteria contained in Title 22, or amendments thereto, for the irrigation of food crops, irrigation of fodder, fiber, and seed crops, landscape irrigation, supply of recreational impoundments and ground water recharge.
17. Prior to delivering recycled water to any new user, the discharger shall submit to the Regional Board a report discussing any new distribution system being constructed by the discharger to provide service to the new user.
18. Recycled water shall not be delivered to any new user who has not first received a discharge permit from the Regional Board and approval from the State Department of Health Services.
19. Treated or untreated sludge or similar solid waste materials shall be disposed at locations approved by the Regional Board's Executive Officer.
20. Grazing of sheep on the irrigation site is allowed only under the following conditions, unless otherwise approved by the Regional Board's Executive Officer:
 - a. Grazing will only be conducted in October or November after the last cutting of hay has been baled;
 - b. Grazing animals will not be allowed into a portion of the site until 10 days after it was last irrigated;

- c. Temporary fences will be erected to contain the grazing animals in an area of 40 acres or less;
- d. Only ewes that are about to lamb or ewes with newly born will be grazed;
- e. No animals will be sold for slaughter within 90 days after grazing.
- f. No milk produced by sheep that have grazed at the irrigation site shall be used for human consumption.

C. Prohibitions

- 1. The direct discharge of any wastewater from the facility to any surface waters or surface drainage courses is prohibited.
- 2. Bypass, overflow, discharge or spill of untreated or partially treated waste is prohibited.
- 3. Discharge of treated wastewater at a location or in a manner different from that described in Findings No. 3 and 4, above, is prohibited. This prohibition does not limit the flexibility in discharging different percentages of treated wastewater.

D. Provisions

- 1. The discharger shall comply with "Monitoring and Reporting Program No. 01-156", and future revisions thereto, as specified by the Regional Board's Executive Officer.
- 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. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.
- 4. The discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.
- 5. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
- 6. Facilities shall be available to keep the plant in operation in the event of commercial power failure.
- 7. The discharger's wastewater treatment plant shall be supervised and operated by persons possessing certification of appropriate grade pursuant to Section 3680, Chapter 26, Division 3, Title 23 of the California Code of Regulations. The discharger shall ensure that all operating personnel are familiar with the contents of this Board Order.
- 8. The discharger shall comply with all of the conditions of this Board Order. Any noncompliance with this Board Order constitutes a violation of the Porter-Cologne Water Quality Control Act and is grounds for enforcement action.

9. The discharger shall, at all times, properly operate and maintain all systems and components of collection, treatment and control which are installed or used by the discharger to achieve compliance with the conditions of this Board Order. Proper operation and maintenance includes effective performance, adequate process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Board Order. All systems both in service and reserved, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Regional Board upon demand.
10. The discharger shall report any noncompliance that may endanger human health or the environment. Information shall be provided immediately, but not later than twenty-four (24) hours of when the discharger becomes aware of the incident to the Regional Board office and the Office of Emergency Services. The discharger shall also leave a message on the Regional Board office voice recorder during non-business hours. A written report shall also be provided within five (5) business days of the time the discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. The discharger shall report all intentional or unintentional sewage spills in excess of one thousand (1,000) gallons occurring within the Colorado River Basin Region (Lucerne Valley area) to the Regional Board office in accordance with the above time limits.
11. The discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the premises regulated by this Board Order, or the place where records must be kept under the conditions of this Board Order;
 - b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Board Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Board Order; and
 - d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Board Order or as otherwise authorized by the California Water Code, any substances or parameters at this location.
12. The discharger shall comply with the following:
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Board Order, and records of all data used to complete the application for this Board Order, for a period of at least 5 years from the date of the sample, measurement, report or application.

c. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurement(s);
 2. The individual(s) who performed the sampling or measurement(s);
 3. The date(s) analyses were performed;
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and
 6. The results of such analyses.
13. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the United States Environmental Protection Agency.
14. The discharger shall provide the following information regarding off-site use of undisinfected secondary recycled water:
- a. Name and location of the areas being irrigated.
 - b. Quantity and quality of the recycled water provided to individual customers.

The discharger shall immediately notify the Regional Board's Executive Officer of any changes regarding Items a, and b, above.

15. The discharger shall provide a report to the Regional Board when it determines that the plant's average dry-weather flow rate for any month exceeds 80 percent of the design treatment capacity specified in Finding No. 2 above. The report should indicate what steps, if any, the discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.
16. The discharger is the responsible party for the waste discharge requirements and the monitoring and reporting program for the facility. The discharger shall comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Regional Board Orders or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board.
17. The discharger shall report all instances of noncompliance. Reports of noncompliance shall be submitted with the discharger's next scheduled self-monitoring report or earlier if requested by the Regional Board's Executive Officer, or if required by an applicable standard for sludge use and disposal.
18. 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.
19. The concrete-lined reservoir and earthen basins shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, ancillary inflow, and infiltration during the non-irrigation 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.

20. The concrete-lined reservoir and earthen basins shall be managed to prevent breeding of mosquitoes. In particular,
 - a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
21. The discharger shall maintain coverage under the General Storm Water Permit for storm water discharges associated with industrial activities.
22. This Board Order may be modified, rescinded and reissued, for cause. The filing of a request by the discharger for a Board Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include the promulgation of new regulations, modification of land application plans, or modification in sludge use or disposal practices, or adoption of new regulations by the State Board or the Regional Board, including revisions to the Basin Plan.

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 November 14, 2001.

Executive Officer