

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

ORDER NO. R4-2002-0139

**WASTE DISCHARGE REQUIREMENTS
AND
WATER RECYCLING REQUIREMENTS
FOR
LIMONEIRA COMPANY**

(File No. 66-066)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), finds:

1. Limoneira Company (hereinafter Discharger) owns and operates the Limoneira/Olivelands Ranch (Limoneira/Olivelands) located at 1141 Cummings Road, Santa Paula, California (Figure 1). The Discharger currently discharges treated domestic and commercial washwater from Limoneira/Olivelands under Waste Discharge Requirements and Water Reclamation Requirements contained in Order No. 88-15, adopted by the Regional Board on January 25, 1988.
2. California Water Code section 13263(e) provides that all waste discharge requirements shall be reviewed periodically and, upon such review, may be revised by the Regional Board. Following a review of requirements in Order No. 88-15, and inspections of the subject site on April 22 and May 17, 2002, these requirements have been revised to include additional findings, effluent limitations, updated standard provisions, updated specifications for water use, and an expanded monitoring and reporting program which incorporates groundwater and surface water monitoring.

Description of Facility

3. Limoneira/Olivelands encompasses approximately 1,668 acres and is located about 7 miles east of Ventura and 9 miles north of the Pacific Ocean near Santa Paula. Oranges, lemons, hass avocados, and row crops are being grown at the subject ranch. There are two separate farms at this ranch: Limoneira Farm and Olivelands Farm (Figure 2).

Limoneira Farm

4. At Limoneira Farm, the Discharger operates two wastewater collection, treatment, and disposal systems. The first system consists of two Imhoff tanks (Imhoff No. 1 and Imhoff No. 2) with a design capacity of 50,000 gallons per day (gpd) for each tank. The Imhoff tanks are followed by six sequential unlined evaporation/percolation ponds. Ponds No. 1, 2, 4, 5, and 6 are settling ponds and Pond No. 3 is an aeration pond. The approximate capacities of the ponds are:

Pond No. 1	139,358 gallons
Pond No. 2	184,555 gallons
Pond No. 3	973,303 gallons
Pond No. 4	889,233 gallons
Pond No. 5	809,570 gallons
Pond No. 6	825,488 gallons

This treatment system is currently processing about 60,000 gpd of domestic wastewater from residences and a trailer park. Figure 4 shows the schematic diagram for the treatment system.

5. The second system, which is called Plant No. 4, treats up to 15,000 gpd of domestic wastewater and 75,000 gpd of rinse water from the orange and lemon packinghouses. The system uses extended aeration for treatment and consists of a concrete tank with a capacity of 120,000 gallons. The tank is divided into three stages. The first stage consists of two solid and liquid separation chambers, the second stage consists of two aeration chambers, and the third stage consists of two settling chambers. Rinse water is water supplied by the City of Santa Paula to rinse the fruit as it is taken out of storage. The effluent from this treatment system is also discharged to Pond No. 6 of the first system. Total wastewater flow in excess of 90,000 gallons per day is diverted to Imhoff No.1 for treatment and then discharged to the evaporation/percolation ponds. Figure 4 shows the schematic diagram for the treatment system.
6. The treatment and disposal facilities at Limoneira Farm are located about 1,900 feet west of Todd Barranca Creek and 9,900 feet northwest of Santa Clara River in Section 19, Township 3N, Range 21 W, based on the San Bernardino Base & Meridian. Limoneira Farm's approximate latitude is 34⁰ 19' 52" N; and the longitude is 119⁰ 07' 33" W.

Olivelands Farm

7. At Olivelands Farm, up to 30,000 gpd of domestic wastewater from residences are primarily treated at a 50,000-gallon Imhoff tank (Imhoff No. 3) and discharged to a series of six unlined ponds. Pond No. 1 is a separation pond, Pond No. 2 is an aeration pond, and Ponds No. 3, 4, 5, and 6 are all evaporation/percolation ponds. Treated wastewater is not reclaimed at Olivelands Farm for any purpose. Figure 5 shows the schematic diagram for the treatment system. The approximate capacities of the ponds are:

Pond No. 1	309,472 gallons
Pond No. 2	229,113 gallons
Pond No. 3	425,251 gallons
Pond No. 4	622,172 gallons
Pond No. 5	415,729 gallons
Pond No. 6	746,180 gallons

8. Olivelihoods Farm is located about 2 miles west of the Limoneira Farm and approximately 59 feet from Ellsworth Barranca Creek in Section 25, Township 3N, Range 22 W, based on the San Bernardino Base & Meridian. It has an approximate latitude of 34° 18' 42" N and an approximate longitude of 119° 08' 40" W (Figure 3). The Ellsworth Barranca Creek directs intermittent surface water flow to the Santa Clara River approximately 9,000 feet southeast of Olivelihoods Farm.

Orchard Farm

9. The Orchard Farm, also owned by the Discharger, is located approximately 2.5 miles southwest of Limoneira Farm and occupies a total of approximately 1,100 acres. Lemons, hass avocados, and row crops are being grown in this area. However, approximately 6 acres of the farm is used exclusively for growing alfalfa crops for livestock. Treated wastewater from Ponds No. 4, 5, or 6 at the Limoneira Farm is chlorinated, filtered, and then pumped to this area for surface irrigation of only the alfalfa crops. The average monthly volume of treated wastewater used for irrigation during 2001 was 269,000 gallons.
10. In a letter dated May 6, 2002, the Discharger indicated that waste sludge generated from the Imhoff tanks is longer being discharged to the earthen drying pits adjacent to the tanks at Limoneira Farm and Olivelihoods Farm. The sludge will be hauled offsite to a legal waste disposal facility for the next disposal event. The Discharger disposes waste sludge approximately once every three years.
11. The groundwater level in the Limoneira/Olivelihoods area is wide-ranging. As recorded by the County of Ventura, the Limoneira Farm site west of Cumming Road, between Foothill Road and Telegraph Road has groundwater levels between 5 feet (June 1973) and 50 feet (October 1985) below ground surface. The Olivelihoods Farm site near the Ellsworth Barranca and Foothill Road further west has groundwater levels that vary between 14 feet (October 1990) and 45 feet (July 2001) below ground surface.
12. Both potable and irrigation water are currently piped to Limoneira Farm, Olivelihoods Farm, and Orchard Farm. Domestic water used at the Limoneira Farm and the Olivelihoods Farm is furnished by the City of Santa Paula. Domestic water used at the Orchard Farm is furnished not only by the City of Santa Paula but also by a small domestic water well located approximately 3,000 feet northeast of the alfalfa field. Irrigation water is provided by the Farmers Irrigation and Thermalbelt Company and is used for irrigation at the three farms.

Description of Waste Discharge

13. Sources of wastewater discharged at Limoneira Farm and Olivelihoods Farm are summarized at follows:

Source	Limoneira Farm	Olivelands Farm
Rinse water from packinghouse	Up to 75,000 gpd	--
Domestic wastewater	Up to 75,000 gpd	Up to 30,000 gpd

14. At Limoneira Farm, the principal constituents of concern in domestic wastewater are total suspended solids, biodegradable organics, dissolved inorganics, and pathogenic organisms. Rinse water from the orange and lemon packinghouses may include chlorine, insecticides, and fungicides. Specifically, solvent-refined light paraffinic distillate, abamectin, norflurazon, chlorpyrifos, metaldehyde, glyphosate, and simazine, are used during the growing of oranges, lemons, avocados, and row crops. No Maximum Contaminant Levels exist for these constituents, except for glyphosate and simazine. Based on the Maximum Contaminant Levels provided in the California Code of Regulations, the monthly average limits for glyphosate and simazine are 0.7 and 0.004 milligrams per liter, respectively.
15. At Olivelands Farm, the principle constituents of concern in domestic wastewater are total suspended solids, biodegradable organics, dissolved inorganics, and pathogenic organisms.

Storm Water Management

16. The facility was inspected by Regional Board storm water staff on May 17, 2002. Storm water staff determined that the Limoneira/Olivelands Ranch establishment primarily engages in the production of citrus fruit [Standard Industrial Code (SIC) 0174/0179] and therefore is not required to be covered under Water Quality Order No. 97-03 DWQ NPDES General Permit.

Applicable Plans, Policies, and Regulation

17. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) which was subsequently amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state anti-degradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates by reference applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with previously adopted State and Regional Board plans and policies. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.

18. The facility is located in the West of Peck Road Area of the Santa Clara — Santa Paula Groundwater Basin. The evaporation/percolation ponds at Olivelihoods Farm are located adjacent to Ellsworth Barranca Creek within the Santa Paula Creek Hydrologic Unit of the Santa Clara River Watershed.

The Basin Plan has the following beneficial use designations:

Surface water (Santa Paula Creek - Santa Clara River Watershed)

Potential: Municipal and domestic supply

Existing: Industrial process and service supply; agricultural supply; groundwater recharge; freshwater replenishment; water-contact recreation (REC-1); non-water contact recreation (REC-2); warm and cold freshwater habitat; spawning rare, threatened, or endangered species; wildlife habitat; migration of aquatic organisms; and spawning, reproduction, and/or early development of fish

Groundwater (West of Peck Road Area - Santa Clara/Santa Paula Groundwater Basin)

Existing: Municipal and domestic supply; industrial process and service supply; and agricultural supply

19. The requirements contained in this Order are based on the *Basin Plan*. This Order is in conformance with the goals of the aforementioned water quality control plan(s) and will protect and maintain the beneficial use of the groundwater.
20. Section 13523 of the California Water Code provides that a Regional Board, after consulting with, and receiving the recommendations of the State Department of Health Services (SDHS), and after any necessary hearing, shall, if it determines such action to be necessary to protect the public health, safety, or welfare, prescribe Waste Discharge Requirements/Water Recycling Requirements for water which is used, or proposed to be used, as recycled water. Section 13523 further provides that such requirements shall include, or be in conformance with, the statewide recycling criteria. On May 9, 2002, SDHS submitted their comments and Regional Board staff have incorporated their comments as appropriate.
21. The direct beneficial reuse of recycled water for surface irrigation of alfalfa crops could affect the public health, safety, or welfare; requirements for such use are therefore necessary in accordance with section 13523 of the California Water Code.
22. Impacts from the Discharger's discharge may have a cumulative adverse impact on total dissolved solids, nitrates, chloride, and other constituents on receiving groundwater and nearby surface water quality. However, Order No. 88-15 does

- not include effluent monitoring at Olivelihoods Farm. In addition, there is no groundwater monitoring conducted at Limoneira Farm and Olivelihoods Farm. As a result the impacts have not been adequately assessed. Therefore, a groundwater monitoring program and a surface water monitoring program are necessary to evaluate any impacts from the discharge of waste to the groundwater quality, and to determine the migration potential of waste discharge to groundwater and nearby creek. Groundwater and surface water monitoring programs shall be established so that groundwater and surface water may be sampled and analyzed to determine if discharges from the treatment systems impact water quality.
23. The existing treatment systems at Limoneira Farm and Olivelihoods Farm are not capable of disinfecting treated wastewater discharged to the evaporation/percolation ponds. The Discharger will be required to monitor for pathogens (total coliform, fecal coliform, and enterococcus) in accordance with the tentative Monitoring and Reporting Program No. CI-5322 (Attachment T). If monitoring indicates that pathogens are impacting the water quality in excess of Basin Plan objectives, disinfection will be required.
 24. The issuance of Waste Discharge Requirements for this facility is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, section 21000 et seq.) in accordance with California Code of Regulations, title 14, section 15301 as an existing facility.
 25. In accordance with the Governor's Executive Order requiring any proposed activity to be reviewed to determine whether such activity will cause additional energy usage, Regional Board staff have determined that implementation of these Waste Discharge Requirements will not result in a significant change in energy usage.

Notifications

26. The Regional Board has notified the Discharger and interested agencies and persons of its intent to revise the Waste Discharge Requirements for this discharge, and has provided them with an opportunity to submit their written views and recommendations for the requirements.
27. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that Limoneira Company shall comply with the following waste discharge requirements:

A. EFFLUENT LIMITATIONS AT LIMONEIRA FARM

1. Waste discharged or recycled water shall be limited to treated domestic wastewater and treated rinsewater only.

2. Treated wastewater/rinsewater shall be discharged only at the evaporation/percolation ponds and the surface irrigation areas controlled by the Discharger.
3. Waste discharged shall at no time contain any substances or agents, which would produce offensive or unsightly conditions in the disposal area.
4. Waste discharged or recycled water shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Units*</u>	<u>30-Day Average</u>	<u>Daily Maximum</u>
BOD ₅	mg/L	30	45
Suspended solids	mg/L	30	45
Oil & Grease	mg/L	----	15
Total dissolved solids	mg/L	2,000	----
Sulfate	mg/L	800	----
Chloride	mg/L	110	----
Boron	mg/L	1.0	----
Nitrate + Nitrite + Ammonia + Organic Nitrogen as Nitrogen	mg/L	----	10
Glyphosate	mg/L	0.7	----
Simazine	mg/L	0.004	----

*mg/L: milligrams per liter

5. Treated wastewater shall at all times be within the range of 6.5 to 8.5 pH units.
6. Treated wastewater shall not contain organic chemicals or inorganic chemicals (i.e., heavy metals, arsenic, or cyanide) in concentrations exceeding the limits contained in the current California Drinking Water Standards, title 22, sections 64431 and 64444 of the California Code of Regulations, or subsequent revisions.
7. Radioactivity shall not exceed the limits specified in title 22, section 64443 of the California Code of Regulations, or subsequent revisions.
8. Any wastes that do not meet the foregoing requirements shall be held in impervious containers, and discharged at a legal point of disposal.

B. SPECIFICATIONS FOR USE OF RECYCLED WATER

1. Recycled water used for surface irrigation of alfalfa crops shall be at all times an adequately disinfected and oxidized wastewater. The wastewater

shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters (ml), as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms does not exceed an MPN of 240 per 100 ml in any two consecutive samples. An adequately oxidized wastewater means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen. In addition, a geometric mean enterococcus density shall not exceed 24 organisms per 100 ml for a 30-day period.

2. Recycled water shall be applied at such a rate and volume as not to exceed vegetation demand and soil moisture conditions. No harvested fruit shall come in contact with such irrigation water on the ground.
 3. Special precautions must be taken to prevent clogging of sprinkler nozzles, to prevent overwatering, and to exclude the production of runoff. Pipelines shall be maintained so as to prevent leaks.
 4. There shall be no cross-connection between the potable water supply and piping containing recycled water.
 5. Recycled water uses shall meet the requirements specified in the "Guidelines for Use of Recycled Water" issued by the SDHS.
 6. Recycled water used for irrigation shall be retained on the areas of use and shall not be allowed to escape as surface flow, except as provided for in a National Pollutant Discharge Elimination System (NPDES) Permit.
 7. All areas where recycled water is used shall be posted with conspicuous signs that include the following wording in a size no less than 4 inches high by 8 inches wide: "ATTENTION: NON-POTABLE RECYCLED WATER – DO NOT DRINK" or "RECYCLED WATER USED FOR IRRIGATION – DO NOT DRINK." Perimeter warning signs indicating that the recycled water is in use shall be posted at least every 500 feet, with a minimum of at least one sign on each corner of each irrigation area at access road entrances.
 8. The portions of the recycled piping system that are in areas subject to access by the general public shall not include any hose bibbs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled piping system in areas subject to public access.
- C. GROUND WATER LIMITATIONS AT LIMONEIRA FARM, OLIVELANDS FARM, AND ORCHARD FARM

1. Receiving water shall be defined as groundwater at a point no greater than fifty (50) feet hydraulically downgradient of the furthest extent of the disposal/irrigation areas at Limoneira Farm, Olivelihoods Farm, and Orchard Farm or the property line of the Discharger, whichever is less.
2. The receiving water shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Units</u> *	<u>30-Day Average</u>	<u>Daily Maximum</u>
Total dissolved solids	mg/L	2,000	----
Sulfate	mg/L	800	----
Chloride	mg/L	110	----
Boron	mg/L	1.0	----
Nitrate + Nitrite + Ammonia + Organic Nitrogen as Nitrogen	mg/L	----	10
Glyphosate	mg/L	0.7	----
Simazine	mg/L	0.004	----
Fecal coliform	MPN/100mL	----	1.1
Total coliform	MPN/100mL	----	1.1
Enterococcus	MPN/100mL	----	1.1

* MPN/100mL: Most Probable Number per 100 milliliter; mg/L: milligrams per liter

D. GENERAL REQUIREMENTS

1. Standby or emergency power facilities, emergency bypass facilities, and/or sufficient capacity shall be provided for recycled water storage during rainfall, and at times when irrigation cannot be practiced.
2. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
3. Adequate facilities shall be provided to protect and maintain the irrigation system from damage by storm flows and runoff.
4. At a minimum, a plant operator shall inspect the facility on a daily basis to ensure that the treatment processes are working properly and that the plant recycled water is in compliance with this Order.

E. PROHIBITIONS

1. The discharge of treated wastewater to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.

2. The discharge of wastes, whether treated or untreated, or any reclaimed water to any drainage ditch, watercourse or tributary is prohibited at all times.
3. Recycled water use or spray irrigation shall not be conducted during periods of rainfall and/or runoff.
4. Recycled water use or spray irrigation shall not be discharged to geologically unstable areas, and shall not result in earth movement. Spray irrigation with recycled water shall not result in soil erosion.
5. Recycled water shall not be used for food crops irrigation or stored in any impoundment within 100 feet of any domestic water supply well or mineral spring.
6. Treated wastewater discharges shall not cause pollution or nuisance.
7. Treated wastewater discharges shall not result in problems due to breeding of mosquitoes, gnats, midges, or other pests.
8. Treated wastewater discharges shall not impart tastes, odors, color, foaming, or other objectionable characteristics to receiving groundwater.
9. Treated wastewater discharges which could affect receiving groundwater shall at no time contain any substance in concentration toxic to human, animal, plant, or aquatic life.
10. The surfacing or overflow of treated wastewater from food crops irrigation and disposal areas at any time and at any location and the direct or indirect discharge of wastes to waters of the State (including storm drains, groundwater or surface water drainage courses) is prohibited.
11. There shall be no onsite disposal of sludge. Any offsite disposal of sludge shall be made only to a legal point of disposal. For purposes of this Order, a legal disposal site is one for which requirements have been established by a California Regional Water Quality Control Board, and which is in full compliance therewith.

F. PROVISIONS

1. A copy of this Order shall be maintained at the facility so as to be available at all times to operating personnel.
2. In accordance with California Water Code (CWC) section 13267, the Discharger shall furnish, under penalty of perjury, technical monitoring program reports: such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted.

3. The Discharger shall file with the Regional Board technical reports on self-monitoring work performed according to the detailed specifications contained in Monitoring and Reporting Program CI-5322 which is attached and incorporated herein by reference. If there is any conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the Monitoring and Reporting Program prevail.
4. Should monitoring data indicate impacts to groundwater or nearby surface water, the Discharger shall submit, within 90 days after determination of the problem, plans for measures that will be taken, or have been taken, to mitigate any long-term effects that may result from the disposal of wastes. Any water quality impact to surface and groundwater such as, but not limited to, risk to human health from pathogens, and accelerated eutrophication of surface waters from nutrients in wastewaters shall be reported.
5. The Discharger shall notify the Regional Board by telephone within 24 hours of any violations of discharge or treated wastewater use conditions or any adverse conditions as a result of the use of treated wastewater from this facility that may endanger health or the environment; written confirmation shall follow within one week.
6. The Discharger shall notify the Regional Board staff by telephone immediately of any confirmed coliform counts that could cause a violation of the Waste Discharge Requirements/Water Recycling Requirements, including the date(s) thereof. This information shall be confirmed in the next monitoring report. In addition, for any actual coliform limit violations that occurred, the report shall also include the reasons for the high coliform results, the steps taken to correct the problem (including dates thereof), and steps that have been taken to prevent a recurrence.
7. This Order does not alleviate the responsibility of the Discharger to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Expansion of the facility from its current capacity shall be contingent upon issuance of all necessary permits.
8. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of any records required to be kept by this Order.

9. The Discharger shall ensure that the capacity of the disposal area is adequate and that adequate steps are taken to accommodate system failure or to deal with loss of assimilative capacity of the soils.
10. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a) Violation of any term or condition contained in this Order;
 - b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
11. In accordance with CWC section 13263(e), these requirements are subject to periodic review and revision by this Regional Board with a five (5) year cycle.
12. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into waters of the state are privileges, not rights.
13. The Discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.
14. When the Discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or correct information.
15. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order.
16. This Order includes the attached *Standard Provisions Applicable to Waste Discharge Requirements* (Attachment W) which are incorporated herein by reference. If there is any conflict between provisions stated herein and the *Standard Provisions Applicable to Waste Discharge Requirements*, the provisions stated herein will prevail.
17. Pursuant to CWC section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be received by the State Water Resources Control Board, P.O. Box 100, Sacramento, California, 95812, within 30 days of adoption of the Order.

I, Dennis A. Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on August 29, 2002.

Dennis A. Dickerson
Executive Officer