

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102-A Laurel Lane
San Luis Obispo, California 93401

ORDER NO. 86-01

WASTE DISCHARGE REQUIREMENTS
FOR
WILLIAM FURTADO
dba WILLIAM FURTADO DAIRY
SANTA CLARA COUNTY

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

1. William Furtado, owner and operator, filed a Report of Waste Discharge on May 24, 1985, in accordance with Section 13260 of the California Water Code. The report was filed on behalf of William Furtado Dairy for authorization to discharge dairy wastewater within the Llagas Creek sub-basin. The information supports a request for allowing discharge of dairy wastewater.
2. William Furtado (hereafter Discharger), operates a dairy located at 7555-A Ferguson Road, Gilroy. The current number of dairy cows is about 780. The facilities are in sections 28 and 33 of T10S, R4E, MD B&M, as shown on Attachment "A" of this order.
3. Up to 34,000 gallons-per-day (129 m³/day) of washwater and a variable amount of storm runoff are discharged at this facility. Wastewater is discharged to a series of six holding ponds covering 3.6 acres and to two separate spray disposal fields covering a total of 124 acres. A portion of the wastewater is recycled. An engineering report dated February 11, 1984, indicates the facility can accommodate a 25-year, 24-hour storm if the system is properly managed.
4. The holding ponds and spray disposal fields are located on fairly level (<2%) topography consisting of clay-loam soils. Depth to ground water and ground water quality have been determined. Regionally, ground water movement is to the south-southeast.
5. Jones Creek is adjacent to the southwest boundary of the dairy and flows in a southeasterly direction until it empties into Llagas Creek approximately four miles downstream.
6. Title 23, Chapter 3, Subchapter 15, of the California Administrative Code contains regulations affecting confined animal facilities. This Order implements these regulations.

7. The Water Quality Control Plan, Central Coastal Basin, (Basin Plan) was adopted by the Board on March 14, 1975, and approved by the State Water Resources Control Board on March 20, 1975. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters.
8. Present and anticipated beneficial uses of groundwater in the vicinity of the discharge include:
 - a. Municipal and domestic supply;
 - b. Agricultural supply; and,
 - c. Industrial service supply.
9. Present and anticipated beneficial uses of Llagas Creek that could be affected by the discharge include:
 - a. Municipal and domestic water supply;
 - b. Agricultural water supply;
 - c. Industrial service supply;
 - d. Groundwater recharge;
 - e. Water contact recreation;
 - f. Non-water contact Recreation
 - g. Wildlife habitat;
 - h. Cold freshwater habitat; and,
 - i. Fish migration and spawning.
10. Domestic wastewater from the dairy is discharged to a septic tank/leachfield system which is excluded from this Order and subject to regulation by the Santa Clara County Health Department.
11. These waste discharge requirements are for an existing facility and are exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with Section 15301, Chapter 3, Title 14, of the California Administrative Code.
12. Discharge of waste is a privilege, not a right, and authorization to discharge is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assure this and mitigate any potential adverse changes in water quality due to the discharge.
13. On September 16, 1985, the Board notified the Discharger and interested agencies and persons of its intent to adopt waste discharge requirements for the discharge and has provided them with a copy of the proposed order and an opportunity to submit written views and comments.
14. After considering all comments pertaining to this discharge during a public hearing on March 14, 1986, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 of the California Water Code, William Furtado, his agents, successors, and assigns, may discharge waste at William Furtado Dairy providing compliance is maintained with the following:

(Note: other prohibitions and conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984. Applicable paragraphs are referenced in paragraph D.3. of this Order.)

A. Prohibitions

1. Discharge to areas other than the disposal ponds and irrigation areas shown in Attachment "A," is prohibited.
2. Discharge of domestic wastewater to the dairy wastewater system is prohibited.

B. Discharge Specifications

1. Wastewater quantities shall not exceed the amount of waste generated by 780 dairy cows and associated washwater and contaminated runoff.
2. Holding ponds, plus irrigation areas under the control of the operator, shall be maintained to have capacity to retain all "facility wastewater" and "runoff" from "manured areas" during any 25-year, 24-hour storm (6.5 inches/24 hours).
3. "Animal confinement areas" and "manured areas" shall be protected from inundation or washout by overflow from stream channels for up to 20-year peak stream flows.
4. Extraneous surface drainage, including water from roofed areas, shall be prevented from running through "manured areas" and into ponds except when such drainage can be fully retained on-site pursuant to paragraph B.2., above.
5. Holding ponds and "manured areas" constructed after November 26, 1984, shall be protected from inundation or washout by overflow of stream channels for up to 100-year peak stream flows.

6. "Facility wastewater" and "runoff" from "manured areas" shall be contained and controlled pursuant to this order.
7. Animals in the "confined animal area" shall be prevented from entering surface waters.
8. Lands where liquid animal wastes are applied shall be managed to preclude runoff of wastewater.
9. Lands where solid and semi-solid animal wastes are applied shall be managed to preclude "runoff" until after new plant growth is established. Wet manures applied to cultivated land should be incorporated into the soil soon after application.
10. Wastewater application shall be managed to minimize percolation to ground water.
11. "Manured areas" shall be managed to minimize infiltration into underlying soils.
12. The discharge shall not contain cleaning agents, solvents, or other constituents in concentrations detrimental to waters, soils, plants, or animals.
13. Discharge of dairy wastes shall not occur within 100 feet of any water well.
14. "Freeboard" shall exceed 12 inches (0.6 m), or the specified design freeboard, if greater, in all holding ponds.
15. Any salt added to animal feed shall be limited to that quantity required to maintain animal health and optimum productivity.
16. Retention ponds shall be lined or underlain by soils that contain at least 10-percent clay and not more than 10-percent gravel, or by artificial materials of equivalent impermeability
17. Application of manure and wastewater to disposal areas, irrigation areas, and crop lands shall be at rates which are reasonable for the crop, soil, climate, management system, and condition of waste, and shall assure that wastewater percolate meets the terms of this order.
18. Effluent discharged to irrigation areas shall not have a pH less than 6.5 or greater than 8.4.
19. Effluent irrigation shall not take place during rains.
20. Application of wastewater to irrigation areas shall be at rates and durations suitable for the type of soils and irrigation method.
21. Manure shall be regularly removed from "confined animal areas."

22. Retention ponds shall be sufficiently drained following each storm to restore the design capacity of the system.
23. The discharger shall operate the dairy wastewater system in conformance with the Operation and Maintenance Plan except where the plan conflicts with this order. In event of conflict, this order shall govern in cases where it is the most conservative.

C. Ground Water Limitations

1. The discharge shall not cause a significant increase of mineral constituent concentrations in underlying groundwaters, as determined by comparison of samples collected from wells located upgradient and downgradient of the disposal area.
2. The discharge shall not cause concentrations of chemicals and radionuclides in groundwater to exceed limits set forth in Title 22, Chapter 15, Articles 4 and 5 of the California Administrative Code.

D. Provisions


1. Net daily use of dairy washwater averaged over each month shall not exceed the minimum volume necessary to satisfy dairy sanitation requirements, (estimated to be 34,000 gallons (129 m³)).
2. Discharger shall comply with "Monitoring and Reporting Program No. 86-01," as specified by the Executive Officer.
3. Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984; except items A.1., 2., 4., 5., 8., 12., 13., 17., 24.; C.16. and C.18.
4. Pursuant to Title 23, Chapter 3, Subchapter 9, of the California Administrative Code, the Discharger must submit a written report to the Executive Officer not later than July 1, 1990, addressing:
 - a. Whether there will be changes in the continuity, character, location, or volume (as represented by a change in animal population) of the discharge; and,
 - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.

E. Definitions

1. "Confined animal areas" are areas where cattle, including calves, are penned (or otherwise enclosed or held) and fed by means other than grazing.

2. "Manured areas" include manure storage areas and "confined animal areas."
3. "Facility wastewater" means all wastewater, from whatever source, produced in or having contact with "manured areas."
4. "Freeboard" means the vertical distance between the lowest point along the top of a dike, dam, or similar feature and the surface of the wastewater retained by the feature.
5. "Manure" means accumulated moist animal excrement and includes feces and urine which may be mixed with bedding materials, spilled feed, and soil.
6. "Runoff" means any precipitation, leachate, or other liquid that drains from any part of the facility.
7. "Usable ground water" is first encountered ground water beneath the site which will sustain a residence year-round, i.e., 300 gallons-per-day.

I, KENNETH R. JONES, 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 Coast Region, on March 14, 1986.


Executive Officer

ATTACHMENT "A"
William Furtado Dairy

Irrigation Area

ANIMAS

Manure Storage and Drying Area

Bedding and Feed Area

Calf Area

DAIRY COW CONFINEMENT AREA

Holding Ponds

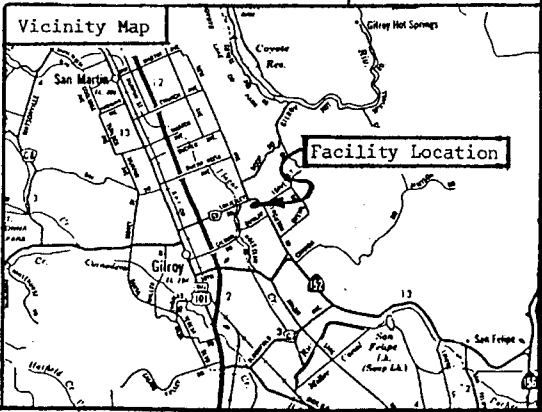
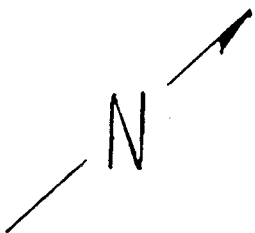
Lagoon Solids Contained Pasture

Contained Pasture for Lagoon Overflow

Irrigation Area

JONES CREEK

Ferguson Rd



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

MONITORING AND REPORTING PROGRAM NO. 86-01

FOR

WILLIAM FURTADO
WILLIAM FURTADO DAIRY
SANTA CLARA COUNTY

Facility Monitoring

Animal population shall be monitored according to the following schedule:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Sampling & Analyzing Frequency</u>
Average Cow Population in Confined Area			
Total	Head	---	Estimated Monthly
Milking	Head	---	Estimated Monthly

Effluent Monitoring

A sampling station shall be established where representative samples of wastewater discharged from the holding ponds can be obtained. The following shall constitute the effluent monitoring program:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Sampling & Analyzing Frequency</u>
Wastewater Flow	gal/day	Estimated	Monthly
Pond Freeboard	inches	Measured	Weekly
Total Filtrable Residue (Dissolved Solids)	mg/l	Grab	Semi-Annually (June & Dec.)
Sodium	mg/l	Grab	" "
Chloride	mg/l	Grab	" "
Total Nitrogen (as N) (Kjeldahl nitrogen + nitrate nitrogen + nitrite nitrogen)	mg/l	Grab	" "
pH	—	Grab	" "

Receiving Water Monitoring

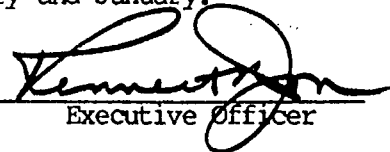
By June 1, 1986, two monitoring wells for monitoring receiving water shall be established, one upgradient and the other downgradient, of the disposal areas. If existing wells are not appropriate, new wells shall be constructed according to the Executive Officer's specifications. Reference point elevation and a well log of each well shall be submitted to the Executive Officer. After depth to ground water has been measured, the wells shall be purged and samples collected from each well according to the following schedule:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Sampling & Analyzing Frequency</u>	
Depth to Groundwater	feet	Measured	Semi-Annually (June, December)	
Nitrate Nitrogen (as N)	mg/l	Grab	"	"
Total Dissolved Solids	mg/l	Grab	"	"
Sodium	mg/l	Grab	"	"
Chloride	mg/l	Grab	"	"
pH	—	Grab	"	"

Reporting

In reporting monitoring data, the discharger shall submit all data in the form prescribed by the Regional Board. Monitoring reports shall be submitted semi-annually by the 20th day of July and January.

ORDERED BY



Executive Officer

March 14, 1986

Date