

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2008-0100

WASTE DISCHARGE REQUIREMENTS
FOR
JOHN FISCALINI, DBA FISCALINI FARMS,
STANISLAUS COUNTY

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

1. John Fiscalini, owner and operator of Fiscalini Farms, notified Regional Board staff on 2 January 2007 by phone that they were planning on installing a mesophilic anaerobic digester (hereafter "digester system") to the current waste handling and treatment system. Mr. Fiscalini submitted a Report of Waste Discharge (ROWD) on 20 February 2008 for the addition of the digester to the current dairy facility. The digester system will be owned and operated by John Fiscalini, and will digest a feedstock made up of a mixture of manure generated at the facility, cheese whey from the existing onsite cheese plant, and sudan green chop grown on site, to generate biogas. John Fiscalini is referred to in this Order as "Discharger". Fiscalini Farms dairy facility, including the digester system after it is installed, is referred to in this order as "facility."
2. The facility is not currently regulated under Order No. R5-2007-0035, Waste Discharge Requirements General Order for Existing Milk Cow Dairies (hereafter "General Order") because the facility disposes of whey generated by the on-site cheese plant into the wastewater storage lagoons. Pursuant to Provision E. 6. of the General Order, the Order does not apply to such facilities.
3. The Fiscalini Farms cheese plant is currently regulated under General Industrial Storm Water Permit, Water Quality Order No. 97-03-DWQ, NPDES No. CAS000001, and is identified by WDID No. 5S501013935. The Discharger has received several Notices of Non-Compliance under the General Industrial Storm Water Permit for failure to submit annual reports. The annual reports that were the subject of the Notices have been received. Although the Discharger has indicated that the cheese plant may be expanded in the future, this Order only addresses waste generated by the cheese plant as currently operated.
4. The facility is in the northwest portion of Section 5 and the northeast and western portion of Section 6, Township 3 South, Range 8 East, Mount Diablo Base and Meridian. The facility occupies Stanislaus County Assessor Parcel Numbers (APNs) 003-011-009, 012-004-004, 012-004-007, 012-004-018, 012-004-019, 012-004-020,

012-005-001, 012-005-003, and 012-005-004. The facility address is 4848 Jackson Road in Modesto, Stanislaus County as shown on Attachment A.

Existing Dairy Facility

5. Fiscalini Farms has been operating as a dairy on the site since 1912. The ROWD submitted in October 2005 reported the facility houses 1,650 milking and dry cows. The Preliminary Dairy Facility Assessment submitted in December 2007 reported the facility houses 1,700 milking and dry cows.
6. The existing dairy includes a milking parlor, wash pens, free stalls, feed lanes, open corrals, a mechanical separator, and two wastewater storage lagoons. A site plan showing the layout of existing installations is shown in Attachment B.
7. Currently, manure is washed from the dairy barn using fresh water recycled from the milk cooling system. Manure in the freestall barns is removed six times a day by flushing with recycled wastewater and excess dairy barn wash water through four flush tanks. The flushwater, (1,200,000 gallons per day), which includes approximately 4,000 gallons per day of cheese whey from the onsite cheese plant, is run through a mechanical slope screen separator before entering into the wastewater storage lagoons. Storm water runoff from the corrals and leachate from feed and manure storage areas are conveyed to the wastewater storage lagoons. A diagram of the current wastewater system is shown in Attachment C1.

Proposed Digester Facility and Operation

8. The September 2007 ROWD describes the proposed addition of a mesophilic anaerobic digester system that will generate biogas for power generation to sell to the local power company. The digester installation will include an above ground flush collection tank with a moisture barrier between the soil and the tank floor, a thickening tank, two 850,000 gallon capacity concrete above ground tanks with a moisture barrier between the soil and tank floor, and a combined heat and power (CHP) unit. The covers on each digester tank will be a double membrane, which includes an inner membrane that serves as gas storage and an outer membrane that protects against the weather. The digester tank system has a desulphurization unit installed to reduce hydrogen sulphide in the methane to 50 parts per million. The digester system is currently being constructed. A diagram of the digester system is shown on Attachment C2.
9. The digester system will require some modification in the dairy waste handling. Feed lanes and free stalls will continue to be flushed. In addition 4,000 gallons per day of whey is also used to flush. Manure gathered by flushing will be routed to the flush collection tank and thickening tank. In the thickening tank the manure will be separated so material on the bottom of the tank is about eight to ten percent (8-10%)

solids. The supplemental feedstock of sudan green chop is added directly to the digester tanks.

10. A total of 40,000 gallons per day of the 8 – 10% solids material will be removed from the bottom of the thickening tank and added to the digester tanks daily. In addition up to 30 tons of sudan green chop will be added to the two digester tanks daily. Of the remaining liquid in the thickening tank, 1,000,000 gallons is returned to the flush tank system and 160,000 gallons is sent to the wastewater storage lagoons daily. The hydraulic retention time is approximately 24-30 days in the tanks. Digester effluent will be removed from the digester daily and passed through two screw press separators. Separated digester liquid effluent will go to the wastewater storage lagoons; the separated digester solids will be stored on a concrete pad until they are either used onsite for animal bedding or sold off site.
11. Methane produced during digestion will be conveyed to the CHP unit where it will be converted to electrical power and heat. Excess moisture from the gas will be removed during its conveyance to the CHP unit through the use of water traps in the line. The electricity produced by the CHP unit will be used to power the dairy and onsite cheese facilities. The heat produced from the CHP unit will be transferred in the form of hot water for use in the dairy barn and the cheese facility. Any remaining heat will be sent to the digester tanks through heating coils in the walls of the tanks to maintain the tank temperature. Any excess electricity produced will be sold through a Power Purchase Agreement with Modesto Irrigation District.
12. Instead of a hydrogen sulphide scrubber, each digester tank is topped with a plastic net. Sulphur crystals will condense on the net. When the sulphur crystals are large enough, they will drop off the net and back into the digesting solution. Therefore, there will not be any separate scrubber effluent generated at the facility.
13. To optimize gas production, cheese whey from the onsite cheese plant, and sudan green chop from onsite crops will be mixed with manure for digester feedstock. No supplemental feedstock material will be imported to the facility for the digester.
14. Wastewater will be blended with irrigation water in the wastewater retention system prior to application to land application areas. The total dissolved solids (TDS) concentrations will vary over the storage period (November through February) with the input of storm water runoff into the wastewater retention system. The expected range of concentrations in the wastewater storage lagoons are: total nitrogen between 457 and 835 milligrams per liter (mg/L), total phosphorous between 54 and 110 mg/L, and TDS between 1,069 and 4,736 mg/L, depending upon the season. Historically, the TDS in lagoons water has not been measured. The numbers above are estimated and will be refined as future sampling is conducted.

15. For purposes of this Order, "waste" includes, but is not limited to: manure; cheese whey; leachate; wastewater; digester effluent; precipitation that contacts raw materials, products, or byproducts such as manure; supplemental feedstock; silage; milk; or bedding.

Wastewater Ponds and Volume of Liquid Waste

16. The facility's existing wastewater retention system comprises of two wastewater storage lagoons with an approximate total retention capacity of 5,584,364 cubic feet (with two feet of freeboard). The Confined Animal Regulations in Title 27 of the California Code of Regulations (Title 27 CCR) §22562 (d) require that, as a minimum, each pond shall be lined with, or underlain by, soils which contain at least 10 percent clay and not more than 10 percent gravel or artificial materials of equivalent impermeability. Testing indicated that soils in the northeast area of the lagoons were less than 10% clay. Therefore, stockpiled topsoil (13.5% clay) and soil from the southern portion of the lagoons (18% clay) were blended and placed in a one foot layer over the sides and bottom of the lagoons after excavation was complete. The final report was certified to meet the soil texture requirement by Mr. Jess Wry, California Registered Civil Engineer No. 5046, in a report prepared by Quality Control Inspection, Incorporated dated 14 June 1992.
17. Title 27 CCR §22563(a) requires that application of manure and wastewater to land application areas shall be at rates reasonable for the crop, soil, climate, special local situations, management system, and type of manure. The generally accepted best management practice for dairies is to provide for 120 days of wastewater storage during the winter months (December to March) when there is little, if any, irrigation demand. The existing retention capacity of the facility appears to be sufficient to hold dairy wastewater, including whey, through the winter months. Certification of adequate storage capacity will be provided as part of the Waste Management Plan.

Waste Application to Cropland

18. Best management practices for protection of water quality underlying the land application areas include application of waste at rates which are reasonable for the crop, soil, climate, special local situations, management system, and type of manure consistent with Title 27 CCR §22563(a). Reasonable application is considered to be application of wastes at a rate that does not unreasonably degrade and does not pollute the waters of California or create a nuisance condition. The constituents of concern in this facility's wastes are nutrients (nitrogen compounds, potassium and phosphorus) and non-nutrient salts. Recent information published by the University of California (UC) indicates that an appropriate nutrient loading rate is between 1.4 to 1.65 times the nitrogen harvest rates¹. Reasonable application requires careful

¹ University of California, Division of Agriculture and Natural Resources, Committee of Experts on Dairy Manure Management, Managing Dairy Manure in the Central Valley of California, September 2003, Revised February 2004, July 2004, and June 2005 pp 47.

timing and prudent monitoring of crop nutrient requirements, available nutrients in the soil, and water inputs. Reasonable application is achieved by the implementation of an appropriate Nutrient Management Plan (NMP) to maximize harvest and minimize leaching. Reasonable application of irrigation water (including leaching fraction) results in an irrigation efficiency of no less than 75 percent.

19. The Discharger owns and farms 480 acres of cropland divided into 9 separate fields where dairy waste is applied as shown on Attachment D. The Discharger triple crops the entire 480 acres with corn, winter forage, and sudan grass.

Site Specific Conditions

20. The facility is in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and pan evaporation rates in the discharge area are about 12 inches and 69 inches, respectively, according to information published by the Western Regional Climate Center. The 25 year, 24 hour precipitation event for the area around the facility is approximately 2.5 inches, according to the National Oceanic and Atmospheric Administration for the Modesto area.
21. Soils in the facility vicinity are classified as Dinuba Fine Sandy Loam, Dinuba Sandy Loam, Fresno Sandy Loam, Hanford Sandy Loam, and Modesto Loam according to the United States Department of Agriculture Soil Conservation Service.
22. The production area of the facility and land application area is not within a 100-year floodplain, according to Federal Emergency Management Agency maps.
23. Land use surrounding the facility is predominantly agricultural. The City of Ripon is approximately four miles north of facility with the Stanislaus River between, the community of Salida is approximately three miles east of the facility, and the City of Modesto is approximately twelve miles southeast of the facility. Irrigation water is supplied to the facility from the Modesto Irrigation District via the canal onsite which bisects the property.
24. Consistent with the United States Clean Water Act (CWA) §502(14) and 40 CFR §§122.2 and 122.23, the facility is a “concentrated animal feeding operation” and a “point source” and subject to the National Pollutant Discharge Elimination System (NPDES) permit program for any discharge to waters of the United States, other than discharges of agricultural storm water as defined in 40 CFR §122.23(e).

Groundwater Considerations

25. The facility obtains its irrigation water from the Modesto Irrigation District (MID) canal. There are nine monitoring wells, eight domestic wells and two irrigation wells

at the facility; however, irrigation well number 05 is not used and irrigation well number 04 is only used when the MID water is not flowing. Samples were collected from the on-site domestic and irrigation wells in October 2007 and analyzed for electrical conductivity and nitrate-nitrogen. In May 2003 the onsite groundwater monitoring wells were sampled and analyzed for several constituents. A summary of the results for electrical conductivity and nitrate as nitrogen from both sampling events is as follows:

Selected Constituents from Onsite Domestic and Irrigation Wells (October 2007)

Well Identification	Electrical Conductivity umhos/cm²	Nitrate – Nitrogen mg/L
04 Irrigation Well	850	20.7
05 Irrigation Well	1400	29.3
02 Domestic Well	1280	22.6
03 Domestic Well	810	8.3
06 Domestic Well	620	14.9
07 Domestic Well	880	16.4
08 Domestic Well	890	17.6
09 Domestic Well	1520	51.9
10 Domestic Well	1420	31.6
11 Domestic Well	1130	15.8
mg/L - milligrams per liter	umhos/cm -	micromhos per centimeter

² Results for Electrical Conductivity were reported in mmhos/cm. This result was then converted to umhos/cm by multiplying by 1,000.

Selected Constituents from Onsite Groundwater Monitoring Wells (May 2003)

Well Identification	Electrical Conductivity umhos/cm³	Nitrate – Nitrogen mg/L
FMW1	2515	83.5
FMW2	2300	0.7
FMW3	3052	4.8
FMW4	1972	42.9
FMW7	1456	20.9
FMW8	1548	No Data
FMW9	1471	37.8
FMW10	1880	37.5
FMW11	2011	42.2
FMW12	1248	39.2
mg/L - milligrams per liter umhos/cm - micromhos per centimeter		

Basin Plan, Beneficial Uses, and Water Quality Objectives

26. The Water Quality Control Plan for the Sacramento and San Joaquin River Basins (4th Ed. Revised August 2006) (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for protecting waters of the basin.
27. Beneficial uses of groundwater in the surrounding area are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.
28. The existing and potential beneficial uses of surface waters in the surrounding area include: municipal and domestic supply, agricultural supply, industrial process supply; water contact recreation; non-contact recreation; warm freshwater habitat; warm and cold migration; warm and cold spawning; and wildlife habitat.
29. The Basin Plan includes water quality objectives for chemical constituents that, at a minimum, requires water designated as domestic or municipal supply to meet the maximum contaminant levels (MCLs) specified in Title 22, CCR. The Basin Plan recognizes that the Regional Water Board may apply limits more stringent than

³ Results for Electrical Conductivity were reported in micro Siemens per centimeter (uS/cm). This result is equivalent to umhos/cm.

MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely effect beneficial uses.

30. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.

Antidegradation

31. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter "Resolution 68-16"), prohibits degradation of groundwater unless it has been shown that:
- a. The degradation is consistent with the maximum benefit to people of the State;
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
 - c. The degradation does not result in water quality less than that prescribed in State and Regional policies, including violation of one or more water quality objectives; and,
 - d. The discharger employs the best practicable treatment or control (BPTC) of the wastes to minimize degradation.
32. Constituents of concern that have the potential to degrade groundwater underlying the facility include salt (primarily sodium and chloride), nutrients (nitrogen), and boron. This Order requires the Discharger to implement BPTC of the wastes to minimize degradation. Degradation can occur from seepage to groundwater from the waste management areas on the facility: the corral area (including dry waste, and feed storage areas); the wastewater storage lagoons; digester works; and the land application area. This Order, therefore, establishes schedules of tasks to evaluate BPTC for each waste management area of the facility and to characterize groundwater and all waste constituents. The evaluation of BPTC is required in the Order as outlined in the Provisions section below. Completion of this evaluation and implementation of the approved strategies developed from that work will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.
33. The Regional Water Board finds that some short-term degradation of groundwater beneath the facility is consistent with Resolution 68-16 provided that:
- a. The degradation is confined to a localized area and is temporally limited;
 - b. The Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating BPTC measures;

- c. The degradation is limited to waste constituents typically encountered in confined animal operations as specified in the groundwater limitations of this Order; and,
 - d. The degradation does not result in water quality less than that prescribed by the Basin Plan.
34. Some degradation of groundwater by some of the typical waste constituents released with discharge from a confined animal facility (after effective source management, treatment, and control) is consistent with maximum benefit to the people of California. Global Warming Solutions Act (AB-32) signed by the Governor on 27 September 2006 requires the development of market mechanism that will reduce greenhouse gas emissions. The proposed project reductions of greenhouse gas emissions from the dairy and the production of renewable energy are in keeping with the intent of AB-32. Secondary benefits include a reduction in ozone precursor compounds and hydrogen sulfide, which will improve air quality. Therefore, sufficient reason exists to accommodate groundwater degradation around the facility, provided that the terms of the Water Quality Control Plan for the Sacramento and San Joaquin River Basin are met. Degradation of groundwater by constituents (e.g., toxic chemicals) other than those specified in the groundwater limitations of this Order is prohibited.
35. This Order requires a study by the Discharger to determine background groundwater conditions and to evaluate the impact of the existing dairy facility on groundwater and its impact on beneficial uses. This Order contains tasks for assuring BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution 68-16. Based on the results of the scheduled tasks, the Regional Water Board may reopen this Order to consider groundwater and other limitations to comply with Resolution 68-16.

California Environmental Quality Act

36. With respect to the existing dairy facility, this Order is exempt from California Environmental Quality Act (CEQA) (Public Resources Code 21000, et seq.) under 14 CCR 15301.
37. Stanislaus County Planning and Community Development served as the lead agency for the digester project for purposes of CEQA. An Initial Study for the digester project was circulated by Stanislaus County Planning and Community Development on 20 January 2007. The Initial Study determined that the proposed project would not have a significant effect on the environment; therefore, a Negative Declaration was prepared. On 5 April 2007, Stanislaus County Planning and Community Development adopted the Negative Declaration and Use Permit No. 2006-36. As part of this Order, prohibitions have been included to protect surface water and groundwater quality. The protections include: Prohibition A.2., A.4. and A.9.; Discharge Specifications B.1.a., B.1.b., B.1.c., and B.1.d.; Land Application

Area Specification C.1.; Interim Groundwater Limitations D.1. and D.2.; and Provision E.11. and E.12.

General Findings

38. Pursuant to the California Water Code (CWC) §13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue this discharge. Failure to prevent conditions that create or threaten to create pollution or nuisance or that may unreasonably degrade waters of the State will be sufficient reason to modify, revoke, or enforce this Order, as well as prohibit further discharge.
39. This Order does not authorize violation of any federal, state, or local law or regulation. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from his liabilities under federal, state, or local law.
40. The CWC §13267(b) states that “In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including cost, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring these reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.”
41. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2008-0100 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the wastes subject to this Order.
42. These requirements are consistent with Title 27 CCR, Division 2, Chapter 7, Subchapter 2, regulating confined animal facilities.
43. The California Department of Water Resources set standards for the construction and destruction of groundwater wells, as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC §13801, apply to all monitoring wells.

Public Notice

44. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been

45. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, pursuant to §§ 13263 and 13267 of the CWC, John Fiscalini, dba Fiscalini Farms and their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. The discharge of waste other than as defined in Finding 15 above, or of hazardous waste as defined in Title 22 CCR §66261.3 et seq., is prohibited.
2. Application of undigested whey to the land application area is prohibited.
3. The direct or indirect discharge of waste and/or storm water from the production area of the facility to surface waters, except in accordance with the facility's NPDES permit, is prohibited. The production area is defined as that part of the facility that includes the animal confinement areas, manure storage area, raw material storage area, and waste containment area. It also includes the digester, feedstock handling and storage area, and effluent handling area.
4. The discharge of wastewater to surface waters from the land application area, except in accordance with the facility's NPDES permit, is prohibited. Irrigation supply water that comes into contact or is blended with waste or wastewater shall be considered wastewater under this Prohibition.
5. Precipitation-related discharges of manure, litter, or process wastewater from land application areas without an NPDES permit are prohibited, unless the discharges are agricultural storm water discharges as defined in 40 CFR § 122.23(e).
6. The disposal of dead animals in any liquid manure or wastewater system is prohibited. The disposal of dead animals at the facility is prohibited except when federal, state or local officials declare a State of Emergency and where all other options for disposal have been pursued and failed and the onsite disposal complies with all state and local policies for disposal of dead animals.
7. All animals shall be prohibited from entering any surface water within the animal confinement area (Title 27 CCR § 22561).
8. The application of waste to lands not owned, leased, or controlled by the Discharger without written permission from the landowner or in a manner not approved by the Executive Officer, is prohibited.
9. The direct discharge of wastewater into groundwater via backflow through water supply or irrigation supply wells is prohibited.

10. Exceeding the October 2005 mature herd size (milk and dry cows) as reported in Finding 5 by more than fifteen percent is prohibited. This allows a total mature herd size of 1,898 at the facility.
11. The land application of manure or wastewater to cropland for other than nutrient recycling is prohibited.
12. The use of manure to construct containment structures or to repair, replace, improve, or raise existing containment structures is prohibited.
13. Any increase in whey discharged to the wastewater retention system above the current level of 4,000 gallons per day is prohibited unless a new Report of Waste Discharge describing the increase is submitted and this Order is revised to incorporate the change in waste discharged.

B. Discharge Specifications

1. The collection, treatment, storage, or disposal of wastes at the facility shall not result in:
 - a. Discharge of waste constituents in a manner or place, or at concentrations or in a mass, which could cause exceedance of water quality objectives of surface water or groundwater;
 - b. Contamination or pollution of surface water or groundwater;
 - c. A condition of nuisance;
 - d. Exceedance of water quality objectives; or
 - e. Unreasonably affect beneficial uses (as defined by the CWC § 13050 and Basin Plan, Chapter 2).
2. The Discharger shall ensure that the salinity concentration in the wastewater storage lagoons will not exceed 1,069 milligrams per liter (mg/L) total dissolved solids (TDS) in the winter (December – March) or 4,736 mg/L TDS in the summer (April – November). This interim specification will be reconsidered upon completion of the BPTC review.
3. Wastes shall not be stored on site for more than 12 months. Any wastes not used within this time period must be removed from the property and disposed of properly.

C. Land Application Area Specifications

1. Title 27 CCR §22563(a) requires that application of manure and wastewater to land application areas shall be at rates reasonable for the crop, soil, climate, special local situations, management system, and type of manure. This Order will require a review of BPTC, which will better define what “reasonable” application rates are for nitrate and non-nutrient salts. For purposes of this Order, non-nutrient salts are defined as the mass of Total Dissolved Solids minus the mass of

nitrogen, potassium, and phosphorus utilized by the crop(s) being grown in the field

2. Land application of all waste from the facility shall be conducted in accordance with a Nutrient Management Plan (NMP) prepared by a specialist who is certified in developing NMPs. The NMP shall reflect actual crops grown at the facility, the actual form of nutrients and non-nutrient salts applied to each field, and reasonable application rates. A certified specialist is a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy or a Technical Service Provider certified in nutrient management in California by the Natural Resources Conservation Service (NRCS). The Executive Officer may approve alternative proposed specialists. Only NMPs prepared and signed by these parties will be considered certified.
3. The application of waste to the land application area shall be at rates that preclude development of vectors or other nuisance conditions and meet the conditions of the certified NMP. All wastewater applied to land application areas must infiltrate completely within 72 hours after application. Tailwater must be conveyed back to the wastewater retention system for storage and reuse.
4. Application of waste shall be timed to minimize nutrient movement below the root zone. Wastewater shall not be applied to land application areas during periods when the soil is at or above field moisture capacity.
5. Land application areas that receive dry manure shall be managed to minimize erosion. Crops must be planted within one month of waste solids application.
6. Waste solids and wastewater shall not be applied closer than 100-feet to any down gradient surface waters, open tile line structures, sinkholes, or other conduits to surface waters unless a 35-foot wide vegetated buffer (for surface waters) or physical barrier is substituted for the 100-foot setback or alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback.
7. Waste and land application areas shall be managed to prevent contamination of crops grown for human consumption. The term "crops grown for human consumption" refers only to crops that will not undergo subsequent processing which adequately removes potential microbial danger to consumers.
8. The Discharger shall have a written agreement with each third party that receives wastewater from the Discharger for its own use. Each written agreement shall be included in the Discharger's Nutrient Management Plan and Annual Report. The written agreement(s) shall be effective until the third party is covered under waste discharge requirements or a waiver of waste discharge requirements that are adopted by the Central Valley Water Board. The written agreement shall:
 - a. Clearly Identify:
 - i. The Discharger and dairy facility from which the wastewater originates,

- ii. The third party that will control the application of the wastewater to land application areas.
 - iii. The Assessor's Parcel Number(s) and the acreage(s) of the land application areas where the process wastewater will be applied, and
 - iv. The types of crops to be fertilized with the process wastewater.
 - b. Include an agreement by the third party to:
 - i. Use the wastewater at agronomic rates appropriate for the crops to be grown, and
 - ii. Prevent the runoff to surface waters of wastewater or of storm water or irrigation supply water that comes into contact with manure or is blended with wastewater.
 - c. Include a certification statement, as specified in General Reporting Requirements C.7 of the Standard Provisions and Reporting Requirements (which is attached to and made part of this Order), which is signed by both the Discharger and third party.
9. Land application of wastes for nutrient recycling from the facility shall not cause the underlying groundwater to contain any waste constituent, degradation product, or any constituent of soil mobilized by the interactions between applied wastes and soil or soil biota, to exceed the groundwater limitations set forth in this Order.

D. Interim Groundwater Limitations

1. These interim groundwater limitations are to be applied at the shallowest groundwater beneath the facility. These limitations are based on either the maximum contaminant level (MCL) for the constituent as published in Title 22 CCR or other applicable Basin Plan objectives but they may or may not reflect the appropriate final groundwater limitations for this site. Final limitations will be established following completion of work required by this Order. Release of waste constituents from any treatment, storage, or disposal component associated with the facility shall not cause or contribute to groundwater:
 - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality (as determined pursuant to the study described in Finding 35 and Provision E.12, and updated as appropriate as a result of ongoing monitoring), whichever is greater:
 - i. Nitrate as nitrogen of 10 mg/L (Title 22 CCR MCL);
 - ii. Chloride of 250 mg/L (Title 22 CCR Secondary MCL);
 - iii. Boron of 1.0 mg/L (crop sensitivity);
 - iv. Total Dissolved Solids of 500 mg/L (Title 22 CCR Secondary MCL);

- v. Electrical Conductivity of 900 μ mhos/cm (Title 22 CCR Secondary MCL);
 - vi. Most probable number of total coliform (either *E. coli* or fecal coliform bacteria) not to exceed 2.2/100 milliliters (Title 22 CCR MCL);
 - vii. For constituents identified in Title 22 CCR, the MCLs quantified therein; and
 - b. Containing taste or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.
2. Final groundwater limitations will be developed based upon the results of the BPTC evaluations and monitoring conducted as directed by this Order and reported consistent with the Provisions below.

E. Provisions

1. The Discharger shall comply with all applicable provisions of the CWC, Title 27 CCR, and the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, Fourth Edition, Revised October 2007.
2. The Discharger shall comply with the attached Monitoring and Reporting Program No. R5-2008-0100 which is part of this Order, and future revisions thereto as specified by the Regional Water Board or the Executive Officer.
3. The Discharger shall submit a complete Report of Waste Discharge in accordance with the CWC § 13260 at least 140 days prior to any material change or proposed change in the character, location, or volume of the discharge, including any expansion of the dairy or cheese plant, addition of waste storage facilities or equipment, closure of the facility, or development of any new treatment technology.
4. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board at least 60 days in advance of the change.
5. If site conditions threaten to violate Prohibitions **A.3.** or **A.4.** or Discharge Specification **B.1.**, the Discharger shall take immediate action to preclude the violation, documenting the condition and all corrective actions. Such actions shall be immediately reported to the Regional Water Board and summarized in the annual monitoring report. Alterations for the production area to avoid a recurrence shall be submitted as a modification to the facility's Waste Management Plan (WMP).
6. Any instance of noncompliance with this Order constitutes a violation of the California Water Code and its regulations. Such noncompliance is grounds for enforcement action, and/or termination of the authorization to discharge.

7. This Order shall become effective upon adoption by the Regional Water Board.
8. If during the performance of the inspections required by the MRP attached to this order, deficiencies, defects, and/or impending failures are observed in any of the wastewater conveyance, control, and/or retention structures, the Discharger shall take immediate action to correct and/or prevent unauthorized release. The corrective action(s) should be documented and these records attached to the pertinent inspection report.
9. Technical reports required by this Order must be certified by an appropriately licensed professional as required in this Order and its Attachments. If the Executive Officer provides comments on any technical report, the Discharger shall address those comments.
10. **By 1 October 2008**, the Discharger shall submit a hydrogeologic report for the area affected or potentially affected by the facility to the Executive Officer. The technical report shall describe the underlying geology, existing wells (active or otherwise), and hydrogeology, including flow direction. The report shall include a summary of well construction on all groundwater monitoring wells. The plan shall also include data collected from May 2008 for the General Order spring sampling requirements and shall incorporate historic groundwater quality data collected from onsite monitoring wells.
11. **By 1 October 2008**, the Discharger shall submit a written work plan for a BPTC technical evaluation that sets forth a schedule for a systematic and comprehensive technical evaluation for each component of the facility's waste treatment and control to determine for each waste constituent BPTC as used in Resolution 68-16. The work plan shall contain a time schedule for completing the comprehensive technical evaluation. The schedule to complete the BPTC Technical Evaluation shall be as short as practicable, and shall not exceed two years. Upon written determination of adequacy of the technical report by the Executive Officer, the Provision shall be considered satisfied.
12. **By 1 July 2009**, the Discharger shall have conducted a study and provided a final report on background concentrations of nitrate and salinity (electrical conductivity or total dissolved solids) in groundwater.
13. **By 1 July 2009**, the Discharger shall submit a Salinity Evaluation and Minimization Plan that identify sources of salt in waste generated at the facility both in the dairy and digester operations. This report must evaluate measures that can be taken to minimize salt in the facility waste, and commit to implement these measures identified to minimize salt in the waste within the NMP. The report must include a proposed implementation schedule. The adequacy of the salinity evaluation, recommended measures to minimize salt in the wastes, and schedule are subject to the Executive Officer's review and determination.
14. **Prior to any digester effluent entering the wastewater retention system**, the Discharger shall formulate and implement a Waste Management Plan (WMP) to

demonstrate that waste management facilities, equipment, and practices in the production area meet the requirements of this Order. Additional requirements for preparing the WMP can be found in Attachment B of the Waste Discharge Requirements General Order R5-2007-0035 for Existing Milk Cow Dairies (Dairy General Order) at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2007-0035.pdf.

The Discharger shall comply with all requirements of Attachment B of the Dairy General Order except as otherwise explicitly stated in this Order. If the design, construction, operation, and/or maintenance of the facility does not comply with those requirements, the WMP must propose modifications and a schedule for modifications that will bring the dairy facility into compliance. The schedule must comply with the due dates in this Order. If the Executive Officer determines that any provisions of Attachment B of the Dairy General Order do not apply to this facility, the Executive Officer shall notify the Discharger that compliance with those provisions is not required.

In addition to the elements outlined in Attachment B of the Dairy General Order, the elements of the WMP for this facility shall include:

- a. A certification that the facility Operations and Maintenance (O&M) instructions for the dairy and digester operations address each waste handling component of the facility (dairy, and cheese plant) and standard and emergency procedures. The O&M instructions should include the facility Emergency Response Plan. The O&M should contain instructions for the wastewater conveyance and storage features (including tailwater recovery), feed and waste storage areas, the digester area and handling of digester feed stock and effluent, the handling and disposal/removal of cattle mortalities, and disposal/removal of spoiled products in the event of problems at the cheese plant. The O&M instructions should be written to ensure that all specifications, limitations and provisions of this Order are met and violations of prohibitions are prevented. A copy of these instructions should be available to employees at all times.
15. **Prior to the application of any wastewater containing digester effluent to land application areas**, the Discharger shall formulate and implement NMP for application of the facility waste to the facility's land application areas. The NMP shall be submitted to the Executive Officer for review and approval. Failure to comply with the NMP is a violation of this Order. A copy of the NMP must be maintained at the dairy. The NMP must provide for protection of both surface water and groundwater. The purpose of the NMP is to control the recycling of waste generated on the facility to minimize their potential to degrade groundwater quality. The objective of the NMP is to manage the application of the waste to the

land application areas and disposal off-site to achieve a balance between nutrients and salts generated, crop requirements, and leaching to underlying groundwater. Additional requirements for preparing the NMP can be found in Attachment C of the Dairy General Order at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2007-0035.pdf.

The Discharger shall comply with all requirements of Attachment C of the Dairy General Order except as otherwise explicitly stated in this Order. If the Executive Officer determines that any provisions of Attachment C of the Dairy General Order do not apply to this facility, the Executive Officer shall notify the Discharger that compliance with those provisions is not required.

In addition to the elements outlined in Attachment C of the Dairy General Order, the elements of the NMP for this facility shall include:

- a. Formulating a water balance for the entire facility to estimate the amount of wastewater generated, the amount of irrigation water added to the wastewater retention system, and the amount of blended wastewater and irrigation water applied to the land application areas. The NMP shall reflect a goal of 75 percent irrigation efficiency, determined for each field.
 - b. Adoption of salt reduction actions as specified in the Salinity Evaluation and Minimization Plan (when approved).
 - c. Yearly evaluation of the results to modify the next year's NMP to maximize crop yield and minimize leaching potential and to be included in the facility's annual report.
 - d. **By 1 January 2010**, total nitrogen applied to the land application areas shall not exceed 1.4 times the nitrogen removed by the harvested portion of the crop. Additional application of nitrogen is allowable if plant tissue testing indicates it is necessary to obtain typical crop yield on written recommendations from a professional agronomist and records are maintained documenting the need.
16. **By two years from satisfaction of Provision E.11**, the written BPTC Technical Evaluation report shall be submitted with the Discharger's written recommendations for any facility modifications (e.g. component upgrade and retrofit) and/or operations modifications that are necessary to ensure BPTC. The proposed schedule for modifications shall be identified. The schedule shall be as short as practicable but in no case shall completion of the necessary improvements exceed four years past the Executive Officer's determination of the adequacy of the comprehensive technical evaluation submitted pursuant to this provision unless the schedule is reviewed and specifically approved by the Regional Water Board. The adequacy of the component evaluation,

recommended improvements, and schedule are subject to the Executive Officer's review and determination.

17. The groundwater limitations set forth in this Order are not final and not an entitlement. **By 1 July 2012**, the Discharger shall submit a Groundwater Limitations Analysis report proposing specific numeric groundwater limitations for each waste constituent that reflects full implementation of BPTC and reflecting applicable water quality objectives for that waste constituent. The report shall describe in detail how these were determined, considering actual data from monitoring wells comprising the approved groundwater monitoring program; impact reductions through full implementation of BPTC; and the factors in CWC §13241, Resolution 68-16, and the Basin Plan. The Discharger may submit results of a validated groundwater model or other hydrogeologic information to support its proposal.
18. The Discharger shall follow Attachment A of Monitoring and Reporting Program No. R5-2007-0035 for the installation of any new monitoring wells at the facility. Attachment A also sets forth requirements for components of a Monitoring Well Installation Completion Report for all new wells.
19. Upon completion of tasks set forth in **Provision E.17.**, the Regional Water Board shall consider the evidence provided and make a determination regarding (a) whether the Discharger has justified BPTC and (b) the appropriate final numeric groundwater limitations that comply with Resolution 68-16.
20. Modification of any existing lagoons or construction of any new lagoon shall not begin until the Executive Officer notifies the Discharger in writing that the design report is acceptable. The design and construction of such ponds shall conform to the requirements in General Specifications B.7 and B.8 of the General Order.
21. Waste shall not be placed into any new or modified wastewater storage lagoon until the Executive Officer notifies the Discharger in writing that the post construction report is acceptable. The post construction report shall conform to the requirements in General Specification B.9 of the General Order.
22. In the event the monitoring implemented under this Order detects evidence of a failure to meet **Discharge Specification B.1.**, the Discharger shall determine if the land application area or the wastewater retention system is the most probable source of the exceedance. If the land application area is the most probable source, the NMP shall be modified within 90 days. If the wastewater retention system is the most probable source, the Discharger shall propose modifications to the system within 90 days. The modifications must be designed to bring the facility into compliance with this Order. The Discharger shall notify the Regional Water Board in writing with details of any proposed changes before the changes are made in the field. Any NMP or WMP plan shall be updated as necessary or if the Executive Officer requests that additional information be included. Modification of any existing lagoon or construction of any new lagoon shall not begin until the

Executive Officer notifies the Discharger in writing that the design report is acceptable.

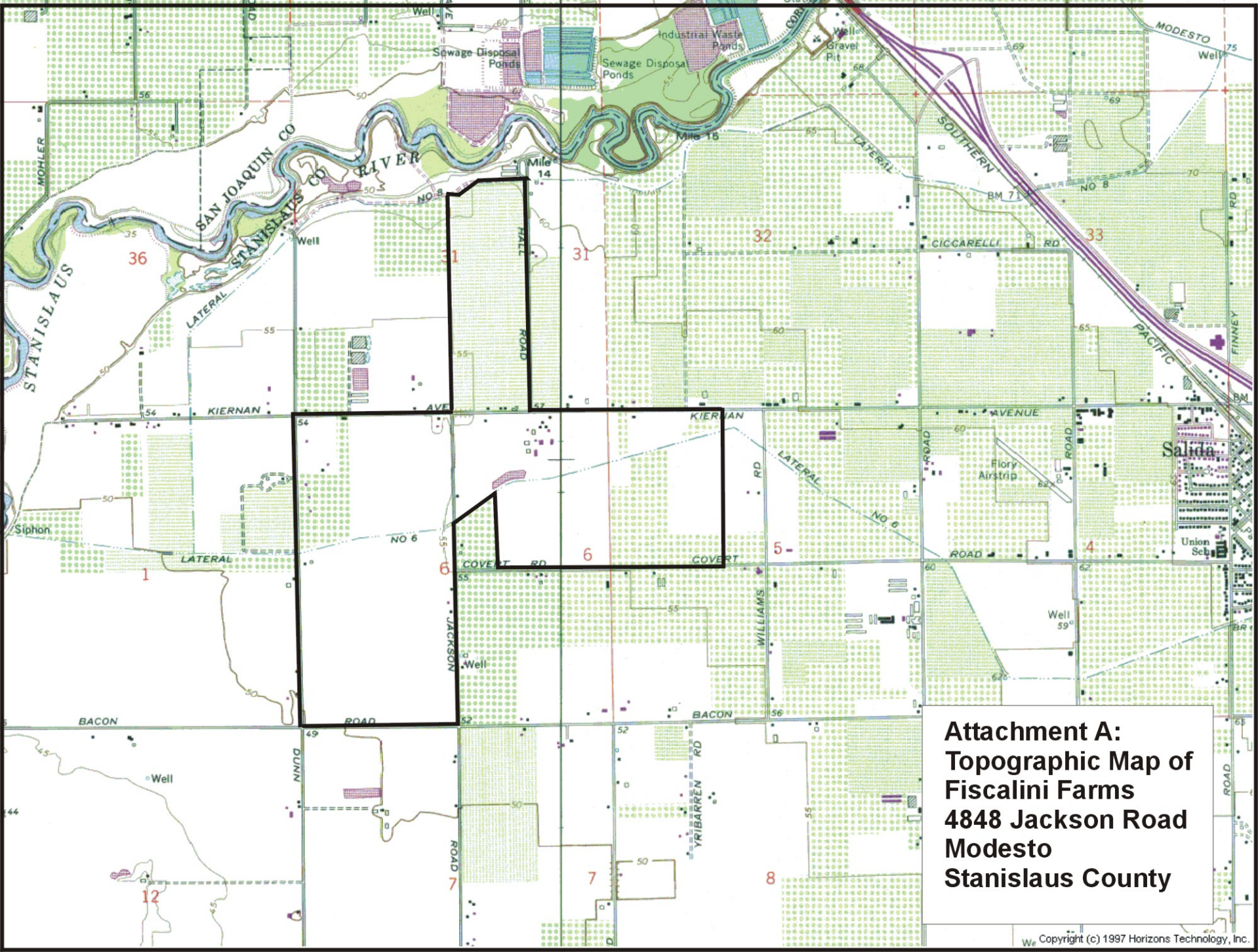
23. If the Regional Water Board or Executive Officer notifies the Discharger that the NMP is not consistent with this Order, revisions shall be made by a specialist who is certified in developing Nutrient Management Plans and submitted to the Regional Water Board in writing within 30 days of notification.
24. The level in the wastewater storage lagoons shall be kept at a minimum of two (2) feet from the top of the embankment. Less freeboard may be approved by the Executive Officer when a Civil Engineer who is registered pursuant to California law, or other person as may be permitted under the provisions of the California Business and Professions code to assume responsible charge of such work, demonstrates that the structural integrity of the pond will be maintained with the proposed freeboard.
25. Wastewater storage lagoons at the facility shall be managed and maintained to prevent breeding of mosquitoes and other vectors. In particular:
 - a. Small coves and irregularities shall not be allowed around the perimeter of the water surface;
 - b. Weeds shall be minimized through control of water depth, harvesting, or other appropriate method;
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface; and,
 - d. Management shall be in accordance with the requirements of the Mosquito Abatement District.
26. All precipitation and surface drainage from outside of the facility (i.e., "run on") shall be diverted away from any manured areas unless such drainage is fully contained (Title 27 § 22562(b)).
27. The wastewater storage lagoons must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation from a 25-year, 24-hour storm event.
28. All roofs, buildings, and non-manured areas located in the production area at the facility shall be constructed or otherwise designed so that clean rainwater, including roof drainage, is diverted away from manured areas, including corrals and waste containment facilities, unless such drainage is fully contained in the wastewater retention system (Title 27 § 22562(b)).
29. The milk parlor, animal confinement area (including corrals), manure and feed storage areas, and the digester equipment area shall be designed and maintained to convey all water that has contacted animal wastes or feed to the wastewater retention system and to minimize standing water and the infiltration of water into the underlying soils. The Discharger shall, at a minimum of once per year, backfill

any slope loss with compacted, non-manured material to maintain pre-existing slopes.

30. Unlined ditches, swales, and/or earthen-berm channels may not be used for storage of wastewater, dry waste, or tailwater and may only be used for conveyance of wastewater from the retention lagoons to the land application areas, irrigation return water management, or temporary control of accidental spills.
31. The Discharger shall comply with all of the terms of this Order including the Standard Provisions and Reporting Requirements for Milk Cow Dairies dated August 2007, attached to and made part of this Order.
32. The Discharger shall maintain a copy of this Order and its attachments at the site to be available at all times to site-operating personnel. The Discharger, landowner and key operating personnel shall be familiar with the content of this Order.
33. The Regional Water Board will review this Order periodically and may revise requirements when necessary. If upon completion of the BPTC Technical Evaluation Report, the Regional Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of any Groundwater Limitation; this Order may be reopened for consideration of additional or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.

I, PAMELA C. CREEDON, 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 Valley Region, on 12 June 2008.

PAMELA C. CREEDON, Executive Officer

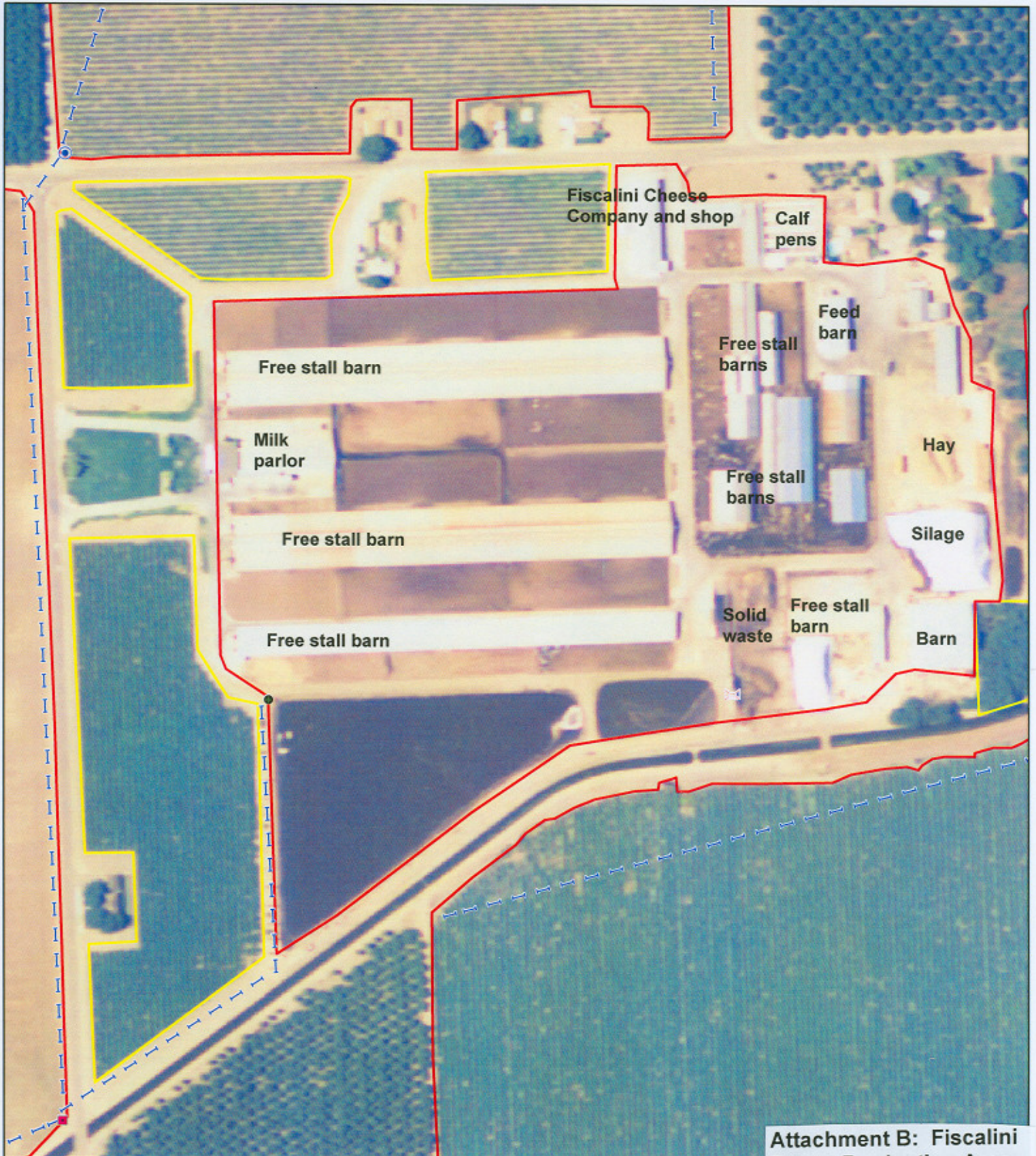


**Attachment A:
Topographic Map of
Fiscalini Farms
4848 Jackson Road
Modesto
Stanislaus County**

HEADQUARTERS MAP

FISCALINI FARMS

FEBRUARY 25, 2008
ASSISTED BY: K. GUY



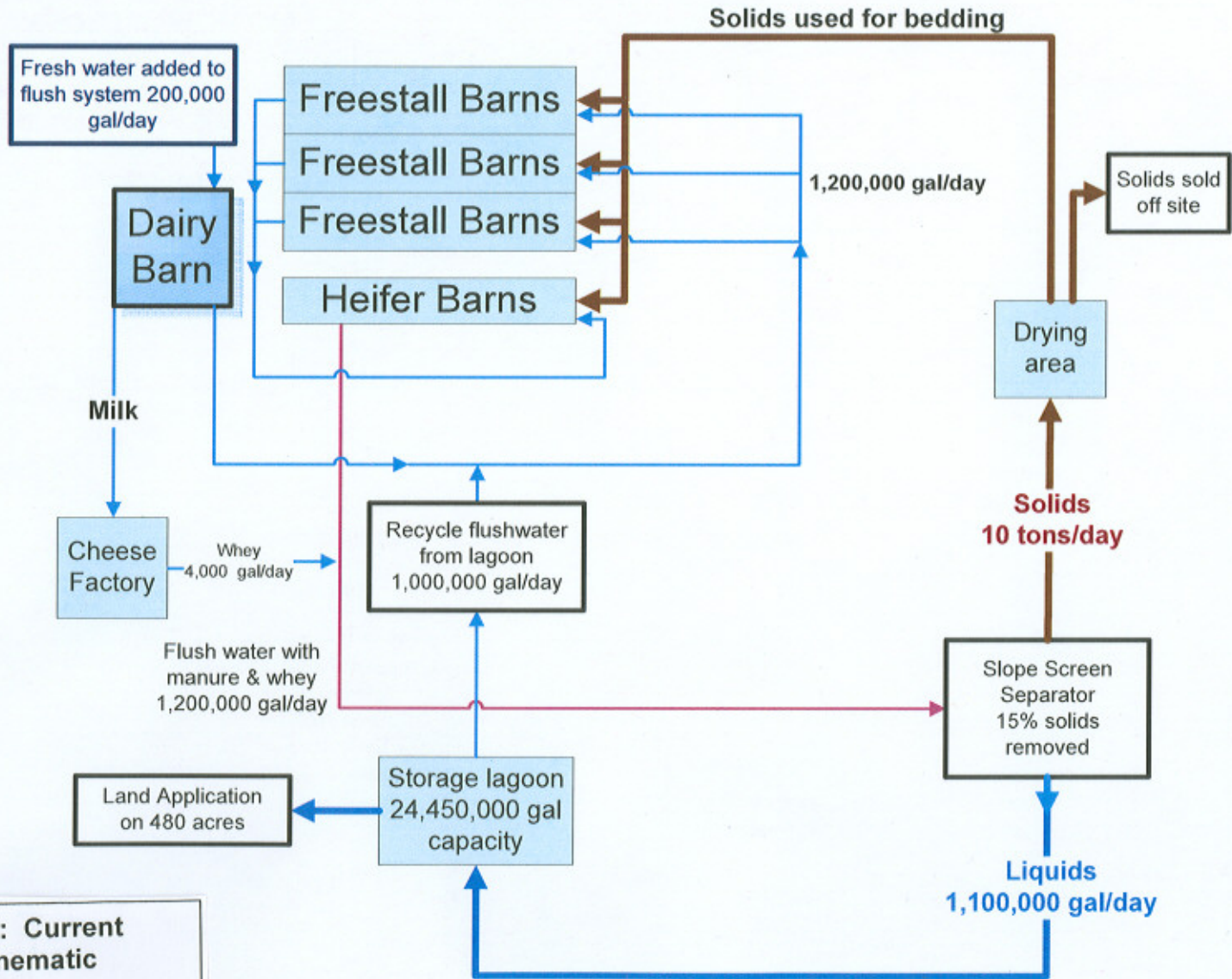
1 inch equals 250 feet

- Non irrigated field
- Field boundary
- Pipeline
- Drain
- Mixing box
- Flow meter
- Slope screen separator

Attachment B: Fiscalini Farms Production Area
4848 Jackson Road
Modesto
Stanislaus County

Current facility water flow schematic

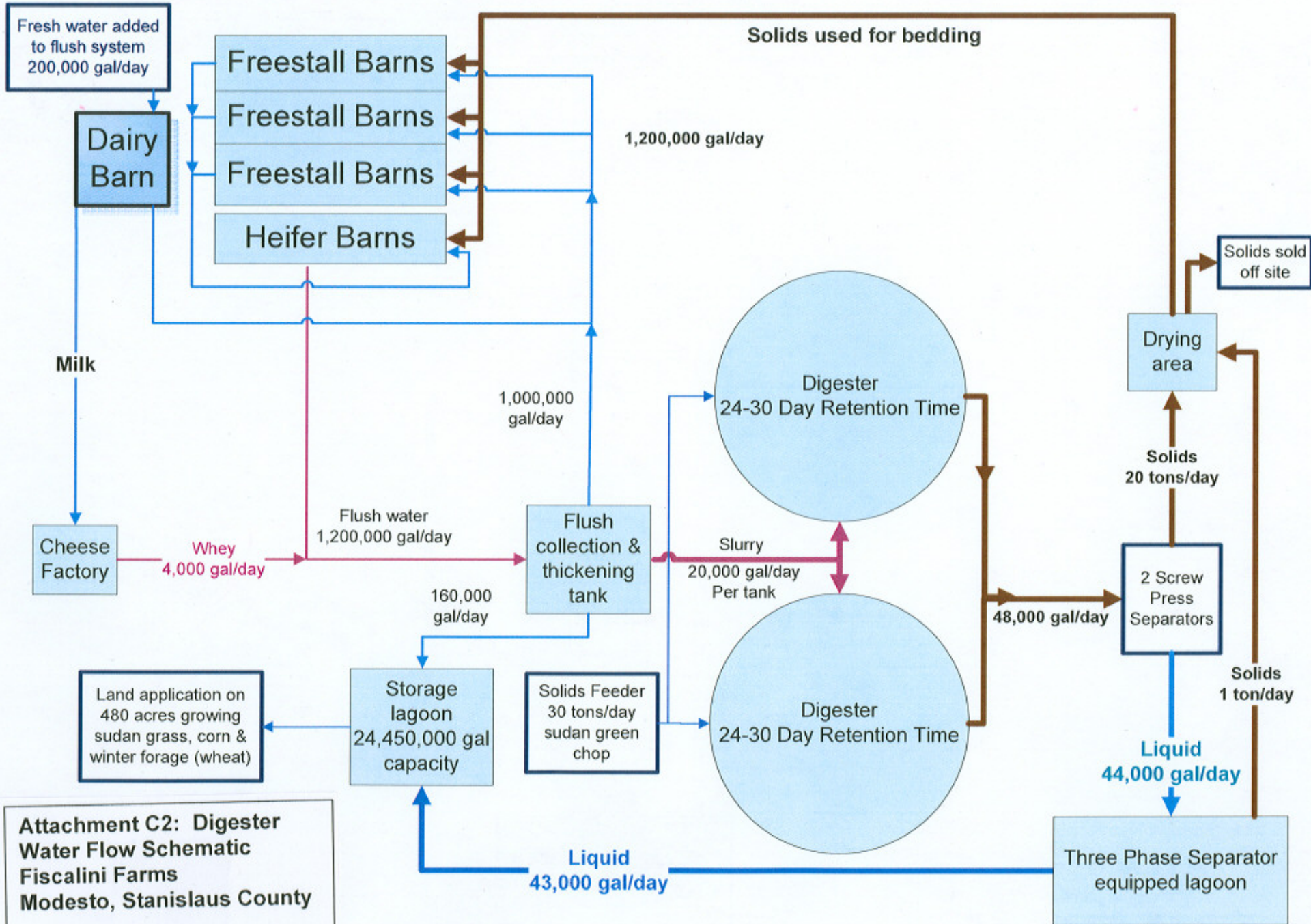
16 March 2008



Attachment C1: Current
Water Flow Schematic
Fiscalini Farms
Modesto, Stanislaus County

Revised facility water flow schematic

16 March 2008

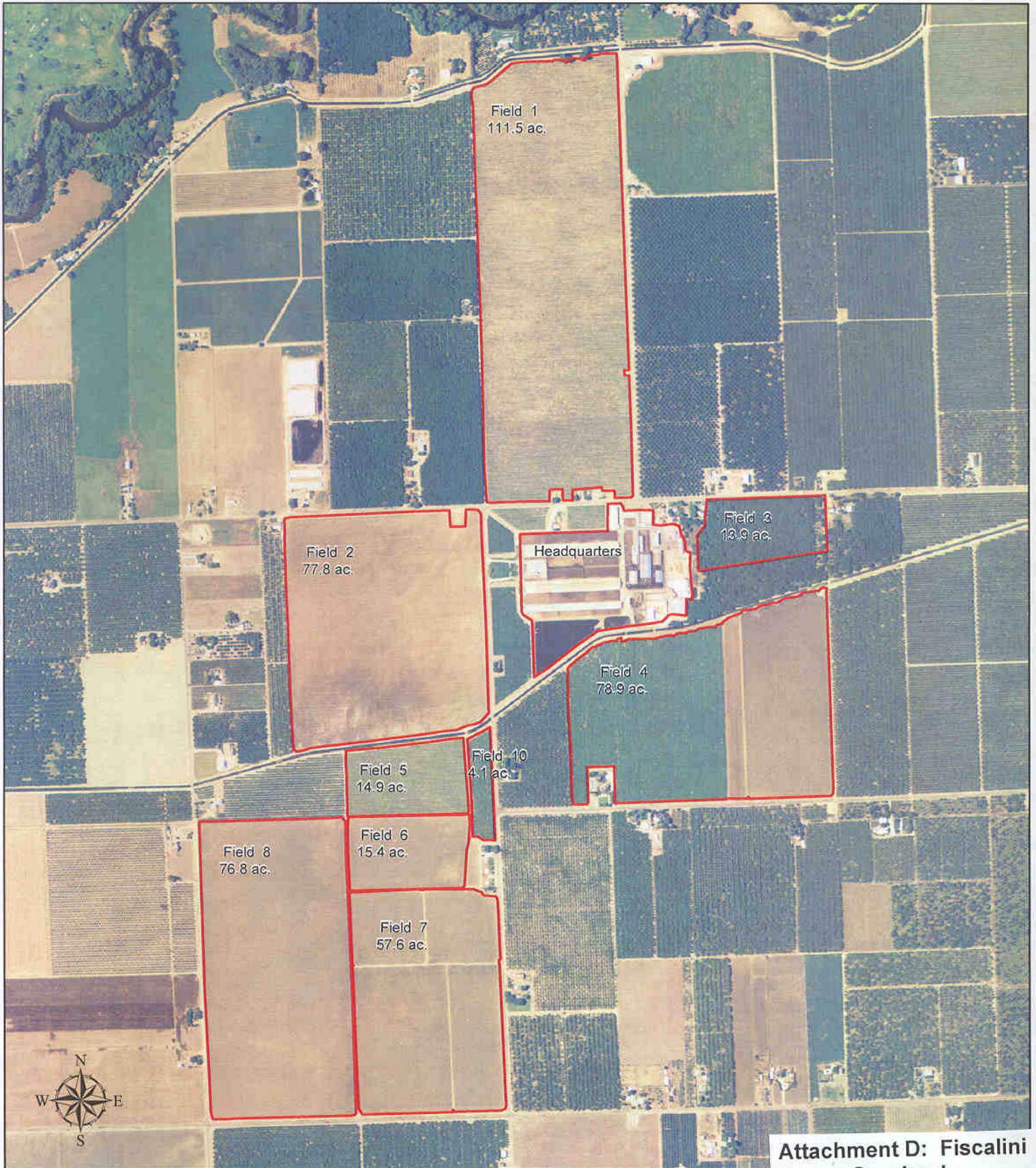


Attachment C2: Digester Water Flow Schematic
Fiscalini Farms
Modesto, Stanislaus County

PROPERTY MAP

FISCALINI FARMS

FEBRUARY 25, 2008
ASSISTED BY: K. GUY



 Field Boundary

1 inch equals 1,150 feet

**Attachment D: Fiscalini
Farms Cropland
4848 Jackson Road
Modesto
Stanislaus County**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-0100
FOR
JOHN FISCALINI, DBA FISCALINI FARMS,
STANISLAUS COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code (CWC) Section 13267. The Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Executive Officer.

This MRP includes Monitoring, Record-Keeping, and Reporting requirements. Monitoring requirements include monitoring of discharges of manure and/or wastewater, storm water, and tailwater from the production area and land application areas, of inputs to and outputs from the digester, and of groundwater in order to determine if the Discharger's facility is in compliance with the discharge limitations of Waste Discharge Requirements Order No. R5-2008-0100 (hereafter "Order")

Monitoring requirements also include monitoring of nutrients applied to, and removed from, land application areas in order for the Discharger to develop and implement a Nutrient Management Plan that will minimize leaching of nutrients and salts to groundwater and transport of these constituents to surface water.

In addition, monitoring requirements include periodic visual inspections of the dairy and digester to verify and document they are being operated and maintained to ensure continued compliance with the Order.

This MRP requires the Discharger to keep and maintain records for five years of the monitoring activities for the production and land application areas and to prepare and submit reports containing the results of specified monitoring as indicated below.

Except where indicated, all monitoring must begin immediately. Note that some types of events require that a report be submitted to the Central Valley Water Board within 24 hours (see section C).

The Discharger must follow sampling and analytical procedures approved by the Executive Officer. Approved procedures will be posted on the Board's web site and copies may be obtained by contacting staff. The Discharger may submit alternative procedures for consideration, but must receive written approval from the Executive Officer before using them.

The Discharger shall conduct monitoring, record-keeping, and reporting as specified below.

A. MONITORING REQUIREMENTS

Visual Inspections

Effective immediately, the Discharger shall conduct and record the inspections specified in Table 1 below and maintain records of the results on-site for a period of five years.

Table 1. INSPECTIONS
<p><i>Digester</i> <u>Weekly:</u> Inspect the digester equipment area (plumbing, control equipment, etc.) for evidence of leaks, corrosion, cracks, or other signs of equipment failure or malfunction.</p>
<p><i>Production Area</i> <u>Weekly during the wet season (1 October to 31 May) and monthly between 1 June and 30 September:</u> Inspect all waste storage areas and note any conditions or changes that could result in discharges to surface water and/or from property under control of the Discharger.</p> <p>Note whether freeboard within each liquid storage structure is less than, equal to, or greater than the minimum two feet required.</p> <p><u>During and after each significant storm event¹:</u> Visual inspections of storm water containment structures for discharge, freeboard, berm integrity, cracking, slumping, erosion, excess vegetation, animal burrows, and seepage.</p> <p><u>Monthly on the 1st day of each month:</u> Photograph each pond showing the current freeboard on that date. All photos shall be dated and maintained as part of the discharger's record.</p>
<p><i>Land Application Areas</i> <u>Immediately before each wastewater application begins:</u> Inspect the land application area and note the condition of land application berms including rodent holes, piping, and bank erosion. Verify that any field valves are correctly set to preclude off-property or accidental discharges of wastewater.</p> <p><u>Daily when process wastewater is being applied:</u> Inspect the land application area and note: the condition of land application berms including rodent holes, piping, and bank erosion; the presence (or lack) of field saturation, ponding, erosion, runoff (including tailwater discharges from the end of fields, pipes, or other conveyances), and nuisance conditions; and the conditions of any vegetated buffers or alternative conservation practices.</p>

Nutrient Monitoring

Starting no later than 2 months after adoption of this Order, the Discharger shall begin monitoring wastewater, manure, and plant tissue produced at the facility, soil in each land application area, and irrigation water and cannery water used on each

¹ A significant storm event is defined as a storm event that results in continuous runoff of storm water for a minimum of one hour, or intermittent runoff for a minimum of three hours in a 12-hour period.

land application area (field-by-field basis) for the constituents and at the frequency as specified in Table 2 below. This information is for use in conducting nutrient management on the individual land application areas and at the facility on the whole. It must be used to develop and implement the Nutrient Management Plan. The Discharger is encouraged to collect and use additional data, as necessary, to refine nutrient management.

Table 2. NUTRIENT MONITORING
<p><i>Dairy Wastewater and Digester Waste (includes commingled digester effluents)</i></p> <p><u>Ongoing:</u> Record flow volumes from the digester into the dairy wastewater storage lagoon.</p> <p><u>Each application:</u> Record the volume (gallons or acre-inches) and date of each wastewater application from the storage lagoon to each land application area.</p> <p><u>Quarterly during one application event:</u> Field measurement of electrical conductivity.</p> <p>Laboratory analyses for nitrate-nitrogen, ammonium-nitrogen, total Kjeldahl nitrogen, total phosphorus, and potassium, and the TDS of the dairy wastewater lagoon, whey, and the digester effluent before placement in the dairy wastewater lagoon.</p> <p><u>Once within 12 months and annually for two years after groundwater monitoring wells are installed:</u> Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).</p>
<p><i>Manure/Composted Manure</i></p> <p><u>Each application to each land application area:</u> Record the total volume (cubic yards) applied and density (pounds per cubic foot) or total weight (tons) applied and percent moisture.</p> <p><u>Once within 12 months:</u> Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).</p> <p><u>Twice per year:</u> Laboratory analyses for ammonium-nitrogen, total kjeldahl nitrogen, total phosphorus, potassium, and density (if volume manure applied is reported) or percent moisture (if weight manure applied is reported).</p> <p><u>Each offsite export of manure:</u> Record the total volume (cubic yards) exported and density (grams per liter) or total weight (tons) exported and percent moisture.</p> <p>Laboratory analyses for density (if volume manure exported is reported) or percent moisture (if weight manure exported is reported).</p> <p><u>Annually:</u> Record the total dry weight (tons) of manure applied annually to each land application area and the total dry weight (tons) of manure exported offsite.</p>

Table 2. NUTRIENT MONITORING
<p><i>Plant Tissue</i> <u>At harvest:</u> Record the total weight (tons) and percent wet weight or volume (cubic yards) and density (grams per liter) of harvested material removed from each land application area.</p> <p>Laboratory analyses for total nitrogen, phosphorus, and potassium (expressed on a dry weight basis), and percent wet weight (if weight of harvested material is reported) or density (if volume of harvested material is reported).</p> <p><u>The following test is only required if the Discharger wants to add fertilizer in excess of 1.4 times the nitrogen expected to be removed by the harvested portion of the crop (see Attachment C for details): Mid-season, if necessary to assess the need for additional nitrogen fertilizer during the growing season.</u></p> <p>Laboratory analyses for total nitrogen, expressed on a dry weight basis.</p>
<p><i>Soil</i> <u>Beginning in the summer of 2008 and then once every 5 years from each land application area:</u> Laboratory analyses for: Total phosphorus</p> <p><u>Spring pre-plant for each crop:</u> Laboratory analyses for: 0 to 1 foot depth: Nitrate-nitrogen and organic matter. 1 to 2 foot depth: Nitrate-nitrogen.</p> <p><u>Fall pre-plant for each crop:</u> Laboratory analyses for: 0 to 1 foot: Electrical conductivity, nitrate-nitrogen, soluble phosphorus, potassium and organic matter. 1 to 2 foot: Nitrate-nitrogen. 2 to 3 foot: Nitrate-nitrogen.</p>
<p><i>Irrigation Water</i>² <u>Each irrigation event for each land application area:</u> Record volume (gallons or acre-inches)³ and source (well or canal) of irrigation water applied and dates applied.</p> <p><u>One irrigation event during each irrigation season during actual irrigation events:</u> For each irrigation water source (well and canal): Electrical conductivity and total nitrogen.⁴ Data collected to satisfy the groundwater monitoring requirements (below) will satisfy this requirement.</p>

Digester Monitoring

When the digester is completed and operational, the inputs and outputs from the digester shall be monitored as follows:

² The Discharger shall monitor irrigation water (from each water well source and canal) that is used on all land application areas.

³ Initial volume measurements may be the total volume for all land application areas. Volume measurements for each irrigation source for each land application area shall be recorded no later than **1 July 2011**.

⁴ In lieu of sampling the irrigation water, the Discharger may provide equivalent data from the local irrigation district.

Table 3. DIGESTER MONITORING
<p><i>Digester Inputs</i> <u>Ongoing for each batch placed in the digester:</u> volume of solid manure volume of whey volume of sudan green chop</p>
<p><i>Digester Outputs</i> <u>Ongoing for each batch removed from the digester:</u> volume of solids removed volume of liquid effluent removed electrical conductivity of the solids removed concentration of total dissolved solids and electrical conductivity of the effluent removed</p>

Monitoring of Surface Runoff

Effective immediately upon adoption of this Order, the Discharger shall monitor discharges of manure and/or wastewater, storm water, and tailwater from the production area and land application area for the constituents and at the frequency as specified in Table 4 below.

Table 4. DISCHARGE MONITORING
<p><i>Unauthorized Discharges (Including Off-Property Discharges) of Manure or Process Wastewater from the Production Area or Land Application Area</i> <u>Daily during each discharge:</u> Record date, time, approximate volume (gallons) or weight (tons), duration, location, source, and ultimate destination of the discharge.</p> <p>Field measurements of the discharge for electrical conductivity, temperature, and pH.</p> <p>Laboratory analyses of the discharge for nitrate-nitrogen, total ammonia-nitrogen, unionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, potassium, total dissolved solids, BOD₅⁵, total suspended solids, and total and fecal coliform.</p>
<p><u>Daily during each discharge to surface water:</u> For surface water upstream⁶ and downstream⁷ of the discharge: Field measurements for electrical conductivity, dissolved oxygen, temperature, and pH.</p> <p>Laboratory analyses for nitrate-nitrogen, total ammonia-nitrogen, unionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, potassium, total dissolved solids, BOD₅, total suspended solids, and total and fecal coliform.</p>
<p><i>Storm Water Discharges to Surface Water from the Production Area</i> <u>Daily during each discharge to surface water:</u> Record date, time, approximate volume, duration, location, source, and ultimate destination of the discharge.</p>

⁵ Five-day Biochemical Oxygen Demand.

⁶ Upstream samples shall be taken just far enough upstream so as not to be influenced by the discharge.

⁷ Downstream samples shall be taken just far enough downstream where the discharge is blended with the receiving water but not influenced by dilution flows or other discharges.

Table 4. DISCHARGE MONITORING
<p>For (1) the discharge and surface water (2) upstream and (3) downstream of the discharge: Field measurements of electrical conductivity, temperature, pH, total ammonia-nitrogen, and unionized ammonia-nitrogen.</p> <p>Laboratory analyses for nitrate-nitrogen, turbidity, total phosphorus, and total and fecal coliform.</p>
<p><i>Storm Water Discharges to Surface Water from Each Land Application Area⁸</i> <u>First storm event of the wet season⁹ and during the peak storm season (typically February)¹⁰ each year from one third of the land application areas¹¹ with the land application areas sampled rotated each year¹²:</u> Record date, time, approximate volume, duration, location, and ultimate destination of the discharge.</p> <p>Field measurements of the discharge for electrical conductivity, temperature, pH, total ammonia-nitrogen, and unionized ammonia-nitrogen.</p> <p>Laboratory analyses of the discharge for nitrate-nitrogen, phosphorus, turbidity, and total and fecal coliform.</p>
<p><i>Tailwater Discharges to Surface Water from Land Application Areas¹³</i> <u>Each discharge from each land application area where irrigation has occurred less than 60 days after application of manure and/or process wastewater:</u> Record date, time, approximate volume (gallons), duration, location, and ultimate destination of the discharge.</p> <p>Field measurements of discharge for electrical conductivity, temperature, pH, total ammonia-nitrogen, and unionized ammonia-nitrogen.</p> <p><u>First discharge of the year from any land application area where irrigation has occurred less than 60 days after application of manure and/or process wastewater:</u> Laboratory analyses for nitrate-nitrogen, total phosphorus, and total and fecal coliform.</p>

1. If conditions are not safe for sampling, the Discharger must provide documentation of why samples could not be collected and analyzed. For example, the Discharger may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, tornados, electrical storms, etc.). However, once the dangerous conditions have passed, the Discharger shall collect a sample of the discharge or, if the discharge has ceased, from the waste management unit from which the discharge occurred.

⁸ Sample locations must be chosen such that the samples are representative of the quality and quantity of storm water discharged.

⁹ This sample shall be taken from the first storm event of the season that produces significant storm water discharge such as would occur during continuous storm water runoff for a minimum of one hour, or intermittent storm water runoff for a minimum of three hours in a 12-hour period.

¹⁰ This sample shall be taken during a storm event that produces significant storm water discharge and that is preceded by at least three days of dry weather. The sample shall be taken during the first hour of the discharge.

¹¹ One land application area shall be sampled for Dischargers that have one to three land application areas, two land application areas shall be sampled for Dischargers that have four to six land application areas, etc.

¹² The Discharger may propose in the annual storm water report to reduce the constituents and/or sampling frequency of storm water discharges to surface water from any land application area based on the previous year's data (see Storm Water Reporting below).

¹³ Tailwater samples shall be collected at the point of discharge to surface water.

2. Discharge and surface water sample analyses shall be conducted by a laboratory certified for such analyses by the California Department of Health Services. These laboratory analyses shall be conducted in accordance with the Title 40 Code of Federal Regulations Part 136 (*Guidelines Establishing Test Procedures for the Analysis of Pollutants*) or other test methods approved by the Executive Officer.
3. All discharges shall be reported as specified in the Reporting Requirements (Priority Reporting of Significant Events and Annual Reporting) below, as appropriate.
4. The rationale for all discharge sampling locations shall be included in the Annual Report (in Storm Water Report for storm water discharges from land application areas).

Groundwater Monitoring

Ongoing monitoring shall be conducted at the frequency and for the parameters specified in Table 5 below.

Table 5. GROUNDWATER MONITORING
<p><i>Domestic and Agricultural Supply Wells</i> <u>Semiannually at time of expected highest and lowest water table levels:</u> Field measurements of electrical conductivity. Laboratory analyses of nitrate-nitrogen.</p> <p><u>Annually:</u> Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride), ammonium-nitrogen, total dissolved solids, and fecal coliform.</p>
<p><i>Monitoring Wells</i> <u>Quarterly for two years and semi-annually after that, with semi-annual testing done at time of expected highest and lowest water table levels:</u> Field measurements of electrical conductivity and pH. Laboratory analyses for nitrate-nitrogen, ammonium-nitrogen, total dissolved solids, fecal coliform, phosphorus, and potassium.</p> <p><u>Annually:</u> Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).</p>

1. Groundwater samples from domestic wells shall be collected from the tap nearest to the pressure tank (and before the pressure tank if possible) after water has been pumped from this tap for 10 to 20 minutes. Groundwater samples from agricultural supply wells shall be collected after the pump has

run for a minimum of 30 minutes or after at least three well volumes have been purged from the well. Samples from subsurface (tile) drains shall be collected at the discharge point into a canal or drain.

2. Prior to any pre-sample purging, the depth of groundwater shall be measured from a surveyed reference point to the nearest 0.01 foot in each well.
3. Monitoring of the domestic and agricultural supply wells may be reduced after one year of data are provided to the Executive Officer.

General Monitoring Requirements

1. The Discharger shall comply with all the "Requirements Specifically for Monitoring Programs and Monitoring Reports" as specified in the Standard Provisions and Reporting Requirements.
2. Approved sampling procedures are listed on the Central Valley Water Board's web site at http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/sampling_procedures.pdf.
3. When special procedures appear to be necessary at an individual dairy, the Discharger may request approval of alternative sampling procedures for nutrient management. The Executive Officer will review such requests and if adequate justification is provided, may approve the requested alternative sampling procedures.
4. The Discharger shall use clean sample containers and sample handling, storage, and preservation methods that are accepted or recommended by the selected analytical laboratory or, as appropriate, in accordance with approved United States Environmental Protection Agency analytical methods.
5. All samples collected shall be representative of the volume and nature of the material being sampled.
6. All samples containers shall be labeled and records maintained to show the time and date of collection as well as the person collecting the sample and the sample location.
7. All samples collected for laboratory analyses shall be preserved and submitted to the laboratory within the required holding time appropriate for the analytical method used and the constituents analyzed.
8. All samples submitted to a laboratory for analyses shall be identified in a properly completed and signed Chain of Custody form.

9. Field test instruments used for pH, electrical conductivity and dissolved oxygen may be used provided:
 - a. The operator is trained in the proper use and maintenance of the instruments;
 - b. The instruments are field calibrated prior to each monitoring event; and
 - c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency.

B. RECORD-KEEPING REQUIREMENTS

Dischargers shall maintain on-site for a period of five years from the date they are created all information as follows:

1. All information necessary to document implementation and management of the minimum elements of the nutrient management plan (NMP);
2. All records for the production area including:
 - a. Records documenting the inspections required under the Monitoring Requirements above;
 - b. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements above. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction;
 - c. Records of the date, time, and estimated volume of any overflow;
 - d. Records of mortality management and practices;
 - e. Steps and dates when action is taken to correct unauthorized releases as reported in accordance with Priority Reporting of Significant Events below; and
 - f. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements D.5.
3. All records for the land application area including:
 - a. Expected and actual crop yields;

- b. Identification of crop, acreage, and dates of planting and harvest for each field;
- c. Dates, locations, and approximate weight and moisture content, or volume and density, of manure applied to each field;
- d. Dates, locations, and volume of process wastewater applied to each field;
- e. Weather conditions at time of manure and process wastewater applications and for 24 hours prior to and following applications;
- f. Records documenting the inspections conducted as required under the Monitoring Requirements above;
- g. Dates, locations, and test methods for soil, manure, process wastewater, irrigation water, and plant tissue sampling;
- h. Results from manure, process wastewater, irrigation water, soil, plant tissue, discharge (including tailwater), and storm water sampling;
- i. Explanation for the basis for determining manure or process wastewater application rates, as provided in the Technical Standards for Nutrient Management established by the Order (Attachment C);
- j. Calculations showing the total nitrogen, phosphorus, and potassium to be applied to each field, including sources other than manure or process wastewater;
- k. Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied;
- l. The method(s) used to apply manure and/or process wastewater;
- m. Dates of manure and/or process wastewater application equipment inspections;
- n. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements above. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction; and

- o. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements D.5.
4. A copy of the Discharger's site-specific Nutrient Management Plan (NMP);
5. All Manure/Process Wastewater Tracking Manifest forms (Attachment A to the MRP) which includes information on the manure hauler, destination of the manure, dates hauled, amount hauled, and certification; and
6. All analyses of manure, process wastewater, irrigation water, soil, plant tissue, discharges (including tailwater discharges), surface water, storm water, subsurface (tile) drainage, and groundwater.

C. REPORTING REQUIREMENTS

Priority Reporting of Significant Events (Prompt Action Required)

The Discharger shall report any noncompliance that endangers human health or the environment or any noncompliance with Prohibitions A.1, A.2, A.3, A.4, A.5, or A.8 in the Order, **within 24 hours** of becoming aware of its occurrence. The incident shall be reported to the Central Valley Water Board Office, local environmental health department, and to the California Office of Emergency Services (OES). During non-business hours, the Discharger shall leave a message on the Central Valley Water Board's voice mail. The message shall include the time, date, place, and nature of the noncompliance, the name and number of the reporting person, and shall be recorded in writing by the Discharger. The OES is operational 24 hours a day. A written report shall be submitted to the Central Valley Water Board office **within two weeks** of the Discharger becoming aware of the incident. The report shall contain a description of the noncompliance, its causes, duration, and the actual or anticipated time for achieving compliance. The report shall include complete details of the steps that the Discharger has taken or intends to take, in order to prevent recurrence. All intentional or accidental spills shall be reported as required by this provision. The written submission shall contain:

1. The approximate date, time, and location of the noncompliance including a description of the ultimate destination of any unauthorized discharge and the flow path of such discharge to a receiving water body;
2. A description of the noncompliance and its cause;
3. The flow rate, volume, and duration of any discharge involved in the noncompliance;

4. The amount of precipitation (in inches) the day of any discharge and for each of the seven days preceding the discharge;
5. A description (location; date and time collected; field measurements of pH, temperature, dissolved oxygen and electrical conductivity; sample identification; date submitted to laboratory; analyses requested) of noncompliance discharge samples and/or surface water samples taken to comply with the Monitoring Requirements above for *Unauthorized Discharges (Including Off-Property Discharges) of Manure or Wastewater From the Production Area or Land Application Area and Storm Water Discharges to Surface Water from the Production Area*;
6. The period of noncompliance, including dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue;
7. A time schedule and a plan to implement corrective actions necessary to prevent the recurrence of such noncompliance; and
8. The laboratory analyses of the noncompliance discharge sample and/or upstream and downstream surface water samples shall be submitted to the Central Valley Water Board office within 45 days of the discharge.

Annual Reporting

By January 15 of each year, the Discharger will submit an Annual Report containing the information on facility operations outlined in the Monitoring and Reporting program and covering the period from 1 November through 31 October of the previous year. It will consist of a General Section, Nutrient Management Plan Section, Groundwater Reporting Section and a Storm Water Reporting Section, as described below. The initial annual report will cover the period from adoption of the order through 31 October 2008. It will also include documentation from a trained professional that no cross connections exist between the waste management system and any water supply or irrigation well, as required under Prohibition A 10 or the Order.

General Section

The General section of the annual report shall be completed on an annual report form provided by the Executive Officer (available on the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/ and shall include all the information as specified below. This section of the annual report shall cover information on crops harvested during the previous reporting period, whether or not the crop was planted prior to this period.

1. Identification of the beginning and end dates of the annual reporting period;
2. An Annual Dairy Facility Assessment using the tool provided by the Executive Officer or any future revisions thereto;
3. Number and type of animals, whether in open confinement or housed under roof;
4. Estimated amount of total manure (tons) and wastewater (gallons or acre-inches) generated by the facility during the annual reporting period and a calculation of the nitrogen, phosphorus, potassium and total salt content of this waste;
5. Estimated amount of total manure (tons), wastewater (gallons or acre-inches), and cannery wastewater (gallons or acre-inches) applied to each land application area during the annual reporting period and a calculation of the nitrogen, phosphorus, potassium and total salt content of this waste;
6. Estimated amount of total manure (tons) and wastewater (gallons or acre-inches) transferred to other persons by the facility during the annual reporting period and a calculation of the nitrogen, phosphorus, potassium and total salt content of this waste;
7. A map showing the location, Assessor Parcel Numbers, and number or acres of each field on the facility and whether each field was or was not used for land application of manure, wastewater, and/or cannery wastewater during the annual reporting period.
8. Calculations showing the nitrogen balance for each field and the facility as a whole during the reporting period. The balance is determined by the amount of nitrogen present in the soil in the land application area at the beginning of the reporting period, plus the amount added by dry waste, wastewater, cannery water and/or fertilizer, and minus the amount removed by harvest and/or export from the facility.
9. Summary of all discharges from the production area that occurred during the annual reporting period, including date, time, location, approximate volume, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows;
10. Summary of all storm water discharges from the land application area to surface water during the annual reporting period, including the date, time, approximate volume, duration, location, and a map showing the discharge

- and sample locations, rationale for sample locations, and method of measuring discharge flows;
11. Summary of all discharges other than storm water from the land application area to surface water that have occurred during the annual reporting period, including the date, time, approximate volume, location, source of discharge (i.e., tailwater, wastewater, blended wastewater, or cannery wastewater), a map showing the discharge and sample locations, rationale for sample locations, and method of measuring discharge flows;
 12. Copies of all manure/process wastewater tracking manifests for the reporting period;
 13. Copies of all written agreements with each third party that receives solid manure or process wastewater from the Discharger for its own use;
 14. Copies of laboratory analyses of all discharges (manure, wastewater, or tailwater), surface water (upstream and downstream of a discharge), and storm water, including chain-of-custody forms and laboratory quality assurance/quality control results;
 15. Tabulated analytical data for samples of manure, wastewater, irrigation water, cannery wastewater, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits; and
 16. Results of the Record-Keeping Requirements for the production and land application areas specified in Record-Keeping Requirements B.2.b, B.2.c, B.3.a, B.3.b, B.3.c, B.3.d, B.3.e, B.3.k, and B.3.n above.

Nutrient Management Plan Section

A copy of the current NMP shall be included with the annual reports together with a statement indicating if the NMP has been updated and whether the current version of the facility's NMP was developed or approved by a certified nutrient management planner.

Groundwater Reporting Section

Within 4 months of the adoption of this Order, and annually by 30 June thereafter, the Discharger shall report the results of all groundwater monitoring. The Discharger shall also provide additional reports on groundwater conditions as required in the Order. Groundwater monitoring reports shall include all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results) and tabular and graphical summaries of the

monitoring data. Data shall be tabulated to clearly show the sample dates, constituents analyzed, constituent concentrations, detection limits, depth to groundwater, and groundwater elevations. Graphical summaries of groundwater gradients and flow directions shall also be included. Each groundwater monitoring report shall include a summary data table of all historical and current groundwater elevations and analytical results. The submittal shall include a description of the statistical or non-statistical methods used in evaluating the groundwater monitoring data. The methods must be approved by the Executive Officer. The groundwater monitoring reports shall be certified by a California registered professional as specified in General Reporting Requirements C.9 of the Standard Provisions and Reporting Requirements of the Order.

Storm Water Reporting Section

By 30 June 2009, and annually thereafter, the Discharger shall submit an annual report that details the results of the previous year's storm water monitoring, including the Discharger's preparation for the upcoming wet season for all land application areas. The annual report shall include a map showing all sample locations for all land application areas, rationale for all sampling locations, a discussion of how storm water flow measurements were made, the results (including the laboratory analyses, chain of custody forms, and laboratory quality assurance/quality control results) of all samples of storm water, an assessment of the storm water monitoring results, an explanation for any pollutants found in storm water from any land application area, and any modifications made to the facility or sampling plan in response to pollutants detected in storm water. The annual report must also include documentation if no significant discharge of storm water occurred from the land application area(s) or if it was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

If the storm water monitoring for any land application area indicates pollutants have not been detected in storm water samples, the Discharger may propose to the Executive Officer to reduce the constituents and/or sampling frequency for that area.

General Reporting Requirements

1. The results of any monitoring conducted more frequently than required at the locations specified herein shall be reported to the Board.
2. Laboratory analyses for manure, process wastewater, and soil shall be submitted to the Board upon request by the Executive Officer.
3. Each report shall be signed by the Discharger or a duly authorized representative as specified in the General Reporting Requirements C.7 of the

Standard Provisions and Reporting Requirements (SPRR), and shall contain the following statement:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

4. Submit reports to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670
Attention: Confined Animal Regulatory Unit

ORDERED BY:

PAMELA C. CREEDON, Executive Officer

Date

**MONITORING AND REPORTING PROGRAM
ATTACHMENT A**

**Manure/Wastewater Tracking Manifest
For
Fiscalini Farms, Stanislaus County**

Instructions:

- 1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
- 2) If there are multiple destinations, **complete a separate form for each destination.**
- 3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
- 4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report.

Operator Information:

Name of Operator: John Fiscalini

Name of Dairy Facility: Fiscalini Farms

Facility Address: 4848 Jackson Road, Modesto, CA 95358

Contact Person Name and Phone Number:

Name

Phone Number

Manure/Wastewater Hauler Information:

Name of Hauling Company and Contact Person:

Hauling Company

Number and Street

City

Zip Code

Contact Person

Phone Number

Destination Information:

Composting Facility / Broker / Farmer / Other (identify) _____ (please circle one)

Destination Address or Assessor's Parcel Number:

Number and Street	City	Zip Code	Assessor's Parcel Number
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Contact information of party that receives the manure or wastewater:

Name of Company (if applicable): _____

Contact Person: _____

Mailing Address: _____

Number and Street	City	Zip Code	
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Phone Number: _____

Dates Hauled: _____

Amount Hauled:

Enter the amount of manure hauled in tons or cubic yards (indicate the units used), the manure solids content (if amount reported in tons) or manure density (if amount reported in cubic yards), and the method used to calculate the amount:

Manure: _____ Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): _____

Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: _____

Enter the amount of wastewater hauled in gallons and the method used to determine the amount.

Wastewater: _____ Gallons

Method used to determine volume of wastewater: _____

Written Agreement:

Does the Operator have a written agreement (in compliance with Land Application Specification 22 of Waste Discharge Requirements Order No. _____) with any party that receives wastewater from the Operator for its own use? (please check one)

_____ Yes _____ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any wastewater transferred after **31 December 2007** to such party. _____ (Operator shall provide initials here to acknowledge this requirement).

Certification:

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Operator's Signature: _____ Date: _____

Hauler's Signature: _____ Date: _____

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR INDIVIDUAL WASTE DISCHARGE REQUIREMENTS
FOR
DAIRIES IN THE SACRAMENTO AND SAN JOAQUIN RIVER BASINS
August 2007**

A. Introduction

1. These Standard Provisions and Reporting Requirements (SPRR) are applicable to milk cow dairies that are regulated pursuant to the provisions of Title 27 California Code of Regulations (CCR) Division 2, Subdivision 1, Chapter 7, Subchapter 2, Sections 22560 et seq.
2. Any violation of the Order constitutes a violation of the California Water Code and, therefore, may result in enforcement action.
3. If there is any conflicting or contradictory language between the Order, the Monitoring and Reporting Program (MRP) associated with the Order, or the SPRR, then language in the Order shall govern over the MRP and the SPRR, and language in the MRP shall govern over the SPRR.

B. Standard Provisions

1. The requirements prescribed in the Order do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws.
2. The Discharger shall comply with all federal, state, county, and local laws and regulations pertaining to the discharge of wastes from the facility that are at least as stringent as the requirements of the Order.
3. All discharges from the facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or to other courses under their jurisdiction that are at least as stringent as the requirements of the Order.
4. The Order does not convey any property rights or exclusive privileges.
5. The provisions of the Order are severable. If any provision of the Order is held invalid, the remainder of the Order shall not be affected.
6. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with the Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

7. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the Order shall not be a defense for violations of the Order by the Discharger.
8. The filing of a request by the Discharger for modification, revocation and reissuance, or termination of the Order, or notification of planned changes or anticipated noncompliance, does not stay any condition of the Order.
9. The Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley Water Board may modify or revoke and reissue the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the California Water Code.
10. The Discharger shall provide to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the Discharger's coverage under the Order or to determine compliance with the Order. The Discharger shall also provide to the Executive Officer upon request, copies of records required by the Order to be kept.
11. After notice and opportunity for a hearing, the Order may be terminated or modified for cause, including but not limited to:
 - a. Violation of any term or condition contained in the Order;
 - b. Obtaining the Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge; or
 - d. A material change in the character, location, or volume of discharge.
12. The Order may be modified if new state statutes or regulations are promulgated, and if more stringent applicable water quality standards are approved pursuant to Title 27 of the CCR, or as adopted into the Central Valley Water Board *Water Quality Control Plans (Basin Plans) for the Sacramento River and San Joaquin River Basins (4th Ed)*. The Order may also be modified for incorporation of land application plans, and/or changes in the waste application to cropland.
13. The Central Valley Water Board may review and revise the Order at any time upon application of any affected person or by motion of the Regional Board.
14. The Discharger shall ensure compliance with existing and/or future promulgated standards that apply to the discharge.

15. The Discharger shall permit representatives of the Central Valley Water Board and the State Water Resources Control Board (State Water Board), upon presentations of credentials at reasonable hours, to:
 - a. Enter premises where wastes are treated, stored, or disposed and where any records required by the Order are kept;
 - b. Copy any records required to be kept under terms and conditions of the Order;
 - c. Inspect facilities, equipment (monitoring and control), practices, or operations regulated or required by the Order; and
 - d. Sample, photograph, and/or video tape any discharge, waste, waste management unit, or monitoring device.
16. The Discharger shall properly operate and maintain in good working order any facility, unit, system, or monitoring device installed to achieve compliance with the Order. Proper operation and maintenance includes best practicable treatment and controls, and the appropriate quality assurance procedures.
17. Animal waste storage areas and containment structures shall be designed, constructed, and maintained to limit, to the greatest extent possible, infiltration, inundation, erosion, slope failure, washout, overtopping, by-pass, and overflow.
18. Setbacks or separation distances contained under Water Wells, Section 8, Part II, in the *California Well Standards, Supplemental Bulletin 74-90 (June 1991)*, and *Bulletin 94-81 (December 1981)*, California Department of Water Resources (DWR), shall be maintained for the installation of all monitoring wells and groundwater supply wells at existing dairies. A setback of 100 feet is required between supply wells and animal enclosures in the production area. A minimum setback of 100 feet, or other control structures (such as housing, berming, grading), shall be required for the protection of existing wells or new wells installed in the cropland. If a county or local agency adopts more stringent setback standards than that adopted by the DWR, then these local standards shall carry precedence over the Well Standards of DWR, and the Discharger shall comply with the more stringent standards.
19. Following any storm event that causes the freeboard of any wastewater holding pond to be less than one (1) foot for below-grade ponds, or two (2) feet for above-grade ponds, the Discharger shall take action as soon as possible to provide the appropriate freeboard in the wastewater holding pond.
20. For any electrically operated equipment at the facility, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the Discharger shall employ safeguards to prevent loss of control over wastes or violation of this Order. Such safeguards may include alternate power sources,

standby generators, standby pumps, additional storage capacity, modified operating procedures, or other means.

C. General Reporting Requirements

1. The Discharger shall give at least 60 days advance notice to the Central Valley Water Board of any planned changes in the ownership or control of the facility.
2. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of the Order by letter at least 60 days in advance of such change, a copy of which shall be immediately forwarded to the appropriate Central Valley Water Board office listed below in the General Reporting Requirements C.11.
3. To assume operation under the Order, any succeeding owner or operator must request, in writing, that the Executive Officer transfer coverage under the Order. The Central Valley Water Board will provide a form for this request that will allow the succeeding owner or operator to provide their full legal name, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a responsibility statement and a signed statement in compliance with General Reporting Requirement C.7 below. The form will also include a statement for signature that the new owner or operator assumes full responsibility for compliance with the Order and that the new owner or operator will implement the Waste Management Plan and the NMP prepared by the preceding owner or operator. Transfer of the Order shall be approved or disapproved in writing by the Executive Officer. The succeeding owner or operator is not authorized to discharge under the Order and is subject to enforcement until written approval of the coverage transfer from the Executive Officer.
4. The Executive Officer may require the Discharger to submit technical reports pursuant to the Order and California Water Code Section 13267.
5. The Discharger shall identify any information that may be considered to be confidential under State law and not subject to disclosure under Public Records Act. The Discharger shall identify the basis of confidentiality. If the Executive Officer cannot identify a reasonable basis for treating the information as confidential, the Executive Officer will notify the Discharger that the information will be placed in the public file unless the Central Valley Water Board receives, within 10 calendar days, a written request from the Discharger to keep the information confidential containing a satisfactory explanation supporting the information's confidentiality.
6. Except for data determined to be exempt from disclosure under the Public Records Act (California Government Code Sections 6275 to 6276), and data determined to be confidential under Section 13267(b)(2) of the California Water Code, all reports prepared in accordance with the Order and submitted to the Executive Officer shall

be available for public inspection at the offices of the Central Valley Water Board. Data on waste discharges, water quality, meteorology, geology, and hydrogeology shall not be considered confidential.

7. All technical reports and monitoring program reports shall be accompanied by a cover letter with the certification specified in C.8 below and be signed by a person identified below:
 - a. For a sole proprietorship: by the proprietor;
 - b. For a partnership: by a general partner;
 - c. For a corporation: by a principal executive officer of at least the level of senior vice-president; or
 - d. A duly authorized representative if:
 - (1) The authorization is made in writing by a person described in Subsection a, b, or c of this provision;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility, such as the position of manager. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and
 - (3) The written authorization is submitted to the Central Valley Water Board.
8. Each person, as specified in C.7 above, signing a report required by the Order or other information requested by the Central Valley Water Board shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”
9. In addition to Item C.7 above, all technical reports required in the Order that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by, or under the direction of, and signed by persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1 or federal officers and employees who are exempt from these Sections by California Business and Professions Code, Section 6739 or 7836. To demonstrate compliance with Title 16 CCR, Sections 415 and 3065, all technical reports must

contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

10. The Discharger shall file a Report of Waste Discharge with the Central Valley Water Board at least 140 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:
 - a. The addition of a new wastewater that results in a change in the character of the waste;
 - b. Significantly changing the disposal or waste application method or location;
 - c. Significantly changing the method of treatment;
 - d. Increasing the discharge flow beyond that specified in the Order; and/or
 - e. Expanding existing herd size beyond the maximum herd size listed in the Order.
11. All reports shall be submitted to the following address:

For facilities in Butte, Lassen, Modoc, Plumas, Tehama, and Shasta counties, submit reports to:

California Regional Water Quality Control Board
Central Valley Region
415 Knollcrest Drive, Suite 100
Redding, CA 96002
Attention: Confined Animal Regulatory Unit

For facilities in all other counties, submit reports to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670
Attention: Confined Animal Regulatory Unit

D. Requirements Specifically for Monitoring Programs and Monitoring Reports

1. The Discharger shall file self-monitoring reports and/or technical reports in accordance with the detailed specifications contained in the MRP attached to the Order.

2. The Discharger shall maintain a written monitoring program sufficient to assure compliance with the terms of the Order. Anyone performing monitoring on behalf of the Discharger shall be familiar with the written program.
3. The monitoring program shall include observation practices, sampling procedures, and analytical methods designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points.
4. All instruments and devices used by the Discharger for the monitoring program shall be properly maintained and shall be calibrated as recommended by the manufacturer and at least once annually to ensure their continued accuracy.
5. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by the Order, and records of all data used to complete the reports. Records shall be maintained for a minimum of five years from the date of sample, measurement, report, or application. Records shall also be maintained after facility operations cease if wastes that pose a threat to water quality remain at the site. This five-year period may be extended during the course of any unresolved litigation regarding the discharge or when requested in writing by the Central Valley Water Board Executive Officer.
 - a. Records of on-site monitoring activities shall include the:
 - (1) Date that observations were recorded, measurements were made, or samples were collected;
 - (2) Name and signature of the individual(s) who made the observations, made and recorded the measurements, or conducted the sampling;
 - (3) Location of measurements or sample collection;
 - (4) Procedures used for measurements or sample collection;
 - (5) Unique identifying number assigned to each sample; and
 - (6) Method of sample preservation utilized.
 - b. Records of laboratory analyses shall include the:
 - (1) Results for the analyses performed on the samples that were submitted;
 - (2) Chain-of-custody forms used for sample transport and submission;
 - (3) Form that records the date that samples were received by the laboratory and specifies the analytical tests requested;

- (4) Name, address, and phone number of the laboratory which performed the analysis;
- (5) Analytical methods used;
- (6) Date(s) analyses were performed;
- (7) Identity of individual(s) who performed the analyses or the lab manager; and
- (8) Results for the quality control/quality assurance (QA/QC) program for the analyses performed.

E. Enforcement

1. California Water Code Section 13350 provides that any person who violates WDRs or a provision of the California Water Code is subject to civil liability of up to \$5,000 per day or \$15,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil liability of up to \$10 per gallon, or \$20 per gallon; or some combination thereof, depending on the violation, or upon the combination of violations. In addition, there are a number of other enforcement provisions that may apply to violation of the Order.

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2008-0100
JOHN FISCALINI
FISCALINI FARMS, STANISLAUS COUNTY

Background

Mr. John Fiscalini is the owner and operator of Fiscalini Farms, a dairy and cheese plant. The facility is about twelve miles northwest of the city of Modesto, Stanislaus County. The dairy is not regulated by Waste Discharge Requirement General Order R5-2007-0035 for Existing Milk Cow Dairies (General Order), adopted 3 May 2007, because whey is discharged into the dairy wastewater management system. The cheese plant is currently regulated under General Industrial Storm Water Permit – WQ Order No. 97-03-DWQ, NPDES NO. CAS000001, and is identified by WDID No. 5S501013935. Mr. Fiscalini has received several Notices of Non-Compliance under the General Industrial Storm Water Permit for failure to submit annual reports. Although the Discharger has indicated that the cheese plant may be expanded in the future, this Order only address waste generated by the cheese plan as currently operated.

On 2 January 2007, Mr. Fiscalini notified Regional Board staff that they were planning to install a mesophilic anaerobic digester on the facility to use waste from the dairy operations and supplemental feedstock (whey from the cheese plant operations and sudan silage chop) to produce electricity for use at the dairy and the cheese plant. Excess electricity produced will be sold through a Power Purchase Agreement with Modesto Irrigation District. Staff has been advised that the digester system is being constructed using grant money that is conditioned on the commencement of energy production by 1 July 2008. Therefore, this Order requires submittal of groundwater data, the Nutrient Management Plan, and the Waste Management Plan according to a schedule rather than requiring submittal of this information prior to issuance of Waste Discharge Requirements.

Herd population data was reported in the October 2005 ROWD as 1,650 milking and dry cows. The dairy's Preliminary Dairy Facility Assessment in December 2007 reported the herd size as 1,700 milking and dry cows. The reported herd size is within the variation allowed by the General Order (i.e., no more than a 15% increase over the maximum total number of mature cows reported in October 2005).

The digester installation will include an above ground flush collection tank with a moisture barrier between the soil and the tank floor, a thickening tank, two 850,000 gallon capacity concrete above ground tanks with a moisture barrier between the soil and tank floor, and a combined heat and power (CHP) unit.

The feed lanes and free stalls will be flushed six times a day. In addition 4,000 gallons per day of whey is also used to flush. Manure gathered by flushing will be routed to the flush collection tank and thickening tank. In the thickening tank the manure will be separated so material on the bottom of the tank is about eight to ten percent (8-10%) solids.

A total of 40,000 gallons per day of the 8 – 10% solids material will be removed from the bottom of the thickening tank and added to the digester tanks daily. In addition 30 tons of sudan green chop will be added to the two digester tanks daily. Of the remaining liquid in the thickening tank, 1,000,000 gallons is returned to the flush tank system and 160,000 gallons is sent to the wastewater storage lagoon daily. The hydraulic retention time is approximately 24-30 days in the tanks. Digester effluent will be removed from the digester daily and passed through two screw press separators. Separated digester liquid effluent will go to the settling basin and then to the wastewater storage lagoon; the separated digester solids will be stored on a concrete pad until they are either used onsite for animal bedding or sold off site.

There will be three waste streams entering the wastewater retention ponds: liquids coming out of the mix tank, digester effluent, and storm water runoff from the production area. Given the operational parameters described in the Report of Waste Discharge, the salinity concentration in the wastewater retention pond should not exceed 1,069 mg/L total dissolved solids (TDS) in the winter (December – March) or 4,736 mg/L TDS in the summer (April – November).

Groundwater Conditions and Existing Land Use

There are nine monitoring wells, eight domestic wells and two irrigation wells at the facility; however, irrigation well number 05 is not used and irrigation well number 04 is only used when the MID water is not flowing. Samples were collected from the domestic and irrigation wells in October 2007 and analyzed for electrical conductivity and nitrate-nitrogen (see Table 1). Nine of the ten supply wells had very high levels of nitrogen.

Table 1: Summary of Selected Constituents from Onsite Domestic and Irrigation Wells (October 2007)

Well Identification	Electrical Conductivity umhos/cm¹	Nitrate – Nitrogen mg/L
04 Irrigation Well	850	20.7
05 Irrigation Well	1400	29.3
02 Domestic Well	1280	22.6
03 Domestic Well	810	8.3
06 Domestic Well	620	14.9
07 Domestic Well	880	16.4
08 Domestic Well	890	17.6
09 Domestic Well	1520	51.9
10 Domestic Well	227	31.6
11 Domestic Well	341	15.8
mg/L - milligrams per liter umhos/cm - micromhos per centimeter		

In May 2003, groundwater monitoring wells at the facility were sampled and analyzed for several constituents. Water quality as indicated by the analytical results shows very high levels of nitrogen in seven of the ten groundwater monitoring wells. A summary of the electrical conductivity and nitrate as nitrogen is shown in Table 2.

¹ Results for Electrical Conductivity were reported in mmhos/cm. This result was then converted to umhos/cm by multiplying by 1,000.

Table 2: Summary of Selected Constituents from Onsite Groundwater Monitoring Wells (May 2003)

Well Identification	Electrical Conductivity umhos/cm ²	Nitrate – Nitrogen mg/L
FMW1	2515	83.5
FMW2	2300	0.7
FMW3	3052	4.8
FMW4	1972	42.9
FMW7	1456	20.9
FMW8	1548	No Data
FMW9	1471	37.8
FMW10	1880	37.5
FMW11	2011	42.2
FMW12	1248	39.2
mg/L - milligrams per liter umhos/cm - micromhos per centimeter		

Groundwater levels from the groundwater monitoring wells at the facility were recorded in May 2003. The groundwater flow could not be determined based on the data provided. Groundwater levels in 2003 averaged around 40.8 feet elevation above sea level for the area. As part of the requirements of this Order, the Discharger will be providing a Hydrogeologic Report that provides additional information on the hydrogeology of the facility.

Land use surrounding the facility is predominantly agricultural. The most prevalent soils on the facility are classified as: Dinuba Fine Sandy Loam with moderate permeability; Dinuba Sandy Loam with moderate permeability; Fresno Sandy Loam with slow to very slow permeability, Hanford Sandy Loam with rapid permeability; and Modesto Loam with very slow permeability.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Central Valley Water Board has adopted a Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins (4th ed.). This Basin Plan designates the beneficial uses of groundwater and surface waters of the Region, specifies water quality objectives to protect those uses, and includes implementation programs for achieving water quality objectives. The Basin Plan also includes plans and

² Results for Electrical Conductivity were reported in micro Siemens per centimeter (uS/cm). This result is equivalent to umhos/cm.

policies of the State Water Board incorporated by reference, including State Water Board Resolution No. 68-16 (*Statement of Policy with Respect to Maintaining High Quality Waters in California*), State Water Board Resolution 88-63 (*Sources of Drinking Water Policy*), and State Water Board Resolution No. 92-49 (*Policies and Procedures for Investigation and Cleanup or Abatement of Discharges Under Water Code Section 13304*).

The procedure for the Regional Water Board to follow in establishing numerical limitations in waste discharge that will implement Basin Plan narrative objectives is described in pages IV-16 through IV-18 of the Basin Plan. The Regional Water Board must consider, among other things, information submitted by a Discharger and other interested parties and relevant numerical criteria and guidelines developed or published by other agencies and organizations on harmful concentrations of constituents.

The constituent concentrations to be included in the proposed Order and summarized in Table 3 below are what the Basin Plan and referenced documents of recognized authorities indicate cannot be exceeded without causing some adverse impact on the listed beneficial uses. For agricultural use and the waste constituents listed, crop application is consistently more sensitive than animal uses, but there may be several concentration thresholds that apply dependent upon the crop and how irrigation takes place.

While insufficient data has been reported to establish background groundwater conditions, it appears that groundwater in the regional production aquifer beneath the facility is heavily impacted for beneficial uses. This Order requires the continued monitoring of the groundwater monitoring network to monitor the impact of the discharge and help develop long-term groundwater limits, the development of which is discussed further in the Antidegradation section below.

The Order uses the constituent concentrations summarized in Table 3 as interim groundwater limitations while a Groundwater Limitations Analysis is performed to determine if more stringent groundwater limitations are needed to protect water quality. These interim groundwater limitations are based on either the maximum contaminant level (MCL) for the constituent as published in Title 22 CCR or other designated Basin Plan objectives.

Table 3: Summary of Interim Receiving Water Numerical Limitations

Constituent	Units	Value	Beneficial Use	Criteria or Justification
Boron	mg/L	1.0	AGR ²	Boron sensitive crops ³
Chloride	mg/L	250	MUN ¹	Recommended Secondary MCL ⁵
Conductivity (EC)	µmhos/cm	900	MUN ¹	Recommended Secondary MCL ⁵
Nitrate as N	mg/L	10	MUN ¹	Primary MCL ⁴
Total Coliform Organisms	MPN/100 mL	2.2	MUN ¹	Basin Plan
Total Dissolved Solids	mg/L	500	MUN ¹	Recommended Secondary MCL ⁴

Notes:

1 - Municipal and domestic supply

2 - Agricultural supply

3 - Ayers, R. S. and D. W. Westcot, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome, (1985)

4 - Title 22, CCR, section 64431, Table 64431-A

5 – Title 22, CCR, section 64449, Table 64449-B

Antidegradation

The antidegradation directives of State Water Board Resolution No. 68-16, “Statement of Policy With Respect to Maintaining High Quality Waters in California,” or “Resolution 68-16” require that waters of the State that are better in quality than established water quality objectives be maintained “consistent with the maximum benefit to the people of the State.” Policy and procedures for complying with this directive are set forth in the Basin Plan.

Certain dairy and digester wastewater constituents are not fully amenable to waste treatment and control and it is reasonable to expect some impact on groundwater. Degradation is likely to occur from waste handling and storage and application of wastes to cropland. However, there is some uncertainty over the degree of that degradation. This Order takes a phased approach. Interim groundwater limitations assure protection of the existing beneficial uses of groundwater while this process takes place.

The Order first requires technical reports in the form of a BPTC technical evaluation for each component of the facility’s waste treatment and control to determine for each waste constituent BPTC as used in Resolution 68-16, a Nutrient Management Plan (NMP) for the cropland, and Salinity Evaluation and Minimization Plan for salinity control of facility waste. The results of these technical evaluations and water quality data from required groundwater monitoring will be used to develop numeric groundwater limitations for each waste constituent that reflects full implementation of BPTC and compliance with the most stringent applicable water quality objectives for each constituent. Lastly, the Order may be reopened to incorporate changes to the interim

groundwater water limitations, or waste handling and treatment technologies, deemed necessary to implement BPTC.

Proposed Order Terms and Conditions

The recently adopted Waste Discharge Requirement General Order R5-2007-0035 for Existing Milk Cow Dairies (Dairy General Order) has set new standards for waste management on dairy facilities. The requirements specified in the propose Order largely reflect those of the Dairy General Order expect where specific circumstances require different or more stringent discharge specifications or provisons.

California Environmental Quality Act (CEQA)

With respect to the existing dairy facility, this Order is exempt from the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et. seq.) under 14 CCR 15301.

Stanislaus County Planning and Community Development served as the lead agency for the digester project for purposes of the California Environmental Quality Act (CEQA). An Initial Study for the dairy facility was circulated by Stanislaus County Planning and Community Development on 20 January 2007. The Initial Study determined that the proposed project could not have a significant effect on the environment; therefore, a Negative Declaration was prepared. On 5 April 2007, Stanislaus County Planning and Community Development adopted the Negative Declaration and Use Permit No. 2006-36.

Discharge Prohibitions, Specifications and Provisions

This proposed Order prohibits the discharge of wastes to surface water. This includes natural and man-made water bodies and conveyances whether surface water is present or not at the time of discharge. In the event such a discharge occurs due to a failure of proper waste management, the proposed Order specifies monitoring and mitigation of the surface water body affected. The actions required by the proposed Order include:

- Immediate termination of the discharge.
- Notification of regulatory agencies (Regional Water Board, County Health Department, Fish & Game, etc.) within 24 hours of discovery.
- Investigation to determine the extent and magnitude of the discharge impact.
- Mitigation of the degradation caused by the discharge.
- A plan to prevent recurrence of the discharge.

This proposed Order prohibits discharge of waste to groundwater that causes or contributes to exceedances of water quality objectives. This proposed Order reduces the threat of degradation of groundwater by requiring the Discharger to:

- Submit a hydrogeologic report for the area affected or potential affected by the facility to the Executive Officer. The technical report shall describe the underlying geology, existing wells (active or otherwise), well restrictions, and hydrogeology, including flow direction. The report shall include a summary of well construction on all groundwater monitoring wells. The plan shall also include data collected from May 2008 for the General Order spring sampling requirements.
- Conduct a performance evaluation of existing waste handling equipment, facilities, and an evaluation of BPTC for the waste handling and disposal activity. A critical waste management element to be evaluated is the existing wastewater retention system. The wastewater retention ponds must be evaluated for their effectiveness to control seepage of wastewater to the shallowest groundwater beneath the facility. The report must include a review of treatment and control technologies, and propose BPTC measures for retention ponds.
- Develop and implement a Waste Management Plan (WMP) to document waste handling and management measures. If the existing conditions do not comply with Title 27 confined animal facility regulations, interim modifications would be proposed to mitigate the problems. The WMP will include a schedule of milestones and completion dates for any necessary construction and/or retrofitting of the existing physical plant.
- Develop and implement a Nutrient Management Plan (NMP) to implement waste application practices in the cropland. The NMP will provide a schedule of waste and irrigation water application formulated to meet the crop needs in each field. The NMP will include a sampling plan for wastewater, soil, crop tissue, and irrigation water, to collect the data needed to manage waste applications.
- Develop a Salinity Evaluation and Minimization Plan that identifies sources of salt in waste generated at the facility both in the dairy and digester operations. The report should evaluate measures that can be taken to minimize salt in the facility waste, and provide a schedule to implement these measures identified to minimize salt in the waste with the NMP.
- Use monitoring to assess the performance of the facility in meeting this proposed Order's specifications and limitations.
- Prepare a final Groundwater Limitations Analysis to propose specific numeric groundwater limitations for each waste constituent that reflects full

implementation of BPTC and compliance with the most stringent applicable water quality objectives for each constituent. The data from the groundwater monitoring program and the monitoring provisions of the NMP will be used to measure the facility's performance. This data will be used in the the Groundwater Limitations Analysis to formulate the subsequent final groundwater limitations.

Initial Compliance Monitoring

This Order prescribes monitoring of digester effluent, wastewater in the retention ponds, and fresh irrigation water. It prescribes monthly (and weekly during the rainy season) monitoring of wastewater retention ponds' freeboard to verify the wastewater retention system has sufficient capacity to meet the requirements of Title 27 §22562 (a) (i.e., sufficient to retain facility wastewater generated and stormwater runoff from the 25-year, 24-hour storm). Monitoring of the wastewater application amount(s) to cropland by field and monitoring of the mineral and nitrogen character of the digester effluent, wastewater in the retention ponds, and fresh irrigation water are necessary to determine: 1) the amount and basic quality characteristics of the discharge, 2) if the application to cropland is meeting crop needs and not exceeding the salt application limitations, and 3) if there is a material change in the discharge.

The Discharger must monitor groundwater for waste constituents expected to be present in the discharge, capable of reaching groundwater, and exceeding the groundwater limitations if treatment, control, and environmental attenuation proves inadequate. For each constituent listed in Section D Interim Groundwater Limitations, of the Order, the Discharger must, as part of each monitoring event compare concentrations of constituents found in each monitoring well (or water supply well) to the background concentration or to prescribe numerical limitations to determine compliance.

Reopener

The conditions of discharge in the proposed proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. However, information is presently insufficient to develop final groundwater limitations, so the proposed Order sets limitations for the interim while site-specific, constituent-specific limits are developed in conjunction with a BPTC evaluation. Additional information must be developed and documented by the Discharger as required by schedules set forth in the proposed Order. As this additional information is obtained, decisions will be made concerning the best means of assuring the highest water quality possible that could involve substantial cost. It may be appropriate to reopen the Order if applicable laws, regulations, or site conditions change.