Appendix 1

General Waste Discharge Requirement
Monitoring and Reporting Program
Order No. R1-2012-0002

Waste Management Plan (WMP)

The Monitoring and Reporting Program for General Waste Discharge Requirements Order No. R1-2012-0002 (Order) requires the preparation and implementation of a Waste Management Plan (WMP) for the dairy production area including the milk parlor, corrals, barns, feed storage area, compost, and manure storage areas.

WMP Introduction and Purpose

The purpose of the WMP is to ensure that the dairy is designed, constructed, operated and maintained so that wastes, nutrients, and contaminants generated by the facility are managed to prevent adverse impacts to surface water and groundwater quality in compliance with the Order.

WMP Requirements:

1. A written WMP must be completed within two (2) years of adoption of the Order**,** must be kept on the dairy site, and must be made available for review by Regional Water Board staff during inspections. The portions of the WMP that are related to retention pond specifications and well protection must be prepared by, or under the charge of a responsible professional with experience in manure containment and structural facility specifications. Examples of this professional includes, but are not limited to, registered professional engineers (PE), or the qualified staff of the National Resource Conservation District (NRCS), the Resource Conservation District, or the University California Cooperative Extension.

2. The responsible professional described above shall submit a letter to the Regional Water Board within two (2) years from adoption of the Order, certifying that the dairy retention ponds meet Title 27 requirements (Attachment C.)

3. Wellheads must be protected to prevent movement of contaminants to groundwater. The WMP must discuss the manner by which wellheads are protected. The WMP must contain documentation from a trained professional (i.e., a person certified by the American Backflow Prevention Association, an inspector from a state or local governmental agency who has experience and/or training in backflow prevention, or a consultant with such experience and/or training) that there are no cross-connections that would allow the backflow of waste into a well. If testing or modification of the well and/or associated piping

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is recommended by a responsible professional, then all testing and modifications are to be completed within 90 days from the time of the recommendation.

4. Dischargers shall report on WMP implementation in the Annual Report (Appendix 3) due for submittal by November 30 each year beginning in 2012.

Contents of WMP

The Waste Management Plan must contain the following:

1. Facility Name and Address.

2. Assessor's Parcel Number, and Township, Range, Section(s), and Baseline Meridian of the property where the dairy is located.

3. The name(s), address(es), and telephone number(s) of the property owner(s), facility operator(s), and the contact person for the facility.

4. Maximum animal population categories as listed in the Notice of Intent (GWDR - Attachment A).

5. A statement from the responsible professional that the WMP was developed in accordance with the requirements of the GWDR, that it includes all necessary documentation (including calculations), and certifies that all contents of the WMP (and NMP) were done consistent with requirements of the Order and the Statewide Water Quality Regulations for Confined Animal Facilities (Attachment C). Temporary controls must be in place to prevent waste discharges to surface water and groundwater in the interim.

6. Manure Ponds must be capable of retaining all the process water generated by the facility, together with all precipitation on, and drainage through, manured or waste/feedstock storage areas, during the following storms and peak stream flows:
   a. A 25-year 24-hour storm or larger storm;
   b. Peak stream flows per the following requirements:
      1.) 20-year flows for existing facilities that were in operation on or before November 27, 1984;
      2.) Flows greater than 20-year flows for facilities, or portions thereof, that were in operation on or before November 27, 1984 and that are currently protected against such flows;
      3.) 100-year flows for facilities, or portions thereof, which began operating after November 27, 1984.

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7. The determination of the necessary pond storage volume shall reflect:
   a. The maximum period of time (storage period) anticipated between land application events based on the NMP (Appendix 2);
   b. The volume of manure and process water accumulated during the storage period;
   c. Normal precipitation, or normal precipitation times a factor of one and a half (1.5), less evaporation on the surface area during the entire storage period. If normal precipitation is used in the calculation of necessary storage volume, the WMP shall include a Contingency Plan, as specified below;
   d. Runoff from production and manure storage areas resulting from normal precipitation (or runoff due to normal precipitation times a factor of one and a half) during the storage period. If normal precipitation runoff is used in the calculation of necessary storage volume, the WMP shall include a Contingency Plan, as specified below.
   e. 25-year, 24-hour precipitation on the facility's retention pond surface(s) (at the required design storage volume level);
   f. 25-year, 24-hour runoff from the area of the facility draining to the retention pond;
   g. Residual solids after liquids have been removed; and
   h. Minimum two feet of freeboard for retention ponds maintained in all soil and clay lined ponds. Lesser freeboard may be approved by the Regional Water Board for soil and clay lined ponds if documented by a registered civil engineer that structural integrity and required capacity will not be compromised with the proposed freeboard.

8. Manure ponds must meet Title 27 requirements (a minimum of 10% clay and not more that 10% gravel, or have a liner constructed of artificial materials of equivalent or greater impermeability). New manure ponds constructed after the adoption date of the GWDR Order must comply with Natural Resources Conservation Service (NRCS) Waste Storage Facility Code 313 including a maximum specific discharge (unit seepage rate) of 1×10^{-6} cm/sec.

9. The WMP must include an operation and maintenance plan for the retention pond(s) to ensure that:
   a. Corrals and/or pens are designed and maintained to direct all process water and stormwater to the retention pond(s);
   b. The production facilities (e.g., barn, shed, milk parlor, etc.) are designed and maintained to direct all process water and stormwater that has contacted manure, feedstocks, or soil amendments to the retention pond(s);
   c. There is no discharge of manure or storm water to surface waters from the production area or the land application area(s) except as allowed by this GWDR;

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d. All ponds must be managed to prevent nuisances (odors, breeding of mosquitoes, etc), damage from burrowing animals, damage from equipment during removal of solids, embankment settlement, erosion, seepage, excess weeds, algae, and other vegetation;
e. Manure ponds must provide necessary storage volume prior to winter storms, maintain capacity considering buildup of solids, and comply with the minimum 2 feet of freeboard;
f. The removal of solids from any lined pond must prevent damage to the pond liner;
g. Pond clean-out shall be conducted by November 1 of each year to ensure design storage capacity.

10. Contingency Plan: If the necessary storage volume calculated above is based on normal precipitation and/or runoff rather than precipitation or runoff from normal precipitation times a factor of one and a half (1.5), then the WMP shall include a Contingency Plan that describes how the excess precipitation and runoff that is generated during higher-than-normal precipitation will be managed.

11. The WMP shall contain an engineering report showing that production area has adequate flood protection in accordance with Statewide Water Quality Regulations for Confined Animal Facilities (Attachment C). Alternatively, the WMP may include a copy of the appropriate published flood zone map showing that the production area is outside the relevant flood zone. The Regional Water Board may require an engineering report describing the size, elevation, and location of all features used to protect the production area from inundation or washout from flooding, including a map and appropriate cross-sections.

12. Manure ponds must be in conformance with NRCS Waste Storage Facility (No.) Code 313 which states that: "*Waste storage facilities must be planned, designed, and constructed to meet all federal, state, and local laws and regulations. To minimize the potential for contamination of streams, waste storage facilities should be located outside of floodplains, however, if site restriction require location within a floodplain, they shall be protected from inundation or damage from a 25-year flood event, or larger if required by laws, rules and regulations*."

13. Animal confinement areas and storage areas for manure, feeds, soil amendments, and other potential sources of contaminants shall be designed, constructed, and maintained to protect water quality. The following features shall be included:

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a. Corrals and other animal housing is designed, constructed, and operated to minimize infiltration into the underlying soils and to collect and divert all process water to the manure pond(s);
b. The milking parlor is designed and constructed to minimize the infiltration of water into underlying soils and to divert all water that has contacted manure or process water to the retention pond(s);
c. Storage areas for manure, soil amendments, feed and other materials are designed and constructed to minimize infiltration of leachate and to divert runoff away from these areas unless all runoff from these areas is discharged to the retention pond(s);
d. Stormwater: All stormwater from outside manured areas, including that from roofed areas, must be diverted away from manured areas unless such drainage is fully contained and is included in the calculation of storage volume requirements;
e. Covers are used where practical during precipitation to reduce leaching and runoff.

14. The application of manure or process water to lands not owned, leased, or controlled by the Discharger without written permission from the landowner or in a manner not approved by the Regional Water Board, is prohibited by the Order. A manifest is required to be kept onsite to record transfer of waste to outside facilities and must be kept as part of the WMP.

15. The disposal of dead animals in any liquid manure or process water system is prohibited. The Discharger must comply with the most current dead animal disposal information and dispose of dead animals in compliance with all federal, state, and local laws and policies. Adverse impacts to surface water or groundwater quality from dead animal disposal is prohibited.

16. Chemicals, including but not limited to pesticides, herbicides, fungicides, cleaning products, equipment/machinery fluids, fertilizers and other contaminants at the facilities must be used according to manufacturer's directions and in accordance with local, county, state, and federal regulations. Chemicals must not be disposed of in any manure or process water, or storm water storage or treatment system unless the unit is specifically designed to treat such chemicals and other contaminants. The use of disinfectants or other chemicals per label directions is allowed.

17. In accordance with Statewide Water Quality Regulations for Confined Animal Facilities Section 22561 (Attachment C), the Discharger shall prevent animals in confinement from entering any surface water that flows from the dairy. Livestock crossings of watercourses must be designed to protect water quality and must be described in the WMP.

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18. Erosion control measures implemented at the dairy to protect surface water must be detailed in the WMP. Such measures may include, but are not limited to, installation of bridges, culverts, or armored crossings, fencing, barriers, or other deterrents, and vegetative cover to protect surface waters and water quality. Feeding and locating water troughs, shade, and salt/nutrient blocks away from the watercourses may also be appropriate and are encouraged wherever possible.

19. The WMP must describe implementation of salt minimization strategies. To help prevent contamination of surface water and groundwater, salt in animal rations should be limited to the amount required to maintain animal health and optimum production.

20. The WMP must contain an emergency spill prevention plan (SPP) detailing measures to be taken in the case of a discharge or threatened discharge of chemicals, sediment, nutrients, or pathogens to surface water or groundwater. Personnel training, first response actions, and emergency contacts, must be described in the SSP. The SPP must be kept onsite, and made accessible to dairy staff. A copy of the SPP must be included in the WMP for review by RWB staff during inspections.

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