

California Regional Water Quality Control Board

Conditional Waiver of Waste Discharge Requirements
Order No. R1-2015-0051

for Mello 3/Llano Oaks Dairy

In the North Coast Region

The California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board) finds that:

1. Order No. R1-2015-0051 (hereafter, "Order") serves as a Conditional Waiver of Waste Discharge Requirements (Waiver) for Mello 3/Llano Oaks Dairy, a new cow dairy at a currently abandoned dairy site at 3915 Llano Road, Santa Rosa, California, Assessor Parcel Number: 063-180-045. This Order does not cover the dairy if it expands the size of the physical facility beyond the dairy's maximum capacity declared in the associated California Environmental Quality Act (CEQA) document (Finding 31 below) at the time of adoption of this Order. Expanding dairies must apply for a new individual waste discharge permit, a new individual waiver of waste discharge requirements, or a new NPDES permit from the Regional Water Board.
2. Mello 3/Llano Oaks Dairy will house a maximum of 370 cows (milking plus dry). Also, a maximum of 287 other dairy cattle (such as bulls, heifers, calves) will be kept onsite to replace existing milking cows. These maximums are due to seasonal fluctuations. The total dairy cattle (milking cows, dry cows, calves, heifers, and bulls) will not exceed 400 dairy cattle (total milking, dry, calves, heifers, and bulls) at any time. The owners and/or operators of this dairy are hereinafter identified jointly and severably as "Discharger."
3. Dairy operations can cause adverse impacts to water quality of surface water and groundwater as a result of waste discharges and activities that result in soil erosion and degradation of riparian habitat.
4. This Order covers the management of process wastewater, manure, and other organic materials at dairy operations including the application of such materials to cropland. Other wastes such as medicines, pesticides, chemicals, and fertilizers must be disposed at appropriately permitted facilities.

LEGAL AND REGULATORY FRAMEWORK

5. California Water Code (CWC) Section 13260 (a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the state, other than into a community sewer system, must file with the appropriate regional water board a report of waste discharge (ROWD) containing such information and data as may be required.
6. Pursuant to CWC Section 13260, regional water boards prescribe waste discharge requirements (WDRs) except when it finds, pursuant to CWC Section 13269, that a waiver of WDRs for a specific type of discharge is in the public interest.

7. Pursuant to CWC Section 13269, waivers of WDRs shall not exceed five (5) years in duration. Coverage under this Order
 - a. is conditional;
 - b. may be terminated at any time;
 - c. does not permit an illegal activity;
 - d. does not preclude the need for permits which may be required by other local or governmental agencies; and
 - e. does not preclude the Regional Water Board from administering enforcement remedies (including civil penalties) pursuant to the CWC and other applicable law.Most other cow dairies in the North Coast Region are currently enrolled under the Conditional Waiver of Waste Discharge Requirements for Existing Dairies Order R1-2012-0003 (2012 Waiver). The 2012 Waiver will expire in 2017. The Mello 3/Llano Oaks Dairy may be required to enroll in a revised Waiver or another permit along with these other dairies at that time.
8. Any person may be liable for penalties if that person violates a condition of a waiver or WDR, discharges waste, or causes waste to be deposited where it is discharged, into the waters of the state and creates a condition of pollution or nuisance.
9. This Order shall not create a vested right, and all discharges covered by it shall be considered a privilege, not a right, as provided under CWC Section 13263.
10. This Order does not address the cleanup of existing degraded surface and groundwater from past dairy operations. Any required cleanup actions are handled under separate authority under the CWC.
11. This Order applies to the Mello 3/Llano Oaks Dairy, that the Regional Water Board has determined poses a low threat to surface water or to groundwater quality as described in the CEQA document. Dairies that are Concentrated Animal Feeding Operations (CAFOs) and regularly discharge to waters of the United States are required to obtain coverage under an individual National Pollutant Discharge Elimination System (NPDES) permit. Dairies that potentially pose a significant threat to water quality must be regulated by Individual Waste Discharge Requirements.
12. This Order does not cover discharges associated with activities that are not described in this Order. For example, it does not cover discharges of hazardous material, human waste, or mining waste. Discharges of waste not specifically covered under this Order are prohibited, except in compliance with the CWC.
13. Point source discharges to waters of the United States, as defined by federal law, are not authorized under this Order. Point source is defined as any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, CAFO, or vessel or other floating craft, from which pollutants are or may be discharged (federal Clean Water Act (CWA) § 502(14), 33 U.S.C. §1362(14)). CAFOs, as defined in 40 Code of Federal Regulations (CFR) part 122.23(b) or designated in accordance with 40 CFR 122.23(c), are point sources. Nonpoint discharges include agricultural stormwater discharges and return flows from irrigated agriculture. The State Water Resources Control Board's (SWRCB's) 2004 Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy) states that nonpoint source discharges of waste be regulated by WDRs, waiver of WDRs, or prohibitions to ensure compliance with Regional Water Board Water Quality Control Plans.

14. Pursuant to the Water Quality Control Plan for the North Coast Region (Basin Plan) and SWRCB plans and policies, including SWRCB Resolution No. 88-63, and consistent with the CWA, the existing and potential beneficial uses of the Laguna de Santa Rosa Hydrologic Sub-Area of the Russian River Hydrologic Unit are as follows:
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| a. Municipal and Domestic Supply (MUN) | o. Preservation of Areas of Special Rare, Threatened, or Endangered Species (RARE) |
| b. Agricultural Supply (AGR) | p. Migration of Aquatic Organisms (MIGR) |
| c. Industrial Service Supply (IND) | q. Spawning, Reproduction, and/or Early Development (SPWN) |
| d. Industrial Process Supply (PRO) | r. Shellfish Harvesting (SHELL) |
| e. Groundwater Recharge (GWR) | s. Aquaculture (AQUA) |
| f. Freshwater Replenishment (FRSH) | t. Native American Culture (CUL) |
| g. Navigation (NAV) | u. Flood Peak Attenuation/Flood Water Storage (FLD) |
| h. Hydropower Generation (POW) | v. Wetland Habitat (WET) |
| i. Water Contact Recreation (REC-1) | w. Water Quality Enhancement (WQE) |
| j. Non-Contact Water Recreation (REC-2) | |
| k. Commercial and Sport Fishing (COMM) | |
| l. Cold Freshwater Habitat (COLD) | |
| m. Warm Freshwater Habitat (WARM) | |
| n. Wildlife Habitat (WILD) | |
15. The Basin Plan contains water quality objectives, prohibitions, and policies developed to protect the above-listed beneficial uses of water. Economics were considered as required by law during the development of these objectives, prohibitions and policies. Prohibitions, provisions, policies, and other specifications contained in this Order implement the Basin Plan and the CWC. Compliance with applicable water quality objectives, prohibitions, and policies will protect the listed beneficial uses above.
16. Populations of several species of anadromous salmonids listed as threatened or endangered under both the federal Endangered Species Act or the California Endangered Species Act have declined significantly during the past half century in the majority of water bodies in the North Coast Region. Degradation of freshwater habitat by land use activities is an important contributing factor to the decline in populations.
17. SWRCB Resolution 68-16, entitled "Statement of Policy with Respect to Maintaining High Quality of Waters in California," requires that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. Resolution 68-16 only allows change in the existing high quality if it has been demonstrated to the Regional Water Board that the change is consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in policies. Resolution 68-16 further requires that discharges meet WDRs which will result in the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and that the highest water quality consistent with maximum benefit to the people of the state will be maintained. This Order is consistent with Resolution No. 68-16 and the federal antidegradation policy.

This Waiver prohibits discharges of waste to surface waters except in specified circumstances that are consistent with federal regulations, requires the Discharger to manage waste and waste disposal in a manner that will prevent degradation of

groundwater, and requires the Discharger to manage waste to prohibit nuisance conditions. The Regional Water Board finds that under normal operating conditions:

- a. The discharge conditions and effluent limitations established in this Waiver will ensure that existing beneficial uses and quality of waters of the State in the Region will be maintained and protected; and
 - b. Discharges regulated by this Waiver will not degrade existing water quality if the terms and conditions of this Waiver are met.
18. Resolution No. 68-16 incorporates the federal antidegradation policy (reference 40 CFR §131.12). Both Resolution 68-16 and the federal antidegradation policy require that where surface waters are of higher quality than necessary to protect the designated beneficial uses, the high quality of those waters be maintained unless certain findings be made before any adverse change to water quality is allowed.
 19. Resolution 68-16 and the federal antidegradation policy acknowledge that an activity that results in an incrementally small decrease of water quality can result in degradation through cumulative effects; especially when a waste that is a cumulative, persistent, or bioaccumulative pollutant is discharged.
 20. This Waiver requires that discharges of waste from the dairy shall not cause surface water or groundwater to be further degraded, to exceed water quality objectives, to unreasonably affect beneficial uses, or to cause a condition of pollution or nuisance. This Waiver also requires monitoring of surface water and groundwater to demonstrate compliance with water quality objectives.
 21. California regulations governing discharges from confined animal facilities are contained in Title 27 of the California Code of Regulations (CCR), Division 2, Subdivision 1, Chapter 7, Subchapter 2, Article 1 (Attachment A of this Order). Sections 22560-22565 of those regulations require containment of manure, wash water, and stormwater runoff from animal confinement areas. The Mello 3/Llano Oaks Dairy will have a maximum of 370 mature dairy cattle, qualifying as an Animal Feeding Operation under U.S. Environmental Protection Agency regulations. This dairy size is smaller than a Large Concentrated Animal Feeding Operation (Large CAFOs are dairies with 700 or more mature dairy cattle). No discharge of waste to surface waters is expected or allowed under this Waiver. This Order is consistent with Title 27 regulations for confined animal facilities.
 22. Numerous North Coast water bodies are listed as impaired for various pollutants including sediment, temperature, nutrients, and indicator bacteria pursuant to CWA Section 303(d). The United States Environmental Protection Agency (EPA) has approved Total Maximum Daily Loads (TMDLs) to address many of these impairments in water bodies throughout North Coast Region. Compliance with this Order is a key component for addressing impairments and meeting Basin Plan water quality standards. Additionally, the Regional Water Board has a Sediment Policy and a Temperature Policy as part of the Basin Plan.
 23. This dairy is located in the Laguna de Santa Rosa Hydrologic Sub-Area of the Russian River Hydrologic Unit. Impairments identified within this Sub-Area on the 2012 303(d) List include mercury, indicator bacteria, dissolved oxygen, phosphorus, sediment/siltation, and temperature.

24. This Order requires the Discharger to prepare and implement a Water Quality Plan (WQP), as described in Attachment C, within 60 days of adoption of this Order. The WQP is intended to help ensure that the dairy is designed, constructed, operated and maintained so that nutrients and wastes generated are managed to prevent conditions of nuisance or adverse impacts to groundwater and surface water.
25. This Order requires the Discharger to prepare and implement a Nutrient Management Plan (NMP), as described in Attachment D, within 180 days of adoption of this Order. The NMP is intended to help ensure that the dairy is designed, constructed, operated and maintained so that nutrients and wastes generated are managed to prevent conditions of nuisance or adverse impacts to groundwater and surface water. The NMP must be specific to the maximum number of dairy cattle and nutrients kept onsite. The NMP must be available to Regional Water Board staff during inspections and must be submitted to the Regional Water Board staff upon request.
26. Pursuant to CWC Section 13267, a MRP is attached to this Order. Monitoring must be consistent with the dairy's WQP and NMP. The Discharger shall submit all reports as specified in the MRP. Noncompliance reporting, cleanup, and violations are discussed in the MRP. The MRP requires routine individual facility sampling (or group sampling) of stormwater runoff and/or surface waters on or near the dairy. The MRP also requires sampling of domestic and/or agricultural wells for a representation of groundwater quality conditions. One option for fulfilling these monitoring requirements is to join a representative water monitoring group like the one already formed for surface water monitoring for existing dairies under a 2012 Regional Water Board dairy program permit. If the Discharger can demonstrate that group monitoring will result in meaningful, valid monitoring data, Regional Water Board staff may allow the Discharger to use data gathered from the representative group monitoring program to substitute for some or all of the required monitoring. Approval of the group monitoring plan by Regional Water Board staff is required.
27. Reporting of efforts implemented to achieve sustained water quality protection is required in an Annual Report (MRP Appendix 1) that is due to the Regional Water Board by November 30 each year. The Annual Report shall assess if Best Management Practices (BMPs) for waste containment and nutrient application to land at agronomic rates are effective in preventing discharges to surface water and groundwater for the past year (November 1 of the last year through October 31 of the current year). The Annual Report shall include the results of sampling and assessments required in the MRP and the photo documentation described in the MRP. Sampling results are not required to be submitted by the discharger if the dairy is in group monitoring. However, if the Discharger is in a group monitoring plan then the discharger must indicate the associated group on page 5 of the Annual Report. Regional Water Board staff will review the Annual Report and provide comments if necessary for the dairy facility to meet the Waiver requirements.

CEQA AND ADDITIONAL FINDINGS

28. The Regional Water Board is the lead agency for purposes of complying with the California Environmental Quality Act (CEQA) Public Resources Code sections 21100-21177. On September 28, 2015, the Regional Board provided a Notice of Intent to adopt a Mitigated Negative Declaration (SCH No. 215092073) for the project (California Code of Regulations Title 14, § 15072.) The Initial Study and Mitigated

Negative Declaration reflect the Regional Water Board's independent judgment and analysis. The documents or other material, which constitute the record, are located at 5550 Skylane Blvd, Suite A, Santa Rosa, CA 95403. Based on the Initial Study and Mitigated Negative Declaration, the Conditional Waiver of Waste Discharge Requirements for the dairy operation and related activities in accordance with this Order will be consistent with the Basin Plan and will be in the public interest. The Regional Water Board has reviewed and considered the environmental document and any proposed changes incorporated into the project or required as a condition of approval to avoid significant effects to the environment. The Regional Water Board conducted a public hearing on November 19, 2015, in Santa Rosa, California, considered all evidence concerning this matter, and adopted the mitigated negative declaration. The Regional Board will file a Notice of Determination within five days from the issuance of this Order. Mitigation measures necessary to reduce or eliminate significant water quality impacts are included as conditions of approval in the Order section below.

29. California Department of Food and Agricultural Code section 33487 exempts state agencies from any requirement to prepare a CEQA environmental impact report for dairy farms under the following circumstances:
 - a. when the dairy will be constructed and operated in accordance with the minimum standards in Chapter 5 of the Food and Agricultural Code;
 - b. where the applicable local agencies have completed all necessary reviews and approvals including that required by CEQA; and
 - c. where a permit for construction was issued by a local agency on or after the effective date of Food and Agricultural Code section 33487 and construction has begun.
30. The Regional Water Board conducted a public hearing on November 19, 2015, in Santa Rosa, California, and considered all evidence concerning this matter and adopted the CEQA Mitigated Negative Declaration.
31. The Regional Water Board has reviewed the contents of this Order, related CEQA Initial Study and Mitigated Negative Declaration, written public comments, and testimony provided after the notice and hearing, and hereby finds that the adoption of this Order is consistent with the Basin Plan, and is in the public interest.

THEREFORE, the Regional Water Board hereby approves and adopts the "Mitigated Negative Declaration" prepared on this Order, and directs the Executive Officer to file all appropriate notices; and

IT IS HEREBY ORDERED that this Order is issued for the Mello 3/Llano Oaks Dairy in the North Coast Region, and prohibits the expansion of the physical facilities from that described in the Initial Study and Mitigated Negative Declaration associated with this Order. Physical facilities include the roofed structures, such as stall barns, that limit the size of the mature dairy cow (see Definitions Attachment B) herd. The following conditions apply to Mello 3/Llano Oaks Dairy as covered by this Order:

1. This Order contains a schedule of compliance to complete and submit:
 - a. a Water Quality Plan;
 - b. a Nutrient Management Plan;
 - c. a Monitoring and Reporting Plan; and
 - d. Annual Reports.

Best Management Practices (BMPs) must be in place as needed to avoid pollutant discharges to surface waters and groundwater.

The Discharger shall prepare and implement a Water Quality Plan (WQP), as described in Attachment C, within 60 days of adoption of this Order. The WQP is intended to help ensure that the dairy is designed, constructed, operated and maintained so that nutrients and wastes generated are managed to prevent conditions of nuisance or adverse impacts to groundwater and surface water.

2. The property has a 2015 Comprehensive Nutrient Management Plan (CNMP) prepared by Conestoga-Rovers Technical Service Providers, however, the CNMP has not yet been updated for the proposed dairy operations. The Discharger shall prepare and implement a Nutrient Management Plan (NMP), as described in Attachment D, within 180 days of adoption of this Order. The NMP is intended to help ensure that the dairy is designed, constructed, operated, and maintained so that nutrients and wastes generated are managed to prevent conditions of nuisance or adverse impacts to groundwater and surface water.

New waste storage facilities constructed after adoption of this Order must meet all applicable federal, state, and local laws and regulations. Waste storage facilities should be located outside of floodplains; however, if site restrictions require location within a floodplain, they shall be protected from inundation or damage from a 100-year flood event, or larger if required by laws, rules and regulations.

3. Manure ponds constructed after adoption of this Order must comply with Natural Resources Conservation Service (NRCS) National Conservation Practice Standard, Waste Storage Facility Code 313 including a maximum specific discharge (unit seepage rate) of 1×10^{-6} cm/sec.
4. Manure pond liners must meet or exceed the Statewide Water Quality Regulations for Confined Animal Facilities (Cal. Code Regs., tit. 27, §§ 22560-22565; Attachment A) requirements for a minimum of 10 percent clay and not more than 10 percent gravel, or the liner must be constructed of artificial materials of equivalent or greater impermeability.
5. Coverage under this Order:
 - a. is conditional;
 - b. may be terminated at any time;
 - c. does not permit any illegal activity;
 - d. does not preclude the need for permits which may be required by other federal, state or local governmental agencies; and
 - e. does not preclude the Regional Water Board from administering enforcement remedies (including civil liability) pursuant to the CWC.

6. All discharges from this dairy must comply with the lawful requirements of all municipalities, counties, drainage districts, and other local agencies regarding discharges of stormwater to storm drain systems or to other watercourses under their jurisdiction that are no less stringent than the requirements of this Order.
7. The Discharger shall comply with all federal, State, county, and local laws and regulations pertaining to the discharge of wastes from the dairy that are no less stringent than the requirements of this Order.
8. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities under federal, state, county, or local laws, nor guarantee the Discharger a capacity right in receiving waters.
9. In addition to the requirements of this Order, the Discharger shall take all other reasonable steps to minimize or prevent any discharge that has a reasonable likelihood to adversely affect human health or the environment.
10. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Wildlife Code Sections 2050 to 2097) or the Federal Endangered Species Act (16 United States Code (U.S.C.) Sections 1531 to 1544). Dischargers shall be responsible for meeting all requirements of the applicable Endangered Species Act. A discharge which is deleterious to fish, plant life, mammals, or bird life or otherwise in violation of California Fish and Game Code Section 5650 is not a discharge which is authorized nor in compliance with the terms and conditions of this Order. The Discharger shall obtain permits as necessary, and comply with permit conditions and all other applicable federal, state, county, and local, laws and regulations.
11. This Order may be re-opened for modifications, revoked and reissued, or terminated.
12. The discharge of waste from the dairy shall not cause the underlying groundwater to exceed water quality objectives or background quality standards; nor cause a condition of pollution or nuisance.
13. Activities conducted under this Order must be in compliance with water quality requirements, the Basin Plan, and amendments thereto.
14. Violations of this Order are subject to enforcement to the extent allowed by law.

MONITORING AND REPORTING PROGRAM (MRP)

15. Pursuant to CWC Section 13267, a MRP is included with this Order. The MRP requires the Discharger to conduct monitoring and to submit Annual Reports (MRP-Appendix 1) by November 30 of each year beginning in 2016.
16. The MRP requires that the Discharger must:
 - a. Report any spill, discharge, or other type of noncompliance that violates the condition of this Order and/or endangers human health or the environment within 24 hours of becoming aware of its occurrence;

- b. Take immediate action to prevent any unauthorized release of waste; and
 - c. Notify the Regional Board when corrective actions are completed and document the corrections.
17. Other reporting, cleanup, and violations are discussed in the MRP. If noncompliance is being reported, the reasons for such noncompliance shall be submitted in writing to the Regional Water Board with an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in terminating the applicability of this Order to a specific facility or Discharger.
18. If the Regional Water Board Executive Officer notifies the Discharger that his/her WQP, NMP, Annual Report, sampling results, or other associated documents are not consistent with this Order, then the Discharger shall submit the revisions or proof of the corrections to the Regional Water Board within 30 days of notification, unless otherwise instructed in writing by the Regional Water Board.

PROHIBITIONS

19. The collection, treatment, storage, discharge, or disposal of wastes at the dairy that results in the following is prohibited:
- a. Discharge of waste constituents in a manner which could cause degradation of surface water or groundwater;
 - b. Contamination or pollution of surface water or groundwater;
 - c. a condition of nuisance (as defined by the California Water Code Section 13050);
or
 - d. Exceedance of groundwater and surface water quality objectives due to the discharge of manure, production area wash water, or dairy feeding and housing area wash water.
20. The discharge of wastes not disclosed by the Discharger, or not within the reasonable contemplation of the Regional Water Board, is prohibited.
21. Discharges of manure, process wastewater, or other wastes to surface waters or groundwater, or discharges that do not comply with the requirements in this Order are prohibited.
22. The discharge of stormwater that has come in contact with manure, process wastewater, or other wastes from the production or animal housing areas is prohibited.
23. The discharge of waste to surface water via tile drain lines or irrigation return flow (tailwater) is prohibited.
24. The direct discharge of wastes into groundwater via backflow through water supply or irrigation supply wells is prohibited.

25. Irrigation supply water that comes into contact with manure or process wastewater shall be considered process wastewater, and its discharge to surface water is prohibited.
26. A discharge of stormwater to surface water from the land application area where manure or process wastewater has been applied is prohibited unless specific protective management practices have been implemented. These management practices must be consistent with a WQP and NMP.
27. The disposal of dead animals in any liquid manure or process wastewater system is prohibited. The Discharger must dispose of dead animals in compliance with all applicable federal, state, county, and local laws and regulations. Adverse impacts to surface water or groundwater quality as a result of dead animal disposal is prohibited.
28. In accordance with the Statewide Water Quality Regulations for Confined Animal Facilities (Cal. Code Regs., tit. 27, §§ 22560-22565; Attachment A), the Discharger shall prevent animals at their facility from entering any surface water within the confinement areas.
29. The application of waste to lands not owned, leased, or controlled by the Discharger without written permission from the landowner and in a manner not approved by the Regional Water Board, is prohibited.
30. Discharges of manure, litter, or process wastewater from the land application area that do not comply with the requirements in the Statewide Water Quality Regulations for Confined Animal Facilities (Cal. Code Regs., tit. 27, §§ 22560-22565; Attachment A), MRP, WQP, and NMP (where applicable) are prohibited. The application of manure or process wastewater to a land application area in a manner that results in the discharge of wastes is prohibited.
31. Please visit the Water Quality Fees page of the State Water Resources Control Board website for the latest information on enrollment fees and annual fees:
http://www.waterboards.ca.gov/resources/fees/water_quality/
32. The Regional Water Board shall determine compliance with the terms of this Order based on the following:
Periodic inspections by Regional Board staff and/or contractors;
 - a. Evaluation of the completed Annual Report and required information submitted according to the MRP;
 - b. Review of progress on the dairy WQP and any NMP; and
 - c. Any other information deemed necessary by the Regional Water Board.
33. The Regional Water Board staff may require, as appropriate, additional management practices and/or monitoring on a site specific or watershed basis. Future management practices and/or monitoring requirements may also be imposed by Regional Water Board staff.
34. The Regional Water Board staff may specifically designate, as appropriate, management practices that staff considers to be above-and-beyond the minimum requirements of this Order. Such practices shall be eligible for generating credits as

allowed under an approved nutrient offset program, water quality credit trading program, or other similar TMDL implementation program.

35. The Discharger shall maintain a copy of this Order, the MRP, the WQP, and the NMP, and make them available at all times to site-operating personnel. The Discharger shall ensure that all site-operating personnel are familiar with the content of these documents and help to carry out the water quality protection measures.
36. The Regional Water Board and other authorized representatives shall be allowed:
 - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. To review or to copy any records that are kept under the conditions of this Order;
 - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. To photograph, sample, and monitor for the purpose of assuring compliance with this Order.

RECORD-KEEPING REQUIREMENTS

37. The Discharger shall create, maintain for five years, and make available to the Regional Water Board during inspections and upon request by the Regional Water Board staff, any reports or records required by this Order including those required under the MRP, WQP, and NMP.
38. A manifest is required to record transfer of waste to outside facilities.

TRANSFERS

39. The Discharger must notify the Executive Officer in writing at least 30 days in advance of any proposed transfer of responsibility and coverage under this Order to a new Discharger (dairy owner). The notice must include a new NOI for the proposed Discharger, a Notice of Termination (N.O.T.) for the existing Discharger, and a specific date for the transfer of responsibility for complying with this Order. This notification shall include an acknowledgment that the existing Discharger is liable for compliance with this Order and for all violations up to the transfer date, and that the new Discharger is liable for compliance with this Order after the transfer date.

PERMIT REOPENING, REVISION, REVOCATION, AND RE-ISSUANCE

40. The Regional Water Board will review this Order periodically and may revise requirements when necessary for reasons including, but not limited to:
 - a. Adoption of more stringent applicable water quality standards in the Basin Plan;
 - b. Changes in state plans, policies, or regulations that would affect the requirements for the discharges.
41. If more stringent requirements are necessary to implement or be consistent with any TMDL adopted by the Water Board to achieve applicable water quality standards pursuant to CWA section 303, or amendments thereto, the Regional Water Board will revise and modify this Waiver.

42. Waivers of Waste Discharge Requirements do not exceed five (5) years. Waiver coverage may be extended by the Regional Water Board or the project may be covered under another permit prior to, or at the end of, the five year term.
43. The Regional Water Board may revoke coverage under this Order at any time and require the Discharger to submit a Report of Waste Discharge or equivalent document and to obtain an individual WDR, an individual NPDES permit, or other permit.
44. The provisions of this Order are severable; and, if any provision of this Order, or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

TERMINATION

45. In the event of closure or change in land use of the dairy, the Discharger shall file a N.O.T. with the Regional Water Board to terminate coverage under the Order. Upon cessation of dairy facility operation, all manure and animal waste-impacted soil is to be treated and stored appropriately so as not to pose a threat to surface water or groundwater quality or create a condition of nuisance.
46. The Regional Water Board staff shall review the N.O.T. and determine its appropriateness. The review may include a Regional Water Board staff inspection to verify project completion and water quality protection. The Executive Officer shall notify the Discharger regarding approval or disapproval of the N.O.T.
47. The Discharger shall, within 30 days of receiving notice from the Regional Water Board that its facility no longer qualifies for coverage under this Order for failure to comply with its terms and conditions, file an updated ROWD or equivalent document for coverage under another permit type. Discharges that could affect the quality of the waters of the state may commence only in accordance with CWC Section 13264(a).
48. If the Discharger fails to comply with the terms and conditions of this Order, the discharger shall be subject to appropriate enforcement action or may be required to enroll under another dairy permit type. Discharges that could affect the quality of the waters of the state may commence only in accordance with CWC Section 13264(a). The Regional Water Board Executive Officer reserves the right to terminate the discharger's coverage under this Order. The Regional Water Board staff can require coverage under another permit such as an Individual NPDES or Individual Waste Discharge Requirements, after proper notice and hearing (CWC Section 13263).
49. Regional Water Board shall terminate the applicability of this Order to any dairy activities at any time when such termination is in the public interest and/or the activities could affect the quality of beneficial uses of the waters of the state.

Certification:

I, Matthias St. John, Executive Officer do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on November 19, 2015.

Matthias St. John
Executive Officer

ATTACHMENTS

- Attachment A – Statewide Water Quality Regulations for Confined Animal Facilities (Title 27)
- Attachment B – Definitions
- Attachment C – Water Quality Plan (WQP)
- Attachment D – Nutrient Management Plan (NMP) Monitoring and Reporting Program (MRP)
- Appendix 1 – Annual Report

Attachment A

Conditional Waiver of Waste Discharge Requirements Order No. R1-2015-0051

Regulations: Title 27, Environmental Protection--Division 2, Solid Waste

Chapter 7. Special Treatment, Storage, and Disposal Units

Subchapter 2. Confined Animals

Article 1. SWRCB - Confined Animal Facilities

[Note: Regulations in this article were promulgated by the State Water Resources Control Board (SWRCB), are administered by the appropriate Regional Water Quality Control Board (RWQCB) through the issuance of waste discharge requirements (WDRs), and are applicable to the owner or operator of a waste management unit (Unit) for the treatment, storage, or disposal of animal waste at confined animal facilities.]

22560. SWRCB - Applicability. (Ch-15: Section 2560)

(a) **General** — This article prescribes statewide minimum standards for discharges of animal waste at confined animal facilities. These standards shall either be implemented in any WDRs issued for a particular animal waste facility or shall be made a condition to the waiver of such requirements.

(b) **ROWD** — A discharger required to submit a report of waste discharge shall provide the following general information and shall report any material changes as defined in Section 2210 of Title 23 of this code:

- (1) average daily volume of facility wastewater and volume or weight of manure;
- (2) total animal population at the facility, and types of animals;
- (3) location and size of use or disposal fields and retention ponds, including animal capacity; and
- (4) animal capacity of the facility.

(c) **Regulations Are Minimum Standards** — The RWQCB shall impose additional requirements, if such additional requirements are necessary to prevent degradation of water quality or impairment of beneficial uses of waters of the state.

Note:

Authority cited:

Section 1058, Water Code.

Reference:

Sections 13140-13147, 13260 and 13263, Water Code; Section 43103, Public Resources Code.

22561. SWRCB - General Standard For Surface Water. (Ch-15: Section 2561)

The discharger shall prevent animals at a confined animal facility from entering any surface water within the confined area.

Note:

Authority cited:

Section 1058, Water Code.

Reference:

Sections 13140-13147, 13260 and 13263, Water Code; Section 43103, Public Resources Code.

22562. SWRCB - Wastewater Management. (Ch-15: Section 2562)

(a) **Design Storm (for Run-On/Run-Off Control)** — Confined animal facilities shall be designed and constructed to retain all facility wastewater generated, together with all precipitation on, and drainage through, manured areas during a 25-year, 24-hour storm.

(b) **Manured Area Run-On Exclusion** — All precipitation and surface drainage outside of manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events described in (a), shall be diverted away from manured areas, unless such drainage is fully retained. RWQCBs can waive application of such requirements only in specific instances where upstream land use changes have altered surface drainage patterns such that retention of flood flows is not feasible.

(c) **Design Storm (for Flood Protection).**

(1) Retention ponds and manured areas at confined animal facilities in operation on or after November 27, 1984, shall be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows.

(2) Existing facilities that were in operation on-or-before November 27, 1984, and that are protected against 100-year peak stream flows must continue to provide such protection. Facilities, or portions thereof, which begin operating after November 27, 1984, shall be protected against 100-year peak stream flows.

(3) The determination of peak stream flows shall be from data provided by a recognized federal, state, local, or other agency.

(d) **Retention Pond Design** — Retention ponds 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.

(e) **Discharge To Disposal/Use Fields** — The RWQCB shall allow the discharge of facility wastewater and of collected precipitation and drainage waters to use or disposal fields only if such discharge is in accordance with section 22563. Absent an NPDES permit for discharge to surface waters, the only other allowable discharge is to wastewater treatment facilities approved by the RWQCB.

Note:

Authority cited:

Section 1058, Water Code.

Reference:

Sections 13172, Water Code; Section 43103, Public Resources Code.

22563. SWRCB - Use or Disposal Field Management. (Ch-15: Section 2563)

(a) **Reasonable Soil Amendment Rate** — Application of manure and wastewater to disposal fields or crop lands shall be at rates which are reasonable for the crop, soil, climate, special local situations, management system, and type of manure.

(b) **Run-Off & Percolation** — Discharges of facility wastewater to disposal fields shall not result in surface runoff from disposal fields and shall be managed to minimize percolation to ground water.

Note:

Authority cited:

Section 1058, Water Code.

Reference:

Section 13172, Water Code; Section 43103, Public Resources Code.

22564. SWRCB - Management of Manured Areas. (Ch-15: Section 2564)

Manured areas shall be managed to minimize infiltration of water into underlying soils.

Note:

Authority cited:

Section 1058, Water Code.

Reference:

Section 13172, Water Code; Section 43103, Public Resources Code.

22565. SWRCB - Monitoring. (Ch-15: Section 2565)

The RWQCB can require confined animal facility operations to undertake a monitoring program as a condition to the issuance or waiver of WDRs.

Note:

Authority cited:

Section 1058, Water Code.

Reference:

Sections 13172 and 13267, Water Code.

Source: <http://www.calrecycle.ca.gov/laws/regulations/Title27/ch7s2345.htm#Article1>

Last update: October 01, 2012

ATTACHMENT B

Conditional Waiver of Waste Discharge Requirements Order No. R1-2015-0051 Definitions For Mello 3/Llano Oaks Dairy

25-year, 24-hour rainfall event: means precipitation events with a probable recurrence interval of once in twenty five years as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May 1961, or equivalent regional or State rainfall probability information developed from this source.

Agronomic rates: is the land application of irrigation water and nutrients (which may include animal manure, bedding, litter, or process wastewater) at rates of application in accordance with a nutrient management plan that will enhance soil productivity and provide the crop or forage with needed nutrients for optimum health and growth.

Aquifer: is ground water that occurs in a saturated geologic unit that contains sufficient permeability and thickness to yield significant quantities of water to wells or springs.

Artificial recharge area: an area where the addition of water to an aquifer is by human activity, such as putting surface water into dug or constructed spreading basins or injecting water through wells.

Bioaccumulative pollutants: are those substances taken up by an organism from its surrounding medium or from food, and is subsequently concentrated and retained in the body of the organism.

Carcinogenic: pollutants are substances that are known to cause cancer in living organisms.

Catastrophic rainfall event: means a rainfall event greater than the 25-year, 24-hour rainfall event, and includes events like tornadoes, hurricanes or other catastrophic conditions that would cause an overflow.

Confined area: is the area where cows are confined within the production area.

Cropland: is the land application area where dry or solid manure and/or process wastewater is recycled for the purpose of beneficially using the nutrient value of the manure and/or process wastewater for crop production.

Degradation: is any measurable adverse change in water quality.

Design volume: for a liquid storage structure includes allowances for the volume of manure, process wastewater, and other wastes accumulated during the storage period; volume of "normal precipitation" minus evaporation; volume of runoff from the facility's drainage area during normal rainfall events; volume of precipitation from the 25-year, 24-hour storm event on the storage structure area; volume of runoff from the facility's

drainage area for the 25-year, 24-hour storm event; volume of solids; necessary freeboard requirements; and any additional storage requirements, such as to meet management goals, or the minimum treatment volume for anaerobic lagoons.

Discharge: is the discharge or release of waste to land, surface water, or ground water. The Federal Pollution Control Act states that “discharge” includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping;

Discharger: is the property owner and/or the operator of an existing milk cow dairy subject to this Order.

Enclosed Bays: means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay and Bodega Harbor. Enclosed bays do not include inland surface waters or ocean waters.

Estuaries: means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Facility: is the property identified as such in the Order.

Fecal coliform: a type of coliform bacteria that live in the intestines of warm-blooded animals (humans, pets, farm animals, and wildlife) and are associated with human or animal wastes.

Field moisture capacity: is the upper limit of storable water in the soil once free drainage has occurred after irrigation or precipitation.

Freeboard: is the elevation difference between the process wastewater (liquid) level in a pond and the lowest point of the pond embankment before it can overflow.

Groundwater: is water stored underground in rock crevices and in the pores of geologic materials that make up the Earth’s crust; and water that flows downward and saturates soil or rock, supplying wells and springs. The upper surface of the saturated zone is called the water table.

Incorporation into soil: is the complete infiltration of process wastewater into the soil, the disking or rotary tiller mixing of manure into the soil, shank injection of slurries into soil, or other equally effective methods.

Inland Surface Waters: are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Irrigation return flow: has the same meaning as return flow from irrigated agriculture in Section 502 (14) of the federal Clean Water Act, and for purposes of this Order is defined as surface and subsurface water that leaves a field following application of irrigation water, where the irrigation water is not a wastewater and where such irrigation water has been applied in accordance with a site specific nutrient management plan. “Tailwater” may be considered an irrigation return flow if it meets the conditions in this paragraph.

Irrigation water: is water that is applied to fields to grow crops.

Land application: means the application of manure, litter, or process wastewater onto or incorporated into the soil.

Land application area: is land under control of the cow dairy owner or operator, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling.

Liquid manure handling system: means a system that collects and transports or moves waste material with the use of water, such as in washing of pens and flushing of confinement facilities. This would include the use of water impoundments for manure and/or wastewater treatment.

Manure: is the fecal and urinary excretion of livestock and other commingled materials. Manure may include litter, bedding, compost, raw materials, and waste feed.

Manured solids: is manure that has sufficient solids content such that it will stack with little or no seepage.

Mature dairy cow: For the purposes of this Order, ‘mature dairy cow’ is a dairy cow that has produced milk at any time during her life (milking + dry).

Maximum Daily Effluent Limitation (MDEL): means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Method Detection Limit (MDL): is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in: Title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML): is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone: is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Multi-year Phosphorus Application: means phosphorus applied to a field in excess of the crop needs for that year. In multi-year phosphorus applications, no additional manure, litter, or process wastewater is applied to the same land in subsequent years until the applied phosphorus has been removed from the field via harvest and crop removal.

Negligible Expansion: the annual average number of mature dairy cows in the herd may not expand more than 15% beyond the maximum number declared in the Notice of Intent (Attachment A).

Not Detected (ND): are those sample results less than the laboratory's MDL.

Normal Precipitation: is the long-term average precipitation based on monthly averages over the time that data has been collected at a particular weather station. Normal precipitation is usually taken from data averaged over a 30-year period (e.g. 1971 to 2000) if such data is available.

Nuisance: is defined in section 13050 of the Porter-Cologne Water Quality Control Act as "*...anything which meets all of the following requirements:*
(1) *Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.*
(2) *Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.*
(3) *Occur during, or as a result of, the treatment or disposal of wastes.*"

Nutrient: is any element taken in by a plant which is essential to its growth and which is used by the plant in elaboration of its food and tissue.

Nutrient Management Plan (NMP): is a description of site-specific nutrient management practices that ensure appropriate agricultural utilization of manure, litter, or process water, as specified in this Order. See MRP, Appendix 2, NMP.

Nutrient recycling: is the application of nutrients at agronomic rates for crop production.

Ocean Waters: are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Off-property discharge: is the discharge or release of waste beyond the boundaries of the property of the dairy's production area or the land application area or to water bodies that run through the production area or land application area.

Open tile line intake structure: is an air vent for a subsurface (tile) drain system.

Order: is the Conditional Waiver of Waste Discharge Requirements Order.

Overflow: means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.

Persistent pollutants: are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Physical facility: is defined as the roofed structure, such as the stall barn, that limits the size of the dairy herd (milking + dry cows). No expansion of the physical facility (roofed structure that houses the cows, such as the stall barn) is allowed under this permit. If roofed structures need replacing/repair during permit coverage, it must be similar in size and location. Limited alterations are allowed, such as converting corrals to freestalls, as long as these alterations do not increase the capacity of the physical facilities. Manure ponds are not part of the physical facility and are discussed separately in the Order.

Pollutant: is defined in Title 40 Code of Federal Regulations Section 122.2 as "*...dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.*"

Pollution: is defined in Section 13050(l)(1) of the Porter-Cologne Water Quality Control Act as "*...an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses.*" "Pollution" may include "contamination".

Pollutant Minimization Program (PMP): means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention: means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Pond: is defined as retention ponds, storage ponds, settling ponds, or any structures used for the treatment, storage, disposal, and recycling of process wastewater. Ponds are differentiated from sumps, which are structures in a conveyance system used for the installation and operation of a pump.

Process wastewater: is water directly or indirectly used in the operation of a cow dairy for any or all of the following: spillage or overflow from animal watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other dairy facilities; washing or spray cooling of animals; or dust control, and includes any water or precipitation and precipitation runoff which comes into contact with any raw materials, products, or byproducts including manure, feed, milk, or bedding.

Production area: is that part of a cow dairy that includes the animal confinement area, the manure storage area, wastewater, litter, waste containment area, the raw materials storage area such as feed, silage, and bedding materials. The animal containment area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. The raw materials storage area includes but is not limited to feed silos, silage

bunkers, and bedding materials. Also included in the definition of production area is any area used in the storage, handling, treatment, or disposal of mortalities.

Riparian areas: are defined as a vegetated ecosystem along a water body through which energy, materials, and water pass. Riparian areas characteristically have a high water table and are subject to periodic flooding and influence from the adjacent water body. These systems encompass wetlands, uplands, or some combination of these two landforms.

Salt: is defined as the sodium chloride and any added minerals (such as calcium, phosphorus, potassium, sulfur, iron, selenium, copper, zinc, or manganese) in the animal ration. Salts commonly break up into cations (sodium, calcium, etc.) and anions (chloride, sulfate, etc.) when dissolved in water. Total dissolved solids is generally measured as an indication of the amount of salts in a water or wastewater.

Setback: means a specified distance from waters of the State or United States or potential conduits to waters of the State or United States where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: Open drainage ditches, tile drainage lines, intake structures, sinkholes, and agricultural well heads.

Significant quantity: is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.

Significant storm event: is a precipitation event that results in continuous runoff of storm water for a minimum of one hour, or intermittent discharge of runoff for a minimum of three hours in a 12-hour period.

Sole-source aquifer: is an aquifer that supplies 50 percent or more of the drinking water of an area.

Source of Drinking Water: any water designated or potentially suitable as municipal or domestic supply (MUN) in the Water Quality Control Plan for the North Coast Basin (Basin Plan).

State: the State of California.

State Water Board: the State Water Resources Control Board.

Stormwater: stormwater runoff, snowmelt runoff, and storm water surface runoff and drainage.

Subsurface (tile) drainage: water generated by installing and operating drainage systems to lower the water table below irrigated lands. Subsurface drainage systems, deep open drainage ditches, or drainage wells can generate this drainage.

Surface water: includes essentially all water that is on the Earth's surface, such as in a stream, lake, river, reservoir, or ocean. Surface waters include waters of the United States and their tributaries such as interstate waters and their tributaries, intrastate waters, all impoundments of these waters, and all wetlands hydrologically connected to lakes, streams, or rivers. Manure ponds are not considered surface waters in the context of this Regional Water Board Order.

Tailwater: the runoff of irrigation water from an irrigated field.

Toxicity Reduction Evaluation (TRE): a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests).

Vegetated buffer: a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching waters of the United States.

Waste: is set forth in Water Code Section 13050(d), and includes manure, leachate, process wastewater and any water, precipitation or rainfall runoff that came into contact with raw materials, products, or byproducts such as manure, compost piles, feed, silage, milk, or bedding. The Basin Plan states that "waste" includes sewage and any and all other substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature, including such waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Wastewater: is the same as "process wastewater" as defined above.

Waters of the state: is defined in Section 13050 of the California Water Code as "*...any surface water or groundwater, including saline waters, within the boundaries of the state.*" Note this includes isolated wetlands.

Waters of the United States: is defined in 40 CFR § 122.2 as (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate “wetlands;” (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition; (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial sea; and (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Note: Waste treatment systems including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Wetland: For regulatory purposes under the Clean Water Act, the term wetlands means “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”

Wet season: is the period of time between October 1 and April 30 of each year.

Attachment C

Conditional Waiver of Waste Discharge Requirements

Order No. R1-2015-0051 Water Quality Plan for Mello 3/Llano Oaks Dairy

Purpose

Owners and operators (hereinafter identified as “Discharger”) seeking coverage under the Conditional Waiver of Waste Discharge Requirements for Mello 3/Llano Oaks Dairy in the North Coast Region, Order No. R1-2015-0051 (the Waiver), are required to prepare and implement a Water Quality Plan (WQP). The purpose of the WQP is to help the Discharger ensure that the dairy is designed, constructed, operated, and maintained so that contaminants generated by the dairy are managed to prevent adverse impacts to the quality of surface water and groundwater.

Due Date

The WQP must be prepared and submitted to the Regional Water Board within 60 days of Regional Water Board adoption of Conditional Waiver Order R1-2015-0051.

Format

The WQP is developed by the Discharger by printing and completing the following questionnaire. If the Discharger needs more room for any answers, additional sheets can be attached and responses numbered to correspond to the question.

Water Quality Plan

I. General Information :

A. Basic Dairy Information:

1. Dairy Name: _____
2. Physical Address: _____

3. Contact person: _____
4. Phone number: _____
5. E-mail address: _____
6. Current number of dairy cows (milking + dry): _____
7. Current other dairy cattle: _____
8. Maximum number of mature dairy cows (milking + dry) the dairy is designed for: _____
9. Maximum number of other dairy cattle the dairy is designed for: _____

10. Number of Acres Owned: _____ List APNs: _____

11. Number of Acres Leased: _____ List APNs: _____

12. Number of Acres that receive manure and/or process water: _____
13. Average annual amount of manure applied (indicate pounds, tons, cubic yards, or other units): _____
14. Average annual amount of process water applied (indicate gallons, 1,000 of gallons, or acre-inches): _____

15. Average amount of manure transferred offsite (show units): _____
16. Average amount of process water transferred offsite: (show units): _____

17. Describe offsite location(s) that receive manure and/or process water:

B. **Map:** Please attach legible map(s) identifying the following items where applicable. You may need to use a full-page satellite map (e.g. Bing, Google, or similar) and one or more additional maps at appropriate scales:

1. Perimeter of land owned;
2. Perimeter of land leased;
3. Buildings with use identified;
4. Manure ponds with perimeter outline of drainage area into pond;
5. Solid manure storage area;
6. Silage storage area;
7. Production area perimeter: (areas where livestock feeding and housing areas, feed storage areas, manure and process water storage areas, milk barn, chemical storage areas and manure storage areas are located);
8. Surface watercourses and conveyances (include streams, ditches, piping);
9. Extent of subsurface tile drainage system and associated discharge points;
10. Pumping facilities;
11. Flow meters;
12. Underground pipelines used for transporting process water;
13. Wells and type (domestic, agricultural, industrial, or monitoring well);
14. Drainage controls (berms, levees, and/or ponds) used for tailwater and stormwater;
15. Arrows showing direction of flows;
16. Stormwater discharge point(s);
17. Permanent pens / fences;
18. Crop fields (identified by name or number);
19. Pastures (identified by name or number);
20. Any septic tanks and leachfields on the property;
21. Map legend;

C. **Waste Discharge:** The discharge of process wastewater or stormwater containing manure to surface waters or groundwater is prohibited under the Waiver.

Has the dairy had a discharge of manure or process water to surface or groundwater?
Yes No If yes, describe and provide dates: _____

II. Water Quality Requirements

Based on Statewide Water Quality Regulations for Confined Animal Facilities (CAFs) California Code of Regulations (CCR) Title 27, Division 2, Subdivision 1:

A. 22561 General Standards for Surface Water. *The discharger shall prevent animals at a confined animal facility from entering any surface water within the confined area.*

Do cows have access to any surface water in the production area? Yes No

Describe all measures (i.e. BMPs) taken to prevent access of cows to surface waters in the production area: _____

Describe all measures taken to protect water quality at livestock crossings in the production area: _____

B. 22562(a) Design Storm (for Run-On/Run-Off Control)-Confined animal facilities shall be designed and constructed to retain all facility wastewater (i.e., process water) generated, together with all precipitation on, and drainage through, manured areas during a 25-year, 24-hour storm.

Is your facility designed and operated to meet this code? Yes No

Please complete the following table for manure ponds:

Pond name/number	Dimensions (feet) Length x width x depth	Volume, cubic feet (exclude 2 feet freeboard)
Total volume:		

Explain how you determine compliance with the requirement to retain process water during the 25-year 24-hour storm: _____

Are the manure ponds inspected to ensure design capacity and liner integrity by November 1 of each year? Yes No

Contingency Plan: If pond storage does not meet minimum standards, the dairy facility must have a Contingency Plan that describes how the excess precipitation and runoff that is generated during the higher than normal precipitation will be managed.

Please describe any Contingency Plan in place to manage precipitation and runoff generated during higher than normal precipitation (attach additional sheets, if necessary):

- C. 22562(b) Manured Area Run-On /Exclusion** - All precipitation and surface drainage outside of manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events described in [Section 22562] (a), shall be diverted away from manured areas, unless such drainage is fully retained. RWQCBs can waive application of such requirements only in specific instances where upstream land use changes have altered surface drainage patterns such that retention of flood flows is not feasible.

California State requirements mandate that all precipitation and surface drainage outside of the manure area(s), be diverted away from manured areas unless it is fully retained.

Please describe how your facility is designed and operated to divert run-on or run-off from manured areas or how it is managed to fully contain the drainage:_____

D. 22562(c) Design Storm (for Flood Protection)

Retention ponds and manured areas at confined animal facilities in operation on or before November 27, 1984, shall be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows.

Are your manure ponds protected from a 20-year peak stream flows, and if so, how?
Yes No _____

Existing facilities that were in operation on or before November 27 1984, and that are protected against 100-year peak stream flows, must continue to provide such protection. Facilities, or portions thereof, which begin operating after November 27, 1984, shall be protected against 100-year peak stream flows.

1. For dairies beginning operation after November 27, 1984, please explain how your dairy is designed and operated to protect from inundation or washout from 100-year peak stream flows:

2. If your dairy is required to have protection from 100-year peak stream flows, have the retention ponds and manured facilities at your dairy ever been inundated from any stream during a 100-year peak stream flow?
Yes No If yes, explain:

3. Is the dairy production area located within a 100-year floodplain?
Yes No
If yes, please explain how your facility is designed and operated to protect from inundation or washout from 100-year peak stream flows: _____

E. 22562 (d) Retention Pond Design – *Retention ponds 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.*

1. Do any retention ponds have a liner made from artificial material? Yes No
If so, which pond(s) and what is the material? _____

2. Are your ponds underlain by soils which contain at least 10 percent clay and not more than 10 percent gravel? Yes No If yes, how was this determined? _____

3. Have you conducted a permeability test on any retention ponds? Yes No
If so, which ponds and what was the result? _____

F. 22562 Land Application of Process Waters – This conditional Waiver authorizes the application of manure and process waters to land only if such application is in accordance with the conditions of the Waiver. Absent an NPDES permit for discharge to surface waters, the only allowable discharge is to wastewater treatment facilities approved by the Regional Water Board.

- G. 22563 Reasonable Soil Amendment Rate** – Manure and process water may not be applied to land at a dairy facility solely for disposal. Application of manure and process water to croplands shall be at rates which are reasonable for the crop, soil, climate, special local situations management systems, and type of manure. Please provide information on application practices as requested in the following sections:

For facilities with a prepared Nutrient Management Plan:

The purpose of a Nutrient Management Plan (NMP) is to identify the management practices used to minimize adverse impacts to surface water and groundwater from runoff and leaching from land application areas. A NMP is specific for a particular dairy and considers crops, soil types, climate, and local conditions for all nutrients, and non-nutrient salts, applied to each field. The NMP must be updated in response to changing conditions and when the NMP is not effective in preventing periodic discharges of manure or process water.

Within 180 days of adoption of the Waiver, your dairy is required to have a written NMP prepared for the maximum number of dairy cattle onsite.

1. Does your dairy have a written NMP? Yes No If so, what is the date of the NMP and what specialists helped you prepare the NMP?

If your facility has a written NMP, the most current version should be kept at the dairy and available for review by Regional Water Board staff during inspections.

2. Do you implement the written NMP? Yes No

- H. 22563 Run-Off & Percolation** – *Land application of process wastewater to cropland shall not result in surface runoff from the cropland and shall be managed to minimize percolation to groundwater.*

1. To reduce the potential for stormwater runoff to transport contaminants to waters of the United States, is nutrient application and associated irrigation completed by November 1st of each year? Yes No
2. Describe the measures taken to minimize to process wastewater runoff to surface water and percolation to groundwater to avoid a discharge of pollutants:

- I. 22564 Management of Manured Areas**

Manured areas (corrals, manure solids storage areas, etc.) shall be managed to minimize infiltration of water into underlying soils.

1. Is runoff from manured areas prevented from entering surface waters?
Yes No

Are manured areas lined, and if so, how?

2. Describe the measures taken to minimize infiltration of manure-laden water into underlying soils within manured areas, corrals, pens, and animal housing areas:

3. Describe the measures taken to separate or divert stormwater from contacting manured areas, corrals, pens, and animal housing areas: _____

III. Best Management Practices

Best management practices (BMPs) are any practices or measures used to protect surface and groundwater. Please provide the following information for BMPs not identified previously in this document which are used at your dairy:

- A. Erosion Control: Describe all measures taken to minimize erosion and the discharge of soil particles to surface water: _____

- B. Stream Protection: Please list all stream water quality protection measures throughout the dairy: _____

- C. Nuisance Control: Describe all measures taken to prevent nuisance from manure ponds. Include measures to control: odors, breeding of mosquitoes, damage from burrowing animals, damage from equipment during removal of solids, embankment settling, erosion seepage, excess weeds, algae, and other vegetation that could compromise the needed capacity or proper functioning of your manure pond and/or degrade water quality: _____

D. Groundwater Protection: What practices are employed at the dairy facility to protect groundwater from contamination at wellheads, sinkholes, and tile drains?

E. Dead Animal Disposal: What actions are taken at your dairy to ensure the protection of surface water and groundwater from the disposal of dead animals?

F. Chemical Disposal: What BMPs and chemical handling methods do you use to prevent impacts to surface water and groundwater? _____

G. Petroleum Products: The California Aboveground Petroleum Storage Act requires owners or operators to take specific actions to prevent spills:

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=25001-26000&file=25270-25270.13>

Daily inspections and secondary containment may be required. Spill reporting to the city, county, and state agencies is required. Are you aware of this Act and is your facility compliant? Yes No

H. Other Best Management Practices (BMPs): Describe BMPs, not discussed above, as used to:

1. Prevent waste discharges to surface waters: _____

2. Prevent waste discharges to groundwater: _____

I. Spill or Noncompliance Reporting: Are you aware of spill and noncompliance reporting requirements in the Monitoring and Reporting Plan? Yes No

Are you in compliance with those reporting requirements? Yes No

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this report 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."

Printed Name: _____

Signature: _____ Date: _____

This Water Quality Plan shall be submitted within 60 days of adoption of the Waiver to:

North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403
Phone (707) 576-2220
Fax (707) 523-0135

Or electronically to: Northcoast@waterboards.ca.gov

Attachment D

Conditional Waiver of Waste Discharge Requirements Order No. R1-2015-0051 Nutrient Management Plan (NMP) For Mello 3/Llano Oaks Dairy

Conditional Waiver of Waste Discharge Requirements (Waiver) Order R1-2015-0051 requires the Discharger to prepare and implement a Nutrient Management Plan (NMP) for the new dairy operation within 180 days of adoption of this Order. The NMP is intended to help ensure that the dairy is designed, constructed, operated and maintained so that nutrients and wastes generated are managed to prevent conditions of nuisance or adverse impacts to surface water and groundwater. The NMP must be specific to the maximum number of dairy cattle kept onsite.

Since early 2015, Mello 3/Llano Oaks Dairy has had a draft Comprehensive Nutrient Management Plan (CNMP) that it is working on with a Technical Service Provider for the current heifer grazing and potential future dairy operations. Portions of the CNMP may be used to meet this NMP requirement, however, within 180 days of Waiver Order adoption, the dairy must have a NMP with the requirements in this Attachment D: NMP to meet the Waiver conditions.

Manure and process water cannot be applied to land for the purpose of disposal. Manure and process water that are wastes must be disposed at an appropriate permitted disposal facility. The Discharger must report on NMP progress by filling out the Annual Report (Monitoring and Reporting Program, Appendix 1) for submittal by November 30 each year starting in 2016.

A. NMP Purpose and Implementation

The purpose of the NMP is to identify management practices for the dairy that minimize adverse impacts to surface water and groundwater from runoff and leaching from land application areas. The NMP is specific for a particular dairy and considers crops, soil types, climate, local conditions, all sources of nutrients, and the non-nutrient salts applied to each field. The NMP must be updated in response to changing conditions and the results of monitoring.

The NMP must be developed by the Discharger with the assistance of specialists such as those with a degree in or certification from: Soil Scientist, Agronomist, Crop Advisor, University of California Cooperative Extension (UCCE) service advisor or technician, or a Technical Service Provider certified by the NRCS. In particular, the Discharger shall get assistance from these specialists in completing the nutrient budget calculations. The Regional Water Board staff may approve the use of alternative specialists.

The most current version of the NMP must be kept at the dairy and must be made available for review by Regional Water Board staff during inspections. The NMP shall be submitted to the Regional Water Board upon request. The nutrient budget

component of the NMP shall be revised within 30 days when discharges from a land application area result in exceedence of water quality objectives. The NMP shall be revised within 90 days when any of the following occur: 1) site-specific information becomes available to replace default values used in the initial NMP, 2) changes in operating practices result in the production of nutrients that are not addressed by the NMP, 3) crops will be grown that are not covered by the NMP, 4) there is a change of 15% or more in the acreage used for land application, or 5) the NMP is not effective in preventing periodic discharges of manure or process water to Waters of the United States (US).

The Discharger shall review the NMP annually and revise it if changes in conditions or practices at the dairy require changes in the NMP. The review/revision date must be noted in the NMP. Records on the timing and amounts of manure and process water applied to land and information developed through the Monitoring and Reporting Program (MRP) associated with the Waiver must be considered when making decisions related to nutrient management.

B. Management of Dairy Manure and Process Wastewater

Compliance with the following management measures is required once the Discharger begins implementation of the NMP. Best Management Practices (BMPs) must be in place to prevent discharges to surface waters at all times:

1. The collection, treatment, storage, or application of manure or process water shall not result in:
 - a. degradation of surface water or groundwater except as allowed by the Order,
 - b. contamination or pollution of surface water or groundwater, or
 - c. a condition of nuisance (as defined by the California Water Code Section 13050).

This requirement applies to any degradation products or any constituents of soil mobilized by the interactions between applied materials and soil or soil biota.

For instance, one BMP must include the following: animal waste storage piles (excluding small temporary piles within the corrals) must be covered with a waterproof covering during the rainy season such as from October through May. This excludes times, not to exceed 24 hours, when wind removes the covering.

2. The application of manure and process water shall not violate any applicable local, state, or federal laws or regulations or contribute to an exceedence of any applicable water quality objective in the Basin Plan or of any applicable state or federal water quality criteria.
3. The discharge of process wastewater to surface water is prohibited.

4. The discharge of stormwater to surface water from land where manure or process water has been applied is prohibited unless all applications to land are in accordance with a NMP.
5. The application of manure and process wastewater to land shall be in accordance with a NMP.

C. Contents of NMP

The NMP must contain the following components:

1. **Contact Information:** The name, mailing address, and phone number of (a) the dairy owner, (b) the dairy operator (if different), and (c) any specialist who participated in the development of the NMP.
2. **Specific dates:** The date that the NMP was completed, the date that the NMP will be implemented, and the dates of anticipated NMP reviews and revisions.
3. **Description of the dairy:** The following information must be included:
 - a. name of the dairy;
 - b. the dairy address or, if no street number, the street and nearest cross street;
 - c. design maximum cow population by type (milk cows, dry cows, heifers, calves);
 - d. current cow population by type;
 - e. Assessor's Parcel Number(s) for the dairy and all associated land;
 - f. for each Assessor's Parcel, the total acreage; the acreage used for crops including pasture, the acreage used for application of (a) manure, (b) process water, or (c) both;
 - g. the crop rotation, if any, within each land application area.
4. **Maps:** One or more United States Geological Survey quadrangle maps or equivalent showing the location of the dairy and all areas under the Discharger's control, whether owned, rented, or leased, to which manure or process water may be applied. If suitable, an aerial photo with appropriate notations may be utilized. The map(s), aerial photos, and/or drawings (see next section) should show the locations of all the following that exist at the dairy: surface water courses and conveyances, underground pipelines, where process water is mixed with irrigation water or discharged, drainage flows for the production area and each field, drainage ditches and drainage easements, drainage controls (berms, levees, etc.) for tailwater and storm water; extent of subsurface (tile) drainage systems and associated discharge points, pumping facilities and flow meters, wells and type (domestic, industrial, agricultural, or monitoring), storm water discharge points, a point locating any septic systems, all water quality sampling points, and a map legend. More than one map may be used for clarity. These mapping components are also required in the Water Quality Plan (Waiver, Attachment C). Duplicates may be used.

5. **Drawings:** A scaled drawing, aerial photo or topographic map that shows the production area including the livestock feeding and housing areas, feed storage areas, manure and process water storage areas, milk barn, chemical storage areas, and waste storage areas. These drawings, photos or maps may also be used to show the locations of features listed above under “Maps.”
6. **Nutrient Budget Calculations:** The NMP must include calculations showing all sources of nutrients used by the facility and demonstrating that nutrients are applied at rates that are protective of water quality. These calculations must be reviewed annually and updated if there are any significant changes in conditions or practices at the dairy that necessitate changes in the NMP. These calculations may be reviewed by Regional Water Board staff during inspections. The details of the nutrient budget are discussed below in Section D.
7. **Land application practices and water quality protection:** The NMP must describe the methods by which manure and process water is applied to land application areas, and describe the BMPs that are implemented to protect surface water and groundwater.
8. **Sampling and analysis program:** The NMP must describe the associated sampling program including sampling locations, sampling frequency, sample collection and preservation procedures. The NMP must identify the analytical laboratory utilized and the analyses to be conducted for soil, manure, soil amendments, process water, irrigation water, plant tissue, etc. If that information is in the MRP, the NMP can reference that MRP. The laboratory utilized must be certified, or if not certified it must be approved by the Regional Water Board staff. Laboratory analysis methods are identified in California Analytical Methods Manual for Dairy General Order Compliance – Nutrient Management Plan Constituents:

http://anlab.ucdavis.edu/dairy-general-order-compliance-2013-nutrient-management-plan/uc_analytical_methods.pdf/view

D. Nutrient Budget Calculations

The Discharger shall develop a nutrient budget that establishes the nutrient application practices for each crop in each land application area. The initial nutrient budget may be based on default values if site-specific information is not available¹. Subsequent nutrient budgets shall be based on site-specific analytical data for soil, manure, process water, irrigation water, other sources of nutrients, and plant tissue. The nutrient budget shall include the following:

1. The rate of nutrient applications (e.g., pounds of nitrogen per acre) based on default values or site-specific analytical data in order to meet each crop's needs for nitrogen and phosphorus without exceeding the application rates that will protect water quality. The rate of nutrient applications shall be based on realistic yield goals for each crop in each land application area. For new crops or varieties, industry yield expectations may be used until site-specific yield information is available.
2. The quantity of manure, soil amendments, and/or process water to be applied shall be based on the nutrient content of the material, the characteristics of the material (e.g., the amount of organic nitrogen), and the site conditions (e.g., if a pasture is not grazed or mowed, the amount of residual nutrients in soil will be higher). In determining the quantity to apply, the Discharger shall consider all sources of nutrients including irrigation water, commercial fertilizers, and previous crops.
3. The timing of applications shall be based on seasonal and climatic conditions, the growth stage of the crop, and the availability of water. The anticipated maximum time between land application events (i.e., the storage period) shall be used to determine the needed storage capacity for manure and process water.
4. The method of manure, soil amendment, and process water application for each crop in each land application area shall be based on site-specific conditions and shall minimize the discharge of sediments, nutrients, and salts from the application area.

Nutrient application rates shall not approach a site's maximum ability to contain one or more nutrients through soil adsorption. If the nutrient budget shows that the nutrients generated by the dairy exceed the amount needed by crops in the land application area, then the Discharger must implement management practices that will prevent impacts to surface water or groundwater due to application of excess

¹ Crop nutrient needs may be based on recommendations from the University of California or the Western Fertilizer Handbook (9th Edition). Acceptable default values for the nutrient content of materials include values recognized by the American Society of Agricultural and Biological Engineers (ASABE), the Natural Resources Conservation Service (NRCS), and/or the University of California that accurately estimate. The nutrient content of commercial fertilizers shall be California Department of Food and Agriculture published values.

nutrients. Such practices may include obtaining access to additional land for nutrient application, exporting manure, or reducing the number of cows at the dairy.

Supplementary commercial fertilizers and/or soil amendments may be added when the application of nutrients contained in manure and process water alone is not sufficient to meet the crop needs. Specific nutrients are discussed below.

Nitrogen: Total Ammonia Nitrogen (NH₄) and Total Nitrogen will be measured at the dairy through water and soil sampling. Nitrogen application rates shall not result in total nitrogen applied to the land application areas exceeding the nitrogen application in each location as recommended by UCCE, NRCS, other local information, or 1.4 times the anticipated nitrogen removal in forage. If application of total nitrogen to a land application area exceeds the budgeted application rate for the specific land application area, the Discharger shall either revise the nutrient budget to prevent such exceedence in the future or demonstrate and record that the application rates have not contaminated surface or ground water. Applications of nitrogen exceeding the initial recommendations are allowable if the following conditions are met:

1. Soil Plant Available Nitrogen (PAN) testing or plant tissue testing has been conducted and indicates that additional nitrogen is required to obtain crop yield estimates typical for the soils and other local conditions;
2. The amount of additional nitrogen applied is based on the soil or tissue testing and is consistent with UCCE or NRCS guidelines or written recommendations from a nutrient management specialist or Certified Crop Advisor;
3. The form, timing, and method of application facilitates timely nitrogen availability to the crop; and
4. Records are maintained documenting the need for the additional applications.

Phosphorus and Potassium: Application of these nutrients at agronomic levels, along with reasonable erosion control and runoff control measures, will normally prevent water quality problems. In some instances, other best management practices may need to be included in the NMP.

E. Land Application Practices

Application of manure and process water to croplands shall be at rates which are reasonable for the crop, soil, climate, special local situations, management systems, and type of manure. The timing of nutrient application must correspond as closely as possible with plant nutrient uptake characteristics, while considering cropping system limitations, weather and climatic conditions, and land application area accessibility. Land application areas that receive dry manure and process water shall be managed to minimize erosion.

The NMP must identify all surface water or potential conduits to surface water that are within 100 feet of any land application area and take appropriate actions

to protect water quality. The following sections discuss practices that reduce the potential for pollutants from land application areas to reach surface water.

1. Setbacks, vegetated buffers, and other alternatives to protect surface water:

A setback is a specified distance that separates land application areas from surface water or a potential conduit to surface water, and where manure and dairy process water may not be applied, but where crops may be grown. A vegetated buffer is a relatively narrow (approximately 35 feet), permanent strip of dense perennial vegetation where no crops are grown and which is established perpendicular to the dominant slope of a land application area for the purposes of slowing water runoff, enhancing water infiltration, trapping pollutants bound to sediment, and minimizing the risk of pollutants reaching surface waters. A berm is another alternative to prevent runoff from reaching surface water.

Manure and process water shall not be applied within a 100-foot setback to any down-gradient surface water unless a 35-foot wide vegetated buffer or physical barrier (i.e., a berm) is substituted for the 100-foot setback; or an alternative conservation practice or field-specific condition that provides pollutant reductions equivalent to or better than achieved by the 100-foot setback. Any alternative practice utilized must be described in the NMP.

Animals must be separated from surface waters by a 35-foot wide vegetated buffer unless an alternative practice demonstrating equal or better water quality protection is utilized and described in the NMP. Alternative practices may include rocked crossings, fences, bridges, culverts, engineered slopes, etc. Vegetation along flowing watercourses shall be protected from overgrazing to maintain natural water temperatures and protect stream banks. Flash grazing of the vegetated buffer, as an alternative practice, must be described in the NMP.

Practices for establishing and maintaining vegetated buffers must include:

- limiting removal of vegetation within the buffers and promoting plant growth in the buffer;
- maintaining the recommended height for the plant species;
- establishing plant density for adequate filtering capacity;
- improving soil conditions to reduce erosion and increase infiltration;
- fencing must be maintained to exclude cattle from sensitive areas especially where adverse impacts could occur to riparian vegetation or special-status species;
- preventing erosion channels and gullies from forming.

2. Avoiding conduits that can transport pollutants: Manure and process wastewater shall not be applied closer than 100 feet to open tile line intake structures, sinkholes, or well heads unless the NMP contains a statement from a professional explaining that an alternative practice will be as protective as the 100-foot separation. This professional must be a registered or certified

engineering geologist or hydrogeologist, or a responsible professional with experience in manure containment and structural facility specification. Documentation from initial wellhead construction may be acceptable upon review by Regional Water Board staff.

3. **Wetland Protection:** Wetlands are waters of the state and are protected under state regulations by provisions of the California Water Code. Wetlands are also protected as waters of the U.S. under the federal Clean Water Act. The beneficial use of wetlands must be protected against water quality degradation. Wetlands containing standing water shall be protected through dairy cow exclusion and the exclusion of manure or process water application.

F. Sampling, Analysis, and Calculations

Soil, manure, soil amendments, process water, irrigation water, and plant tissue shall be monitored, sampled, and analyzed. The analytical results shall be used during the development, implementation, and revision of the NMP.

Samples of soils and crop tissues shall be analyzed for available phosphorus at least once every 5 years. Sampling results shall be reviewed to verify that phosphorus levels do not exceed limits needed to maintain acceptable crop yields and prevent adverse impacts to water quality. If this review determines that a buildup of phosphorus threatens water quality, application rates must be decreased until the situation is corrected.

Nutrient credit from previous legume crops shall be determined by methods acceptable to the UCCE, the NRCS, Resource Conservation District, or a technical service provider that is NRCS certified in developing NMP.

G. Field Risk Assessment

The discharger is required to sample discharges of stormwater from land application areas to surface water, as detailed in the MRP. The analytical results for those samples shall be used by the Discharger to assess water quality conditions and to inform management practices. If results indicate a potential for adverse impacts to receiving waters, the Discharger shall modify their NMP to reduce such movement and collect additional samples to assess the effectiveness of the modifications.

Land application areas must be managed to prevent contamination of crops grown for human consumption. When crops grown for human consumption without processing (berries, nut trees, etc.) are grown near to land application areas, the Discharger shall take appropriate actions to prevent movement of pathogens that could cause adverse impacts to human health.

H. Record-Keeping and NMP Review

The Discharger must maintain records for each land application area and use the records as a basis for revisions to the NMP. The NMP must be available for Regional Water Board staff review during inspections.

California Regional Water Quality Control Board
North Coast Region

Conditional Waiver of Waste Discharge Requirements

Monitoring and Reporting Program
Order No. R1-2015-0051

For

Mello 3/Llano Oaks Dairy
In the North Coast Region

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code Section 13267(b) and is associated with the Conditional Waiver of Waste Discharge Requirements (Waiver) Order No. R1-2015-0051 for Mello 3/Llano Oaks Dairy. This MRP requires that regular monitoring, sampling, and record-keeping be conducted by the dairy owners and operators (hereinafter "Discharger") and that the records be made available to California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board) staff. Visual inspections, monitoring, surface water and groundwater sampling, analyses, reporting, and review, will help to prevent uncontrolled waste discharges and to protect water quality.

Attachment C to the Waiver presents requirements for the Water Quality Plan (WQP) which will help to ensure that the dairy production area is designed, constructed, operated and maintained to prevent adverse impacts to surface water and groundwater. Attachment D to the Waiver includes minimum requirements for a Nutrient Management Plan (NMP) for the dairy. Mello 3/Llano Oaks Dairy has been working with a Technical Service Provider since early 2015 to complete a Comprehensive Nutrient Management Plan (CNMP) for current cattle grazing and future milking operations on the dairy property. However, the Waiver requires the Discharger to prepare and implement a NMP within 180 days of adoption of the Waiver, as described in Attachment D, specific to the new dairy operations. The NMP is intended to help ensure that the dairy is designed, constructed, operated, and maintained so that nutrients and wastes generated are managed to prevent conditions of nuisance or adverse impacts to surface water and groundwater.

This MRP requires an Annual Report, including sampling results, to be submitted to the Regional Water Board by November 30 of each year beginning in 2016 (Appendix 1).

I. MONITORING

Visual inspections and sampling of surface water and groundwater are required to assess compliance with conditions of this Waiver and the Water Quality Control Plan for the North Coast Basin (Basin Plan). Sampling results shall be used by the Discharger to assess water quality conditions and to inform management practices.

A. Visual Inspections

This MRP requires periodic visual inspections to ensure the dairy is being operated and maintained in compliance with the Waiver. Visual inspections shall be done when conditions are safe to do so. Except where otherwise noted in this MRP, visual inspections shall be conducted prior to, during, and after anticipated storm events, and during dry conditions, and inspections shall be conducted on a monthly basis at a minimum. Key observations made during inspections and corrective actions taken shall be documented in each Annual Report. All adverse conditions resulting in a discharge found during these inspections shall be reported to the Regional Water Board within 24 hours and shall be recorded and the records retained onsite for a period of five years. Corrective actions shall be implemented to stop the discharge as soon as possible.

1. Production Area

The Discharger shall conduct inspections of the production area **daily**, including all manure containment facilities, pumping equipment, water lines, and animal confinement areas, and note any waste discharges from the property under the control of the Discharger. Any noncompliance with the Waiver shall be reported to the Regional Water Board. Discharges that are a threat to human health or the environment shall be identified as such.

2. Holding Pond Freeboard

The Discharger shall measure the freeboard **weekly** in each holding pond or liquid containment structure. Freeboard is the vertical distance from the pond surface to the lowest elevation of the surrounding berm or the bottom of the spillway. The size of ponds/containment structures needed to contain waste materials and rain water from a 25-year 24-hour storm event will vary from facility to facility. To maintain structural integrity and prevent a discharge, two feet of freeboard shall be maintained in ponds/structures located partially or completely above ground, and one foot of freeboard shall be maintained in ponds/structures that are completely in ground. Noncompliance shall be reported to the Regional Water Board.

3. Manure Containment Structures

Manure containment structures shall be inspected for berm integrity, cracking, slumping, excess vegetation, animal burrows, and seepage. Repairs shall be made to avoid discharges to surface water and/or groundwater, and noted in the Annual Report. Any uncontrolled discharges shall be reported to the Regional Water Board.

4. Animal Confinement Areas

Animal confinement areas within the production area shall be inspected periodically to ensure that all pollution prevention measures, as specified in the facility's WQP, are implemented and effective.

5. Discharges

Receiving waters upstream and downstream of the dairy shall be inspected to monitor any change in water quality resulting from dairy operations. Any adverse change in water quality, including color or turbidity, shall be reported to the Regional Water Board.

6. Cropland and Pasture

The Discharger shall, at least once daily during each irrigation event, inspect any cropland on which process water or manure is applied. Dates, occurrences, location, and estimated amounts of unauthorized releases from the manure containment structures (e.g. ponds) or cropland, either off-property or to surface water drainage courses, shall be documented and reported to the Regional Water Board as noncompliance. Any erosion, conditions of field saturation, or runoff from the cropland containing pollutants shall be remedied as necessary to protect water quality and prevent nuisance conditions.

7. To help minimize discharges of sediment, indicator bacteria, and nutrients, and to help protect stream temperatures, all watercourses shall be assessed annually for potential impacts to:
- a. riparian areas;
 - b. physical impacts such as stream bank trampling and compaction;
 - c. accelerated erosion; and
 - d. discharge of fecal matter and nutrients.

This assessment shall be reported to the Regional Water Board in the Annual Report form and shall include dated photos. Where there is evidence of significant degradation, the dairy owner or operator must develop riparian management protection measures and implement best management practices to control adverse impacts to water quality.

B. Water Quality Testing

Water quality sampling and reporting is required to allow the Regional Water Board to assess compliance with Basin Plan water quality objectives. The following sampling and reporting shall be conducted:

1. Surface Water Sampling

Surface watercourses that flow through the dairy property, including the production area, cropland, or pastures, must be sampled using grab samples at the point where watercourses enter and leave the property. If multiple watercourses flow through the property, the Discharger may request in writing, reduced representative sampling locations. Alternatively, if surface waters flow adjacent to but not through the property, and are located such that they could be impacted by activities at the dairy, the grab samples should be collected upstream and downstream of the areas closest to the dairy property, assuring

legal access for sampling. Sampling shall take place during or directly following each of three (3) major storm events of one (1) inch or more per 24 hours, during the rainy season, beginning in the winter of 2015/2016. Sampling events shall be at least one (1) month apart. Sampling shall be done when conditions are safe to do so. Visual observations, such as changes in color or turbidity, must be recorded at the time of surface water sampling and reported in or submitted with the Annual Report.

Temperature, pH, and electrical conductivity shall be measured onsite with a handheld data sonde or comparable field equipment. Total ammonia nitrogen shall be measured either with a field test kit (colorimetric field test kits are acceptable) or by a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Regional Water Board. 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 Regional Water Board. Electrical conductivity, total ammonia nitrogen, pH, and temperature shall be collected at each sampling location for each sampling event.

Samples shall be tested for the following constituents:

<i>Constituent</i>	<i>Units</i>
Electrical Conductivity (EC)	Mmhos
Total Ammonia Nitrogen (NH ₄)	mg/L
pH	
Temperature	°C

2. Groundwater Well Sampling

Representative wells located at the dairy, including domestic and agricultural supply wells, shall be sampled four (4) times total, approximately six (6) months apart. A sample must be collected in: (1) Spring 2016, (2) Fall 2016, (3) Spring 2017, and (4) Fall 2017. Results of groundwater samples collected consistent with the sampling protocols of this Order and within these time frames for another purpose (e.g. for a County Health Department or by the County milk inspector) may be submitted to the Regional Water Board instead of collecting additional samples. The sample must be representative of groundwater well conditions (i.e. not disinfected).

Groundwater samples from domestic wells shall be collected from the tap before the pressure tank after water has been pumped from this tap for 10 to 20 minutes. If the sample cannot be collected prior to a pressure tank, the well must be purged at least twice the volume of the pressure tank. 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. Alternatives to this protocol may be approved by the Regional Water Board.

One (1) sample from each well shall be tested for the following parameters:

<i>Constituent</i>	<i>Units</i>
Nitrate	mg/L
Fecal Coliform Bacteria	MPN/100mL

Groundwater samples shall be analyzed by a laboratory certified by the State Department of Health Services or a laboratory pre-approved by the Regional Water Board.

3. Sampling Protocol

- a. 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;
- b. All samples collected shall be representative of the volume and nature of the material being sampled;
- c. All sample 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;
- d. 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;
- e. All samples submitted to a laboratory for analyses shall be identified in a properly completed and signed Chain of Custody form;
- f. Results of both surface water and groundwater well samples must be submitted to the Regional Water Board with the Annual Report due after sample results are obtained. If sample results exceed Basin Plan water quality objectives or other public health standards, the Discharger shall note the exceedance in the Annual Report. The Regional Water Board may require corrective actions and additional monitoring;
- g. Field test instruments used for electrical conductivity, pH, temperature, and total ammonia nitrogen, may be used, provided:

1. The operator is trained in the proper use and maintenance of the instruments;
 2. The instruments are field calibrated prior to each monitoring event; and
 3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency.
- h. Alternative sampling protocols shall be approved by Regional Water Board staff. Consultation with the California Dairy Quality Assurance Program regarding sampling protocol is encouraged. The California Analytical Methods Manual for Dairy General Order Compliance – Nutrient Management Plan Constituents laboratory analysis methods document is a valuable reference, located at:

http://anlab.ucdavis.edu/dairy-general-order-compliance-2013-nutrient-management-plan/uc_analytical_methods.pdf/view

4. Additional Monitoring

The Regional Water Board may require additional monitoring or may modify the existing monitoring program as appropriate on a site-specific or watershed basis. Future management practices and/or monitoring requirements may also be imposed by the Regional Water Board, within those water bodies listed as impaired, due to constituents that may be present in waste from cow dairies under federal Clean Water Act Section 303(d).

5. Group Sampling

One option for fulfilling this monitoring requirement is to form a representative monitoring group, to develop and/or administer a local, watershed-based surface or groundwater monitoring program. The Regional Water Board staff may allow the Discharger to use data gathered from the representative monitoring program to substitute for some or all of the required monitoring of individual dairies, if the Discharger can demonstrate that the data are valid.

6. Basin Plan Water Quality Objectives

Water quality objectives are presented in Section 3 of the Water Quality Control Plan for the North Coast Basin (Basin Plan), which is posted on the Regional Water Board web page at:

http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/basin_plan.shtml

II. REPORTING

A. Documentation and Annual Report

Monitoring and water quality testing are required as listed in I.A. and I.B. in this MRP. The objective of the Annual Report (MRP Appendix 1) is to report Waiver compliance and provide updates using photographs and narrative text on new management practices and the effectiveness of existing management practices. Documentation of compliance with conditions of the Order must be submitted to the Regional Water Board in the Annual Report due each November 30, starting in 2016. The annual reporting period is November 1 through October 31. Regional Board staff will review the Annual Report and provide comments if necessary for the facility to meet the Waiver requirements. If the Regional Water Board provides comments on the Annual Report or any technical report, the discharger will be required to address those comments. A copy of the Annual Report including photo documentation must be kept at the dairy facility for Regional Water Board review during inspections. The contents of the Annual Report shall include:

1. Photos shall be taken each year by November 1 and submitted to the Regional Water Board to confirm that:
 - a. The liners of the manure ponds are protective of water quality (free of weeds and cracks that may disturb the liner); and
 - b. The manure ponds have sufficient storage capacity prior to the rainy season as required in the Order.
2. Photos of other pollution prevention measures to protect surface and groundwater must also be submitted with the Annual Report. Photos of permanent pollution prevention measures only need to be submitted in an Annual Report once, as long as the measures are still operational and effective. Examples of pollution prevention measures include:
 - a. cleaning up of pollutant-containing materials from areas where stormwater runoff occurs;
 - b. covering of manure, compost, and feed storage areas;
 - c. installing impermeable ground covering in manure storage areas;
 - d. protecting watercourses from erosion and wastes; and
 - e. any other best management practices or control measures for water quality protection.
3. Dated photos of the watercourse assessment, as described in the MRP page 3, item 7 are required to be attached to the Annual Report. This includes photos of riparian vegetation, streambanks, and any potential erosion that could discharge to watercourses. Photos are to show current water quality protection and any projects that are in progress to improve water quality.
4. A narrative summary of measures taken to protect surface water and groundwater and to meet conditions of the Order. Where appropriate, sketches

of pollution prevention measures implemented since the previous Annual Report may also be submitted.

5. Analytical results of surface water and groundwater samples. If participating in a group monitoring effort pre-approved by the Regional Water Board, the Discharger must submit a statement identifying the group. If results of groundwater samples collected for another purpose are submitted to meet these MRP requirements, an explanation is required in the Annual Report.

B. Spill or Noncompliance Reporting

The Discharger shall report any spill, discharge, or other type of noncompliance that violates the conditions of this Order and/or endangers human health or the environment within 24 hours of becoming aware of its occurrence. The incident shall be reported to the **Regional Water Board office (707) 576-2220, and to the California Office of Emergency Services (OES) (510) 286-0895**. During non-business hours, the Discharger shall leave a message on the Regional Board's office voice mail. The OES is operational 24 hours a day. The message shall include the time, date, place, and description of the discharge. A written report shall be submitted to the Regional Water Board office within fourteen (14) business days of the Discharger becoming aware of the incident. The report shall include complete details of the steps that the Discharger has taken, or intends to take, in order to prevent recurrence. The written submission shall, at a minimum, contain:

1. The approximate date, time, and location of the discharge;
2. A description of the noncompliance and its cause;
3. The flow rate, volume, and duration of the discharge;
4. A note if the noncompliance has been corrected and/or the actual or anticipated time for achieving compliance; and
5. A time schedule and a plan to implement necessary corrective actions to prevent the recurrence of such discharges.

The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in terminating the applicability of this Order to a specific facility or discharger.

If during the performance of Discharger and/or Regional Water Board staff inspections, deficiencies, defects, and/or impending failures are observed in any of the manure-contacted water conveyance, control, and/or retention structures, then the Discharger shall take immediate action to correct and/or prevent any

unauthorized release. The corrective action(s) must be documented and these records attached to the Annual Report.

C. Record-Keeping

The Discharger shall create, maintain for five years, and make available to the Regional Water Board during inspections and upon request by the Regional Water Board, any reports or records required by the Order including those required under this MRP. In addition, a Manure/Process Wastewater Tracking Manifest form is required to be filled out and made available on the dairy site for Regional Water Board staff review during inspections. Upon request by the Regional Water Board staff, the completed form shall be submitted to the Regional Water Board.

D. Signature and Submittal.

Each Annual Report and Noncompliance Report shall be signed by the Discharger or a duly authorized representative 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 report 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."

Reports shall be submitted to:

North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403
Phone (707) 576-2220
Fax (707) 523-0135

Or electronically to: Northcoast@waterboards.ca.gov

III. SUMMARY OF REQUIRED REPORTS AND NOTICES

In summary, the discharger must complete the following in accordance with the Waiver:

- A. **Water Quality Plan** – see Waiver Attachment C. The Discharger is required to prepare and implement a Water Quality Plan within 60 days of adoption of the Waiver.

- B. **Nutrient Management Plan** – See Waiver Attachment D. The Discharger is required to prepare and implement a Nutrient Management Plan within 180 days of adoption of the Waiver.
- C. **Annual Report** – see MRP Appendix 1. The Discharger shall fill out and submit an Annual Report to the Regional Water Board by November 30 of each year starting in 2016. The reporting period is November 1 through October 31. A copy of each Annual Report shall be kept at the facility and be made available for review by Regional Water Board staff during inspections.
- D. **A Manure/Process Wastewater Tracking Manifest Form**, is required to be filled out and made available on the dairy site for Regional Water Board staff review during inspections, for any waste hauled off site. Upon request by the Regional Water Board staff, the completed form shall be submitted to the Regional Water Board.
- E. **Noncompliance Report** – Any spills, discharges, or other noncompliance must be reported and corrected as described in this MRP.
- F. **Extension Request** - The dairy operator may request an extension to MRP deadlines by written request to the Executive Officer of the Regional Water Board at least 30 days prior to the deadlines. This request must include a description of incomplete plan elements, an alternative date of compliance, and assurance of water quality protection in the interim. A letter from the Regional Water Board will be issued granting or denying the request. A staff inspection may be necessary.

Ordered by: _____

Matthias St. John
Executive Officer

November 19, 2015

APPENDIX

1. Annual Report

APPENDIX 1

Annual Report

Report Date: _____
Month / day / year

**For Compliance With Order No. R1-2015-0051
Conditional Waiver of Waste Discharge Requirements
For Mello 3/Llano Oaks Dairy**

Due November 30 each year; reporting for preceding 12 month period (November 1 through October 31).

Facility Information

Facility: _____	Address: _____ No. Street City Zip
Operator: _____	Address: _____
Phone: (____) _____	E-mail: _____
Property owner: _____	Address: _____
Phone: (____) _____	E-mail: _____
Current # of mature dairy cows (milking + dry): _____	
Current # of other dairy cattle: _____	

1. In the previous year, have changes been made to the facility Water Quality Plan? Yes No if yes, please attach explanation.
2. In the previous year, has a Nutrient Management Plan been prepared or revised for your facility? Yes No if yes, please attach explanation.
3. Has the dairy had a manure or process water discharge to surface or groundwater in the past year? Yes No
4. If so, where and how was the problem resolved? _____

5. Please answer the following questions pertaining to facility conditions and actions taken within the previous year to comply with conditions of the Waiver:

“N/A” means that the subject is not applicable to the facility covered by this report)

A. Prevent animals from entering any surface water within confinement areas: (“Surface water” means waters of the United States or any tributary to a water of the United States)							
Are barriers used to keep animals out of surface waters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are watercourse crossings designed and maintained to protect water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Yes	No	N/A		Yes	No	N/A
Are feed sites located away from surface waters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	Yes	No	N/A				
Description of deficiencies (if any) or additional information:							

B. Divert clean stormwater runoff away from manured areas (including heavily used pastures)								
Do buildings have effective gutters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is stormwater that contacts manured areas and feed storage areas contained in holding ponds?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	N/A		Yes	No	N/A	
Is guttered water diverted away from manured areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is clean stormwater runoff managed separate from manure and process water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	N/A		Yes	No	N/A	
Is guttered water contained in holding ponds?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are diversion ditches functional and properly maintained to protect surface waters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	N/A		Yes	No	N/A	
Description of Deficiencies (if any) or Additional Information:								
C. Is the dairy designed to retain all manure and process water generated at the facility, including all runoff from manured areas produced during a 25-year, 24-hour storm? Are wastes managed and contained to protect surface water and groundwater?								
Material to be contained	Yes	No	N/A	Material to be contained	Yes	No	N/A	
All manure solids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Waste milk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Runoff from solids storage areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Veterinary waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Runoff from corrals that contain manure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hazardous wastes (pesticides, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Milk barn washwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Runoff and leachate from silage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Description of deficiencies (if any) or additional information:

System component & condition	Yes	No	N/A	System component & condition	Yes	No	N/A
Ponds are designed to contain all process water and stormwater runoff during a 25-year, 24-hour storm or have a Contingency Plan fully protective of surface water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design calculations are available for manure storage system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Above-ground soil and clay lined manure ponds have a least 2 ft. freeboard? In-ground manure ponds have at least 1 foot of freeboard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The facility has a solids separation system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ponds are cleaned annually to maintain capacity and check liner integrity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The pumping system is maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are dead animals handled in a manner protective of surface water and groundwater quality? Yes No
 Description of Deficiencies (if any) or Additional Information: _____

A Manure Manifest form is required to be filled out and kept on the dairy site if manure is hauled off the dairy property. This is to ensure tracking of nutrients and ensure responsibility that manure is handled properly in a manner protective of water quality. Completed forms must be available to Regional Water Board staff during inspections and staff upon request. Has manure been hauled off site within the past year and is a Manure Manifest form on file at the dairy for this handling? Yes No N/A

E. Photo Documentation per Monitoring and Reporting Plan			
<p>Please attach photo documentation of compliance with required preseason pollution prevention measures.</p> <p>Photos of newly implemented pollution prevention measures to protect surface and groundwater shall be submitted. Examples of pollution prevention includes cleaning of manure ponds, stormwater separation from manured areas, scraping of manured areas, covering manure piles, compost, and feed storage areas, impermeable ground covering in these storage areas to prevent groundwater contamination, stream zone protection, and any other best management practices or control measures for water quality protection.</p> <p>Annually, please include <u>dated</u> photos of the watercourse assessment (Monitoring and Reporting Program, Section I, Item A.7. page 3). This includes photos of riparian areas, streambanks, watercourse crossings, and any potential erosion that could discharge to watercourses. Photos are to show current water quality protection and any projects that are in progress to improve water quality. Page 6 of this Annual Report has space to explain improvement projects.</p> <p>The objective of the Annual Report is to demonstrate that the dairy is ready for the wet season and will not discharge sediment and nutrients to surface waters or groundwater.</p> <p>Photo Documentation of Preseason Best Management Practices is Attached</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

F. Water Quality Sampling

The information below summarizes the water quality sampling requirements, as presented in the Monitoring and Reporting Program (MRP).

Surface Water Sampling

Surface watercourses that flow through the dairy property, including the production area, cropland, or pastures, must be sampled using grab samples at the point where watercourses enter and leave the property. Alternatively, if surface waters flow adjacent to the property but not through the property, and are located such that they could be impacted by activities at the dairy, the grab samples shall be collected upstream and downstream of the areas closest to the dairy property. Sampling shall take place during or directly following each of three (3) major storm events of one (1) inch or more per 24 hours, during the rainy season, beginning in the winter of 2016/2017. Three (3) measurements of electrical conductivity taken three (3) minutes apart shall be recorded during each sampling event at each location. Ammonia nitrogen, pH, and temperature shall be collected once at each sampling location for each sampling event during or following storm events described in this section above.

Electrical Conductivity (EC)	Mmhos
Total Ammonia Nitrogen (NH ₄)	mg/L
pH	
Temperature	°C

Is this dairy in a group monitoring plan? _____ If so, which group? _____

Groundwater Well Sampling

Representative wells currently used and located at the dairy, including domestic and agricultural supply wells, shall be sampled four (4) times total, approximately six (6) months apart. A sample must be collected in: (1) Spring 2016, (2) Fall 2016, (3) Spring 2017, and (4) Fall 2017. One (1) sample from each well shall be tested for the following parameters:

Constituent	Units
Nitrate	mg/L
Fecal Coliform Bacteria	MPN/100mL

Has all surface and ground water quality sampling been completed as described in the Monitoring and Reporting Plan? Yes No

Have all water quality results from the past 12 months been attached? Yes No

The MRP requires recording of visual observations, such as changes in stream color or turbidity at the time of sampling. Please include those observations below or in an attachment.

G. Best Management Practices

(In this section please describe the current condition and effectiveness of management measures not previously described elsewhere in this Annual Report. Please attach additional sheets if more space is needed to fully answer these topics)

Manure Ponds: Are the liners of the manure ponds currently protective of water quality (free of weeds, animal burrows, and cracks that may disturb the liner)? Please describe: _____

Do the manure ponds have sufficient storage capacity prior to the upcoming rainy season as required in the Order? Describe the method used to make this determination: _____

Please describe all new measures taken to prevent nuisances at the manure ponds. Nuisances include odors, breeding mosquitoes, damage from burrowing animals, damage from equipment during removal of solids, embankment settling, erosion seepage, excess weeds, algae, and other vegetation that could compromise the needed capacity or proper functioning of your facility and/or degrade water quality: _____

Riparian Protection: Are effective stream protections present in all pastures that prevent animal waste and sediment from entering waterways (example: bridges, culverts, rock crossings, fencing out animals, water troughs away from streams, shade away from streams, extensive vegetation, revegetation of bare areas, etc.):
Yes No N/A

Describe current water quality issues on the dairy property such as at stream crossings and riparian areas (example: stream bank trampling and compaction, soil erosion, lack of ground cover and riparian shade protection, and discharge of fecal matter, sediment, and nutrients):

Where there is evidence of significant impacts, the dairy owner or operator must develop riparian management protection measures and implement best management practices to control adverse impacts to water quality. What gradual improvements are being done to resolve adverse water quality impacts?

Erosion Control: Please describe all other measures not previously described, that prevent and minimize the occurrence of erosion and discharge of manure, feed, waste, and soil particles from the dairy to surface or groundwaters:

Groundwater Protection: Describe new measures taken to protect groundwater from contamination at wellheads, sinkholes, and tile drains:

Nutrient Management Planning:

In the past year, was manure and process water generated at your facility been applied to pastures, fields or crop lands at rates that are agronomically sound for the crop, soil, climate, special local situations, management system, and manure/wastewater characteristics? Yes No

Please explain: _____

Please describe the measures taken to avoid surface runoff of manure constituents from the dairy's land application areas: _____

Describe the measures taken to separate or divert stormwater from contacting manured areas, corrals, pens, and animal housing areas:

Describe the measures taken to minimize infiltration of manure-laden water into underlying soils within manured areas, corrals, pens, and animal housing areas:

H. Summary

Has all required monitoring been conducted? Yes No

Have all required reports been submitted to the Regional Water Board? Yes No

Does facility meet Regional Water Board Waiver criteria? Yes No

Reports and attachments shall be submitted (either by mail or electronically) by **November 30** of each year:

By mail:

North Coast Regional Water Quality Control Board
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Or electronically: Northcoast@waterboards.ca.gov

I. Certification of Report Preparer

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this report 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.

Printed Name

Title

Signature

Month/ day/year