

**California Regional Water Quality Control Board  
North Coast Region**

**Order No. R1-2019-0001  
General Waste Discharge Requirements  
For Dairies  
Within the North Coast Region**

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

**Scope of Coverage**

1. Order No. R1-2019-0001 (hereafter, Order) serves as general waste discharge requirements (GWDRs) for discharges of waste from dairy facilities that meet the terms and conditions of this Order.

This Order covers the management of process water, manure, and other organic materials at dairies, including the application of such materials to land. This Order also covers the discharge of wastes and water quality impacts from owned or leased dairy cattle grazing lands, dairy croplands, and dairy cattle raising lands that have the potential to discharge wastes to surface waters and groundwater. Other wastes illegal to dispose of at dairies, such as medicines, pesticides, chemicals, and fertilizers, must be disposed at appropriately permitted facilities.

This Order replaces the Regional Water Board's 2012 dairy General Waste Discharge Requirements (Order No. R1-2012-0002) and the Conditional Waiver (Order No. R1-2012-0003). Changes include coverage of new dairies, expanding dairies, reopening of inactive dairies, and goat, sheep, and water buffalo dairies if these dairies demonstrate compliance with the provisions of the Initial Study/Mitigated Negative Declaration per the California Environmental Quality Act. New requirements include a revised Monitoring and Reporting Program, including changes in water quality sampling parameters, a revised Water Quality Plan, a new Riparian Management Plan, and a requirement for Nutrient Management Plans for dairies of a minimum size.

2. Owners and operators of dairies discharging, or proposing to discharge, waste from a dairy in any manner that could affect the quality of the waters of the state within the North Coast Region (Region) and who have been designated by the Regional Water Board are hereinafter defined as "Dischargers" and are subject to the terms and conditions of this Order.
3. This Order classifies dairy facilities as "existing," "new," or "expanded."
  - a. "Existing dairy facilities" are those that were operating as of the time of adoption of this Order. Existing dairy facilities also includes dairies that were existing as of January 19, 2012 and have been continuously covered by a Regional Water Board dairy permit since 2012. It also includes those continuously covered dairies that were temporarily not in operation as a dairy as of the adoption date of

Waste Discharge Requirements for Dairies  
Order No. R1-2019-0001

this Order. Existing facilities applies to inactive dairies that apply to re-open per the conditions of this Order. Existing dairies includes cow, goat, sheep, and water buffalo dairies.

- b. “New dairy facilities” are those that were not yet operating as of the adoption date of this Order; and
  - c. “Expanded dairy facilities” are those that increase their herd size from the maximum milking herd size designated in a previous Notice of Intent (NOI) with the Regional Water Board (i.e. Orders R1-2012-0002 and R1-2012-0003 for existing cow dairies). Expanded facilities also includes dairies that increase their maximum milking herd size from the time that they are enrolled under this Order.
- 4.** This Order applies to owners and operators of dairies (hereinafter referred to as “Dischargers”) that either:
- a. Qualify as an “existing” dairy facility; or
  - b. Qualify as a “new dairy facility” or an “expanded dairy” facility and demonstrate compliance with the provisions of the California Environmental Quality Act (CEQA) in the form of a certified Environmental Impact Report (EIR), Mitigated Negative Declaration, or Negative Declaration. The CEQA document as part of this Order covers most existing, new, and expanded dairy facilities. These facilities also must:
    - i. Have submitted a complete Notice of Intent (NOI) to the Regional Water Board and paid the appropriate fee to the State Water Resources Control Board (State Water Board); and
    - ii. Have received a formal Notice of Applicability (NOA) or equivalent enrollment letter from the Regional Water Board indicating that they are required to comply with the terms and conditions of this Order.
- 5.** This Order applies to commercial dairies including:
- a. All existing cow dairies in operation on January 19, 2012, that have not closed or terminated;
  - b. Other existing dairies, including but not limited to, water buffalo, goat, and sheep dairies;
  - c. Dairies (as described above in 4. a.) that are inactive, as of the adoption date of this Order, whether for a short or long period of time, but are subsequently re-opened as a dairy; and

Waste Discharge Requirements for Dairies  
Order No. R1-2019-0001

- d. New or expanding dairies that demonstrate compliance with the provisions of the CEQA in the form of a certified Environmental Impact Report, Mitigated Negative Declaration, or Negative Declaration such as the CEQA document that is part of this Order.
6. This Order applies to all dairies. Smaller dairies milking less than 25 cows, 25 water buffalo, 100 goats, 100 sheep, or the combined equivalent must meet the Discharge Prohibitions in Section A of this Order but are not required to complete or submit a Notice of Intent (NOI-Attachment A), Water Quality Plan (WQP: Attachment D – Appendix 1), Nutrient Management Plan (NMP: Attachment D – Appendix 2), Riparian Management Plan (RMP-detailed in the Monitoring and Reporting Program and WQP), or Annual Reports (Attachment D-Appendix 3). The Regional Water Board Executive Officer may require these smaller dairies to enroll at any time if it is determined that there is a potential for discharge of waste to surface water or groundwater.
7. Dairies previously enrolled under the Conditional Waiver R1-2012-0003 or GWDR R1-2012-0002 must comply with the terms and conditions of this Order and must certify that their facility is structurally and operationally in compliance with the prohibitions and waste discharge specifications in this Order. Certification is done through a series of plans required including a WQP, RMP, NMP, Annual Reporting and water quality monitoring.
8. Existing goat, sheep, and water buffalo dairies must certify that their facility is structurally and operationally in compliance with all terms and conditions of this Order within two years of enrollment.
9. New, expanding, or reopening of inactive dairies must submit a WQP to the Regional Water Board and have an NMP developed for their dairy when submitting a NOI.
10. If any dairy cannot certify in the NOI or Annual Report that it meets the requirements of this Order, or if the Executive Officer determines that the dairy does not meet the Order requirements, then that dairy must submit a Report of Waste Discharge (Form 200) to the Regional Water Board for an individual permit.
11. Large concentrated animal feeding operations (CAFO)<sup>1</sup>, as defined by federal regulations, include dairies with 700 or more mature dairy cows. Dairies defined as large CAFOs that discharge stormwater from cropland where manure, litter, or process wastewater has been applied must be implementing an NMP upon enrollment under this Order. Such discharges can qualify as “agricultural

---

<sup>1</sup> 40 CFR section 122.23 (b)(4) defines a large CAFO as an operation that stables or confines as many as, or more than, 700 mature dairy cows, whether milked or dry, 10,000 sheep or lambs or 500 horses. The size thresholds for all animal sectors are listed in 40 CFR 122.23(b) and (c).

stormwater discharges,” not subject to NPDES permitting, if manure and wastewater are applied to the land in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater (40 CFR section 122.23(e)). Large CAFOs that discharge such stormwater without an NMP are in violation of the federal Clean Water Act (CWA) and may be fined for the discharge and/or required to enroll under an NPDES permit. This Order does not authorize discharges to surface water that would otherwise require an NPDES permit. Dairies that have a discharge requiring an NPDES permit must obtain coverage under NPDES Permit for Concentrated Animal Feeding Operations Within the North Coast Region, Order No. R1-2012-0001, or a subsequently adopted NPDES permit. Medium Animal Feeding Operations (AFOs) (200-699 mature dairy cows) and small AFOs (less than 200 mature dairy cows) may be designated as CAFOs by the Regional Water Board if the dairy discharges wastes to waters of the United States. Such designated CAFOs would then be required to develop an NMP and apply for coverage under a NPDES permit. A CAFO means an AFO which is defined as a Large CAFO or Medium CAFO by 40 CFR §§ 122.23 (4) and (6), or that is designated as a CAFO by the United States Environmental Protection Agency (USEPA) or the Regional Water Board.

- 12.** This Order applies to the disposal of waste generated by dairies including milk by-products. Milk processing activities, such as cheese-making, that generate additional waste and/or wastewater, may be co-mingled with the animal production waste stream. These additional wastes must be included in the facility’s WQP and NMP consistent with the technical standards specified in Attachment D - Appendices 1 and 2.
- 13.** 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. This Order does not apply to other types of waste, including, but not limited to, wastes such as cannery waste, septage, municipal or industrial sludge and/or biosolids, or similar types of waste generated onsite or brought onto the facility for disposal. Dischargers must apply for coverage under applicable general or individual WDRs as determined by the Regional Water Board prior to receiving and/or discharging such wastes.
- 14.** This Order applies to food waste if such materials are utilized for food for dairy animals or for nutrient application to farmland in accordance with the dairy NMP as described in this Order.
- 15.** 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 California Water Code (Water Code) section 13304.

16. The Discharger may be liable for penalties if the Discharger violates this Order, 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.
17. 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 Water Code Section 13263.

### **Water Quality Concerns**

18. Pursuant to the Water Code, Division 7, the Regional Water Board regulates the discharge of wastes that could affect the quality of the waters of the state, to ensure protection of the beneficial uses of both surface water and groundwater, and the prevention of nuisances. Dairies, as described herein, represent a potential source of waste discharges in the Region.
19. Dairies are operations where all the dairy animals are milked, confined, and/or fed in an area that has a roof, generating solid and liquid manure wastes that are collected and disposed of on land (crops and pastures) or offsite. Within the Region, the primary types of dairies are cow, water buffalo, sheep, and goat dairies. The majority of animal waste is produced by cow dairies in the North Coast Region. There are currently approximately 120 cow dairies operating within the Region, with total milking plus dry cow herd sizes ranging from 45 to 1,800 cows and averaging 300 milking head; 10 dairies milking up to 650 goats; two dairies each milking 30 water buffalo; and three dairies milking up to 100 sheep. All dairies in the North Coast Region are required to meet the conditions of this GWDR.
20. Dairies generate wastes that include, but are not limited to, manure, process wastewater, animal wash water, and any water, precipitation, or rainfall runoff that contacts animal confinement areas and/or raw materials, products, or byproducts such as milk, manure, compost piles, feed, bedding materials, silage, animal tissue or animal mortality. Wastewater may also contain certain chemicals such as detergents, disinfectants, and biocides. Waste from such facilities can contain significant amounts of pathogens, oxygen-depleting organic matter, sediment, nitrogen compounds, and other suspended and dissolved solids that can impact both groundwater and surface water if not properly managed. Daily operations may include activities that cause soil erosion and impacts to riparian habitats that result in degradation of the water quality of surface water and groundwater.
21. Dairy wastes are stored in retention ponds, in corrals, and/or in waste piles. These wastes are then applied to onsite cropland or pastures or transported offsite. The applied wastes are a source of nutrients to crops and pastures but, if improperly managed, can create nuisance conditions and cause pollution of surface water and groundwater. Adverse aquatic habitat impacts associated with improper waste management and application may include: nutrient enrichment resulting in algal blooms, organic waste loading resulting in lowered oxygen levels, pathogen loading that can cause threats to public health, siltation of aquatic habitat, high levels of

ammonia that are toxic to fish and aquatic invertebrates, and elevated levels of nitrates and other salts in groundwater.

### **Background**

**22.** Since 2012, the Regional Water Board has adopted the following Orders regulating waste discharges associated with dairy operations in the North Coast Region:

- a. Order No. R1-2012-0001 National Pollutant Discharge Elimination System for Concentrated Animal Feeding Operations within the North Coast Region, General NPDES No. CAG011001;
- b. Order No. R1-2012-0002 General Waste Discharge Requirements for Existing Cow Dairies in the North Coast Region;
- c. Order No. R1-2012-0003 Conditional Waiver of Waste Discharge Requirements for Existing Cow Dairies in the North Coast Region;
- d. Order No. R1-2015-0051 Conditional Waiver of Waste Discharge Requirements for Mello 3/Llano Oaks Dairy; and
- e. Order R1-2016-0045 Renewal of the Conditional Waiver of Waste Discharge Requirements for Existing Dairies.
- f. Upon adoption, this Order will supersede these previously adopted Orders except for Order No. R1-2012-0001 and they will be rescinded except for enforcement purposes.

**23.** Numerous watersheds throughout the Region are listed as impaired pursuant to Clean Water Act (CWA) section 303(d). The CWA requires states to address these impairments by developing Total Maximum Daily Loads (TMDLs) that examine these water quality problems, identify sources of pollutants, and specify actions that create solutions and restore beneficial uses.

**24.** Issuance of this Order provides an opportunity to include implementation plan requirements identified in Chapter 3-Water Quality Objectives and Chapter 4-Implementation Plans including Total Maximum Daily Loads of the Water Quality Control Plan for the North Coast Basin (Basin Plan).

**25.** The Basin Plan specifies implementation measures for each categorical pollutant source identified as contributing to the water quality impairment in specific watersheds. Livestock grazing lands and confined animal facilities, including dairies, are identified as categorical pollutant sources in certain watersheds. These facilities are required to implement site-specific management measures to control and reduce animal waste and sediment runoff. This Order implements the Basin Plan by requiring management measures for pollutant sources that will improve water quality in impaired watersheds.

**Regulatory Framework**

- 26.** Water Code 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 board a Report of Waste Discharge (ROWD) containing such information and data as may be required by the regional board, unless the requirement is waived pursuant to Water Code section 13269.
- 27.** Water Code section 13263(i) authorizes the regional board to prescribe general WDRs (GWDR) and/or waivers of WDRs for a category of discharges if the discharges are produced by the same or similar operations, involve the same or similar types of waste, require the same or similar treatment standards, and are more appropriately regulated under general WDRs or waivers than individual WDRs.
- 28.** The Regional Water Board finds that it is appropriate to issue a GWDR for dairies because:
- a. Waste discharges involve the same or substantially similar types of operations, namely operations where animals are confined, and wastes are managed by onsite storage, land application, or removal offsite;
  - b. They generate the same or similar types of waste, primarily animal waste; state regulations impose the same effluent limitations and operating conditions on dairies;
  - c. They have many of the same types of potential impacts to surface and groundwater and, therefore, require the same or similar monitoring; and
  - d. Given the time and resources necessary for effective regulatory oversight of dairies in the Region, they are more appropriately regulated under a GWDR than individual WDRs.

The Regional Water Board, however, may determine that specific individual dairies are not appropriately regulated under this GWDR and must obtain individual WDRs.

- 29.** Pursuant to this Order and Water Code section 13267, Dischargers must implement a Monitoring and Reporting Program (MRP: Attachment D). The MRP is necessary to ensure compliance with this Order's terms and provisions to prevent or reduce uncontrolled waste discharges and to protect water quality; it requires regular visual inspections, individual facility water quality sampling, reporting, and record-keeping. The Discharger shall submit all reports as specified in the MRP. Spill or Noncompliance reporting are required. The MRP requires routine sampling (or group sampling) of storm water runoff and/or surface waters on or near the facility. The MRP also requires sampling of domestic and/or agricultural wells for a representation of groundwater quality conditions. Monitoring consistent with a group monitoring plan approved by the Regional Water Board Executive Officer may fulfill individual dairy monitoring requirements. The Executive Officer may change the

substance and format of the MRP. Any future substantive changes to the MRP will be subject to public notice and comment. Advancements in nutrient management planning, budgeting and assessment methodologies may serve to support future modifications to the MRP.

- 30.** Reporting of actions implemented pursuant to GWDR terms and provisions is required in an Annual Report (Attachment D- Appendix 3) that is due to the Regional Water Board by November 30 each year beginning in 2021. 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 and the photo documentation required in the MRP. If a Discharger is covered by a group monitoring plan then the Discharger must indicate the associated group in the Annual Report, and the group is required to submit surface water monitoring results annually.
- 31.** This Order satisfies the State Water Board's 2004 Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy), which requires 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 (Basin Plans). Implementation of the Order will promote attainment of Water Quality Objectives and Basin Plan requirements. The Order incorporates antidegradation requirements as described in Findings 42-48; describes management practices and performance standards to be met, requires annual monitoring and reporting, and the development of management plans to protect water quality. These plans and reports provide a feedback mechanism to the Regional Water Board on the effectiveness of the management practices and set clear milestones for meeting objectives. The consequences for failure to meet Order requirements include modification of Order requirements to require additional management measures and mitigations, and administrative or civil enforcement action for failure to comply with Order conditions including a failure to meet reporting requirements.
- 32.** This Order is consistent with the requirements of the Statewide Minimum Standards for confined animal facilities, California Code of Regulations (Cal. Code Regs.), title 27, sections 22560-22565, which are attached to this Order as Attachment B (hereafter, the "Statewide Minimum Standards"). These Statewide Minimum Standards require containment of manure, wash water, and stormwater runoff from animal confinement areas. The Statewide Minimum Standards are the *minimum* standards for discharges of animal waste at dairies and must be implemented in waste discharge requirements.
- 33.** This Order includes consideration for potential impacts to groundwater associated with dairies. Since the adoption of the 2012 Dairy Orders, California groundwater data and various published studies related to dairies and groundwater impacts have

been evaluated to determine the effectiveness of current confined animal state regulations in protecting groundwater quality. Findings from these studies indicate that effective groundwater protection depends on whether subsurface conditions were adequately assessed in the siting, design, and operation of each facility. Since impacts to groundwater depend on site-specific considerations, facility-specific data are necessary to assess compliance with groundwater water quality objectives. Therefore, this Order requires sampling of existing groundwater wells, including existing monitoring wells, at any dairy that utilizes a waste pond to store and manage operational wastes.

**Water Quality Control Plan for the North Coast Basin**

**34.** The Basin Plan is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater. Economics were considered as required by law during the development of these objectives. It also includes programs of implementation to achieve water quality objectives. The Region's TMDLs and associated implementation plans are also part of the Basin Plan. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Board, Office of Administrative Law, and U.S. EPA, where required.

**35.** Pursuant to the Basin Plan, and Board plans and policies, including State Water Board Resolution No. 88-63, and consistent with the CWA, the existing and potential beneficial uses of waters in the North Coast Region that could be impacted by the discharge of wastes include:

- a. Municipal and Domestic Supply (MUN)
- b. Agricultural Supply (AGR)
- c. Industrial Service Supply (IND)
- d. Industrial Process Supply (PRO)
- e. Groundwater Recharge (GWR)
- f. Freshwater Replenishment (FRSH)
- g. Navigation (NAV)
- h. Hydropower Generation (POW)
- i. Water Contact Recreation (REC-1)
- 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)
- o. Preservation of Areas of Special Biological Significance (ASBS)
- p. Preservation of Areas of Special Rare, Threatened, or Endangered Species (RARE)
- q. Marine Habitat (MAR)
- r. Migration of Aquatic Organisms (MIGR)
- s. Spawning, Reproduction, and/or Early Development (SPWN)
- t. Shellfish Harvesting (SHELL)
- u. Estuarine Habitat (EST)
- v. Aquaculture (AQUA)

Waste Discharge Requirements for Dairies  
Order No. R1-2019-0001

- w. Native American Culture (CUL)
- x. Flood Peak Attenuation/Flood Water Storage (FLD)
- y. Wetland Habitat (WET)
- z. Water Quality Enhancement (WQE)
- aa. Subsistence Fishing (FISH)
- bb. Inland Saline Water Habitat (SAL)

- 36.** 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. In November 2004, the Regional Water Board adopted Resolution R1-2004-0087, the Sediment TMDL Implementation Policy. The goals of the Policy are to control sediment waste discharges to impaired water bodies so that TMDLs are met, sediment water quality objectives are attained, and beneficial uses are no longer adversely affected by sediment. Additionally, in July 2016, the Basin Plan was amended to add the Policy to Implement the Water Quality Objective for Temperature (Policy). The Policy describes the approach to implementing the water quality objectives for temperature in one cohesive policy.
- 37.** Prohibitions, provisions, policies, and other specifications contained in this Order implement the Basin Plan and the Water Code. Compliance with this Order will protect the beneficial uses listed above.
- 38.** 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.
- 39.** California Governor Brown Executive Order B-40-17 continues to make water conservation a way of life in California. This Order encourages water conservation. Information to encourage farm water conservation is in the WQP and the Annual Report, which are part of the MRP.
- 40.** State Water Board Resolution No. 2017-0012 states that Regional Water Boards are encouraged to identify opportunities to reduce methane emissions from dairies and concentrated animal feeding operations while achieving water quality. The California Department of Food and Agriculture (CDFA) website states that when livestock manure decomposes in wet conditions, it produces methane, a greenhouse gas 72 times more powerful than carbon dioxide. Dry handling of manure significantly reduces methane emissions. These reductions contribute to the state's overall short-lived climate pollutant strategy under Senate Bill 1383, which aims to

reduce California's methane emissions to 40 percent below 2013 levels by 2030. The Regional Water Board encourages North Coast dairies to apply for grants from [CDFA for manure management projects](#). Also, dairy operators are encouraged to visit the [California Air Resources Board website](#) to research the latest climate change programs that help dairies improve our state's air quality. Development of, and updating, NMPs can be the first step helping dairies acquire funding for projects that reduce methane emissions and improve air quality.

- 41.** CDFRA has, and may continue, funding air quality improvement projects on dairies in the region such as through the Alternative Manure Management Program (AMMP) and the Digester Program. Other funding sources may also be available to dairies in the future to improve air quality. Regional Water Board supports air quality improvement. Such projects may be permitted under this Order on a case-by-case basis. Dischargers covered under this Order must consult with the Regional Water Board about potential water quality impacts when proposing such projects. Regional Water Board will review and determine if each project protects water quality including the beneficial uses listed in Finding 35 above.

Construction and maintenance of best management practices are required to prevent discharges to surface water and groundwater.

### **Anti-Degradation**

- 42.** State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California", "Antidegradation Policy") requires 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. The Antidegradation Policy only allows change in existing high quality water 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 uses of such water, and will not result in water quality less than that prescribed in the policies. The Antidegradation Policy further requires that discharges comply with WDRs that will result in the best practicable treatment or control of the discharge necessary to assure that: (a) pollution or nuisance will not occur; and (b) the highest water quality consistent with the maximum benefit to the people of the state will be maintained. The Antidegradation Policy incorporates the federal "antidegradation" policy (Cal. Code Regs., tit. 40, § 131.12). This Order is consistent with these policies.
- 43.** High quality waters are those surface waters or areas of groundwater that have a baseline water quality better than required by water quality control plans and policies. This determination is made on a water body by water body and constituent by constituent basis. In the context of diffuse discharges regulated by a general order, the State Water Board recently provided the following guidance on determinations of whether a discharge impacts high quality waters: *When assessing baseline water quality for a general order, we find a general review and analysis of readily available data is sufficient. . . .Regional water boards should not delay the*

*implementation of a regulatory program in order to conduct a comprehensive baseline assessment and analysis—especially where, as here, the general order imposes essentially the same iterative approach for management practices and other requirements regardless of whether or not the receiving water is high quality.*<sup>2</sup>

The Regional Water Board has conducted a general assessment of the existing water quality data that is reasonably available and concludes that the discharges permitted under this Order may impact some water bodies that are high quality for some constituents.

- 44.** The Regional Water Board finds that any limited degradation that may occur in these high quality water bodies even following implementation of all applicable management practices designed to control discharges is to the maximum benefit of the people of the State. The Board has considered the social and economic significance of the dairy industry in the North Coast region and the important role that North Coast dairies provide in providing milk supplies and providing economic value and support to local communities. The Board finds that coupled with the environmental and water quality benefits that will result from implementation of the conditions in the Order, maintaining the North Coast dairy industry is consistent with the maximum benefit of the people of the state to prevent a loss of jobs and adverse impacts to local communities. The Board has additionally considered the impacts to drinking water supplies from potential discharges to groundwater from dairy operations. However, even where this is limited degradation of high quality groundwater, this Order sets the protection of water quality objectives as the floor to any degradation ensuring that drinking water beneficial uses are protected.
- 45.** The Regional Water Board further finds that the conditions and standards required by the Order will result in the implementation of Best Practicable Treatment or Control (BPTC) of discharges from dairy operations. The implementation of the measures outlined in the Order will limit any degradation and will not result in water quality less than that prescribed in the North Coast Water Board Basin Plan. Implementation of the measures outlined in the Water Quality Plan, including Nutrient Management Plan measures, Riparian Management Measures, and performance standards required by title 27 design standards will result in the BPTC of discharges. The Regional Water Board provides some flexibility to dairy operators in selecting the management practices that will achieve performance standards and Basin Plan requirements in compliance with Water Code section 13360, which provides that the Regional Water Board not dictate the precise manner of compliance.
- 46.** This Order prohibits discharges of waste to surface waters except in specified circumstances that are consistent with state and federal regulations. This Order

---

<sup>2</sup> *In the Matter of Review of Waste Discharge Requirements General Order No. R5-2012-0116 for Growers Within the Eastern San Joaquin River Watershed that are Members of the Third-Party Group, SWRCB Order No 2018-0002. (2018).*

requires Dischargers to manage waste and waste disposal to prevent degradation of groundwater and requires Dischargers to manage waste to minimize odors and prohibit nuisance conditions. The Regional Water Board finds that under normal operating conditions:

- a. The discharge conditions and effluent limitations established in this Order will ensure that the existing beneficial uses and quality of waters of the state in the North Coast Region will be maintained and protected, and
- b. Any limited degradation of high quality water that results from discharges regulated by this Order will be consistent with the Antidegradation Policy if the terms and conditions of this Order are met.

**47.** This Order requires that discharges of waste, as described in Finding 18 above, from dairies shall not cause surface water or groundwater to be degraded, to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance. This Order also requires monitoring of surface water and groundwater to demonstrate compliance with water quality objectives. The attached MRP requires water quality sampling and reporting. Results above benchmark values may result in additional sampling, additional required work plan submittals, improved best management plan implementation, and could result in enforcement actions. The effectiveness of management measures will be evaluated through required ground and surface water monitoring and reporting, including annual report submission. Management measures and monitoring may be modified as water quality data are assessed and reported, and whenever site evaluations show that measures need to be improved to meet water quality standards.

**48.** The Order requires groundwater monitoring for nitrogen to ensure that dairies are preventing adverse nitrate impacts to groundwater. Nitrate is the most common chemical contaminant in the world's groundwater aquifers. Nitrate is produced in the atmosphere from nitrogen and occurs naturally in groundwater at concentrations typically below 2 mg/L as N (SWRCB 2017<sup>3</sup>). Inorganic nitrogen may be present in the form of ammonia, nitrite, or nitrate, depending on the oxidation-reduction state of the groundwater. High concentrations of nitrate in groundwater are often associated with the use of fertilizers or animal/human wastes. The United States Geologic Survey (USGS) has estimated that nitrate exceeded background concentrations in 65 percent of shallow wells (<100 feet) in agricultural and urban areas (USGS 2010<sup>4</sup>). Anthropogenic sources of nitrate include its application as a fertilizer for agriculture, and livestock, when in concentrated numbers, produce nitrogenous waste that can leach into groundwater (USGS 2010). Nitrate concentrations in drinking water in excess of the maximum contaminant level (MCL) of 10 mg/L as

---

<sup>3</sup> [SWRCB Nitrate Fact Sheet 2017](#)

<sup>4</sup> Mathany, T.M., Dawson, B.J., Shelton, J.L., and Belitz, Kenneth, 2011, Groundwater-quality data in the northern Coast Ranges study unit, 2009: Results from the California GAMA Program: U.S. Geological Survey Data-Series 609, 92 p.

nitrogen (N), equivalent to 45 mg/L as NO<sub>3</sub>. The current state and federal MCLs for nitrate and nitrite are based on the occurrence of infantile methemoglobinemia (blue-baby syndrome resulting from ingestion of nitrate-contaminated water). The two principal studies used as the basis of these standards are the studies of Bosch et al. (1950<sup>5</sup>) and Walton (1951<sup>6</sup>). The Order requires dischargers to submit a comprehensive Work Plan to prevent nitrate increases in groundwater.

### **California Environmental Quality Act**

**49.** The Regional Water Board is the lead agency for this Order (Project) under CEQA (Public Resources Code section 21000 *et seq.*). The Regional Water Board prepared and circulated an Initial Study/Mitigated Negative Declaration (IS/MND) for the Project for a 33-day comment period. Regional Water Board adoption of the Mitigated Negative Declaration is included in this Order. The Regional Water Board has considered the Mitigated Negative Declaration, as well as all comments, and finds that there is no substantial evidence that this Order will have a significant effect on the environment. The Regional Water Board further finds that the mitigation measures identified in the Mitigated Negative Declaration, as well as the program for monitoring and reporting on such mitigation measures, will keep impacts to less-than-significant levels, and are therefore required as conditions of this Order. The Regional Water Board's decision is based on the record as a whole for the Project, which is available at the Regional Water Board office. The Mitigated Negative Declaration reflects the Regional Water Board's independent judgment and analysis. The Regional Water Board will file a Notice of Determination in accordance with title 14, California Code of Regulations section 15075 within five days of the adoption of the Order.

**50.** Facilities defined as “reopening of an inactive dairy,” “new,” or “expanding” must meet the conditions and be compliant with the provisions in this GWDR including the attached CEQA document (Attachment F: Initial Study/Mitigated Negative Declaration). A Notice of Intent (NOI – Attachment A) and the appropriate filing fee (website noted on NOI) must be submitted to the Executive Officer to qualify for coverage under this GWDR. Completing the NOI includes demonstrating that:

- a. Any potential impacts to wetlands and vernal pools have been addressed in permits pursuant to CWA sections 401 or 404;
- b. All dischargers must comply with Fish and Game Code Section 1600 *et seq.* Lake and Streambed Alteration requirements;

---

<sup>5</sup> Bosch HM, Rosenfield AB, Huston R, Shipman HR, Woodward FL (1950). Methemoglobinemia and Minnesota well supplies. *J Am Water Works Assoc* 42(2): 161-170.

<sup>6</sup> Walton G (1951). Survey of literature relating to infant methemoglobinemia due to nitrate-contaminated water. *Am J Public Health Nations Health* 41(8 Pt 1): 986-996.

- c. The Discharger has obtained coverage under the State Water Board's Construction General Stormwater Permit, if necessary;
- d. The Discharger has obtained a Timberland Conversion Permit, if necessary;
- e. The development of the dairy is in compliance with any applicable county regulations and ordinances, including grading, construction, building ordinances, and groundwater regulations and ordinances;
- f. All impacts to special-status species have been fully mitigated; and
- g. That all potential impacts to cultural resources will be appropriately addressed and mitigated consistent with the Mitigated Negative Declaration.

**51.** Facilities that replace the dairy by rebuilding most or all new structures in a new location on the landowners' property are considered a new dairy and must meet all conditions of this Order including mitigations for new dairies in the IS/MND to meet CEQA and environmental protections.

**52.** Food and Agricultural Code section 33487 exempts state agencies from any requirement to prepare an Environmental Impact Report for CAFOs under the following circumstances: (1) when the CAFO will be constructed and operated in accordance with the minimum standards in Chapter 5 of the Food and Agricultural Code; (2) where applicable local agencies have completed all necessary reviews and approvals including that required by CEQA; and (3) 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.

**53.** The Regional Water Board has satisfied its obligation to address tribal cultural resources under the notification and consultation provisions of Public Resources Code – Assembly Bill 52 (Gatto). Tribes on the SWRCB Consultation List were contacted in July 2017. One tribe submitted a letter requesting notification and consultation. Regional Water Board staff consulted with representatives of that tribe over a 12-month period. The tribe's concerns were considered when drafting this Order. Protection of tribal cultural resources is discussed in Tribal Cultural Resources Mitigation Program (Attachment E), the WQP (Appendix 1); and the Annual Report (Appendix 3).

### **Safe Drinking Water Act**

**54.** It is the policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring Dischargers to meet water quality objectives, designed to protect human health and ensure that water is safe for domestic use.

**Public Notice**

- 55.** The Regional Water Board has reviewed the contents of this Order and all evidence concerning this matter, written public comments, and testimony provided at the public hearing on August 15, 2019, in Santa Rosa and hereby finds that the adoption of this Order is consistent with the Basin Plan and is in the public interest.
- 56.** The Regional Water Board has publicly notified interested agencies and persons of its intent to issue this Order for discharges of wastes from dairies including associated croplands and grazing operations and has provided them with an opportunity for a public meeting and an opportunity to submit comments.

**THEREFORE**, the Regional Water Board hereby approves and adopts the Mitigated Negative Declaration (Attachment F) prepared for this Order, and directs the Executive Officer to file all appropriate notices; and

**IT IS HEREBY ORDERED** that the Dischargers, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

This Order applies to all dairies milking a minimum of 25 cows, 25 water buffalo, 100 goats, 100 sheep, or the equivalent during any time within a calendar period. The Regional Water Board Executive Officer may require smaller dairies to enroll at any time if it is determined that there is a potential for discharge to surface water or groundwater. Smaller dairies are not required to enroll in this program. However, these smaller dairies must meet minimum standards for water quality protection including meeting the Discharge Prohibitions (below) regarding no discharges or potential discharges to surface water or groundwater.

**A. DISCHARGE PROHIBITIONS**

- 1.** The discharge of waste classified as hazardous (Cal. Code Regs., tit. 23, §2521(a)) is prohibited.
- 2.** The collection, treatment, storage, discharge, or disposal of waste at a dairy shall not cause a condition of nuisance, contamination, pollution, or degradation of surface water or groundwater (as defined in Water Code section 13050).
- 3.** The discharge of waste from a dairy that causes or contributes to an exceedance of any applicable water quality objective in the Basin Plan, or any applicable state or federal water quality criteria, or a violation of any applicable state or federal policies or regulations, is prohibited.
- 4.** Discharges of manure, litter, process wastewater, or other wastes from the land application area that do not comply with the Statewide Minimum Standards, MRP, WQP, and NMP are prohibited. The application of manure, process wastewater, or other waste to a land application area in a manner that results in the discharge of wastes is prohibited.

5. In accordance with the Statewide Minimum Standards (Cal. Code Regs., tit. 27, §§ 22561), the Discharger shall prevent animals at their facility from entering any surface water within the confined area.
6. Discharges of facility wastewater to disposal fields shall not result in surface runoff from disposal fields and shall be managed to minimize percolation to groundwater (Reference: Statewide Water Quality Regulations for Confined Animal Facilities -Cal. Code Regs., tit. 27, §§ 22563(b)).
7. A discharge of storm water 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.
8. The discharge of waste to surface water via tile drain lines or irrigation return flow (tailwater) is prohibited.
9. The disposal of dead animals in any liquid manure or wastewater retention pond 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.
10. The application or discharge of manure, process water, or waste to lands not owned, leased, or controlled by the Discharger without written permission from the landowner and in a manner not in compliance with this Order is prohibited.
11. The direct discharge of wastewater into groundwater via backflow through water supply or irrigation supply wells is prohibited.
12. 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.
13. The direct or indirect discharge of waste from a manure pond or waste pond to surface waters is prohibited.

**B. WASTE DISCHARGE SPECIFICATIONS**

**1. PRODUCTION/CONFINED AREA**

- a. Facilities shall be designed, constructed, operated, and maintained to retain all waste, wastewater flow, and stormwater contacting manured areas that are likely to accumulate up to and during a 25-year, 24-hour storm event. Management of the facilities shall be in accordance with a site-specific WQP consistent with the technical standards specified in Attachment B. (Cal. Code Regs., tit. 27, §22562(a).)

- b. In addition to manure waste and wastewater generated from stormwater contacting manured areas, the Discharger must properly contain and manage all other wastes including, but not limited to, silage leachate, compost leachate, dead animals, waste milk, veterinary medical waste, solid and liquid waste from onsite slaughtering, solid and liquid waste from onsite food processing (such as cheese), spoiled feed, bedding, treated wastewater, and any precipitation contacting these materials. Examples of proper containment and management to prevent surface water and groundwater pollution include routing waste and contaminated runoff to manure ponds, preventing stormwater from unnecessarily contacting waste, and storing waste in secure locations. Specific pollution prevention measures must be included in the facility's WQP.
- c. All precipitation and surface drainage outside of manured areas, including that from roofed areas and tributary drainages, shall be diverted away from confined and/or manured areas, unless such drainage is fully retained. (Cal. Code Regs., tit. 27, §22562(b).)
- d. All animal confinement areas and feed/waste storage areas shall be managed to minimize standing water and maximize the infiltration of water into underlying soils.
- e. All confined animals shall be fenced or excluded from any surface water or perennial streams passing through the confined area (within the Production Area). Creek crossings within the confined areas shall be bridged in a manner that prevents animal waste from entering the waterway.

## 2. RETENTION PONDS

- a. Retention ponds and manured areas at dairies 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 flows. Dairies existing before November 27, 1984, and that are protected against 100-year peak stream flows must continue to provide such protection. Dairies, or portions thereof, that began operating after November 27, 1984, shall be protected against 100-year peak stream flows. (Cal. Code Regs., tit. 27, §22562(c).)
- b. All existing retention ponds must be, at a minimum, lined with, or underlain by, soils that contain at least ten (10) percent clay and not more than ten (10) percent gravel or artificial materials or materials with equivalent impermeability or include additional lining materials necessary to comply with this Order's Discharge Prohibitions No. 2 and No. 3. (Cal. Code Regs., tit. 27, §22562(d).)
- c. Retention ponds 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.

- d. Retention ponds (or expanded ponds) constructed after adoption of this Order must comply with Natural Resources Conservation Service (NRCS) Waste Storage Facility Code 313 including a maximum specific discharge (unit seepage rate) of  $1 \times 10^{-6}$  cm/sec. Such ponds may not be used until the Discharger submits a report to the Regional Water Board verifying that the pond liner meets this requirement. Waste shall not be placed into the retention pond until after the Regional Water Board notifies the Discharger in writing that the report is acceptable.
- e. Retention ponds shall be managed to have sufficient freeboard, but in no case less than two feet in partially or completely aboveground ponds and one foot in pond structures that are completely in ground. Freeboard shall be measured vertically, from the water surface up to the point on the surrounding berm or dike having the lowest elevation and shall be designed and constructed to prevent overtopping as a result of windy storm conditions. Lesser freeboard may be approved by the Executive Officer if documented by a registered civil engineer that structural integrity and required capacity will not be compromised with the proposed freeboard.
- f. Following a storm event, the Discharger shall restore the wastewater holding capacity of retention ponds, if necessary, in a timely manner and in a manner consistent with the WQP and NMP.
- g. Retention pond clean-out shall occur annually, at a minimum, and should be conducted prior to the start of the rainy season, but no later than October 31. Bi-annual clean-out may be approved by the Executive Officer if the Discharger submits documents with the Annual Reports to the Regional Water Board verifying that required capacity will not be compromised.

### 3. LAND APPLICATION AREAS

- a. Application of solid and liquid waste (see definition of waste which includes manure, fertilizer, compost, vegetative matter, or animal products) shall be conducted in a manner that prevents the discharge of the waste to surface waters or flood-prone areas. The application shall also minimize percolation of waste to groundwater.
- b. Application of solid or liquid waste to land shall be at site-specific rates based on the nutrient value of the manure, crop type, soil type, climate, and special local conditions (e.g. slope, distance to water body, and application method). Discharges to land shall not exceed the amount needed to meet crop demand and shall be conducted in accordance with the facility's WQP and NMP,

consistent with the technical standards specified in Attachment D – Appendices 1 and 2.

- c. Applications of solid or liquid waste to land, including spray irrigation, must not be conducted when it is raining or when soils are saturated, must not result in runoff to surface waters, and must infiltrate completely within 72 hours after application. Soil is saturated when it has reached its maximum water content.
- d. Solid and liquid waste shall not be applied or stockpiled closer than 100 feet from any downgradient surface waters, open tile lined intake structures, sinkholes, agricultural or domestic well heads, or other conduits to surface waters, unless there is a 35-foot wide vegetative buffer or a physical barrier that prevents runoff to surface waters. Alternative conservation practices or field-specific conditions that will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback or 35-foot vegetative buffer may be proposed to Regional Water Board staff for approval. During the rainy season, manure stockpiles located in an area that could discharge to surface waters must be covered to prevent runoff.
- e. Large CAFOs that are eligible to enroll under this Order must implement an adequate NMP (in accordance with the technical standards specified in Attachment D – Appendix 2) prior to discharging and prior to obtaining coverage if they will discharge stormwater from cropland where manure, litter, or process wastewater has been applied.

#### 4. RIPARIAN AREAS

Dairies are required to submit an RMP by November 30, 2020. Until the RMP is fully implemented, riparian areas on dairy property shall be managed to protect water quality including compliance with the performance measures listed below. Dischargers may propose alternative management measures that provide equal or better protection subject to approval by the Regional Water Board Executive Officer.

- a. Riparian areas are managed in a manner that allows the natural establishment and growth of native vegetation;
- b. Riparian areas are managed in a manner that allows sufficient vegetation to prevent, minimize, and control surface erosion;
- c. Riparian areas are managed in a manner that maintains their essential functions supporting beneficial uses (e.g. sediment filtering, woody debris recruitment, streambank stabilization, nutrient cycling, pollutant filtering, shading);

- d. Periodic grazing in riparian areas is limited to periods when impacts to woody species are minimized;
- e. Grazing within riparian corridors occurs for short durations, and only when forage consisting of non-woody vegetation is available;
- f. Livestock are removed from riparian areas when stubble height reaches 4 inches, or livestock shift preference to browsing of woody species, whichever occurs first;
- g. Livestock are prevented from disturbing sediment discharge sites and other unstable features adjacent to watercourses;
- h. Creek crossings shall be designed and constructed in a manner that prevents, minimizes and controls animal waste from entering the waterway;
- i. In confined animal areas, livestock shall be excluded from any surface water or perennial streams passing through the confined area; and
- j. Grazing in riparian areas shall be conducted in a manner that prevents, minimizes, and controls the discharge of waste to surface waters.

#### 5. TRIBAL CULTURAL RESOURCES PROTECTION

The Tribal Cultural Resources Mitigation Program (Attachment E) is required by this GWDR and the MND. Dairy operations must familiarize themselves with information in Attachment E and follow the steps indicated if archaeological resources are discovered on the dairy land.

#### 6. COMPOST

- a. Composting for use on the dairy is encouraged and is covered by this Order, however, conditions do apply. Please refer to the [California state composting regulations](#).

Composting operations have the potential to degrade water quality (e.g. nitrate, salinity, pathogens, oxygen-reducing materials, sediment, and other waste constituents).

Implementation of best practicable treatment or control can prevent or limit the degradation. Composting operation setbacks from water supply wells and surface water bodies reduce pathogenic risks by coupling pathogen inactivation rates with groundwater travel time to wells or other potential exposure routes (e.g. water contact activities). Compost operations shall be setback at least 100 feet from the nearest surface water body and/or the nearest water supply well. A lesser setback distance may be allowed by the Regional Water Board if the discharger can demonstrate that the groundwater, geologic, topographic, and well construction conditions at the

site are adequate to protect water quality. All nutrients applied to fields, including compost, must be included in the dairy's NMP and applied at agronomic rates. The discharge of any of the following wastes, including storage thereof, at the dairy composting operation is prohibited: Medical wastes as defined in the Health and Safety Code section 117690, radioactive wastes, septage, sludge (water treatment, sewage, or industrial), wastes classified as "designated" as defined in Water Code section 13173, wastes classified as "hazardous" as defined in CCR, title 22, section 66261.3, or wood containing lead-based paint or wood preservatives, or ash from such wood.

Dairies that sell compost and store the minimum amount of materials required by DWQ Compost Order 2015-0121, or revised DWQ Compost Order, must comply with the water quality protection requirements in the State Water Board – Division of Water Quality Order [DWQ 2015-0121](#). Otherwise, agricultural composting is exempt from the DWQ Order such as when utilized on the dairy.

- b. Land Application of uncomposted materials, such as manure, vegetative matter from the dairy site, or materials brought onto the dairy, must meet state regulations for the protection of water quality as stated on the [CalRecycle website](#). Limits at the time of land application include maximum acceptable metal concentrations, pathogen density limits, zoning, and use.

## 7. ODORS

The California Air Resources Board defines public exposure to offensive odors as a potentially significant impact. The operation and maintenance of existing dairies involves the collection and management of manure and materials contacting manure, including storm water. Each facility utilizes site-specific management measures including, but not limited to, manure solids separators, anaerobic digestion, composting, manure wastewater spray irrigation, and/or spreading of manure solids in the fall for crop fertilization. The addition of any new, expanding, and the reopening of inactive dairies, could add odors above existing conditions.

Dairy operators are required to implement best management practices to reduce emitting odors to neighboring properties and public roadways. This is a requirement of the IS/MND. One example is to have a pasture-based dairy with rotational grazing thereby reducing the concentration of cattle in any one area for long periods of time. Manure piles are required to be spread on fields for plant fertilizer or hauled offsite regularly away from the dairy production area. Dairies must implement Best Practicable Treatment or Control practices to reduce objectionable odors.

**C. PROVISIONS**

1. The Discharger shall comply with all applicable provisions of the Water Code, applicable provisions of title 27 of the California Code of Regulations, and the Basin Plan.
2. The Discharger shall comply with the attached MRP and develop and implement site-specific management plans, in accordance with MRP requirements. All existing plans must be updated, and new plans developed in accordance with the technical standards specified in Attachments D including Appendices 1, 2, and 3. Plans must be completed within the schedule outlined below in Section J. All management plans must comply with the mitigation measures in the attached IS/MND. Mitigation measures identified in the Mitigated Negative Declaration to keep impacts to less-than-significant levels, as well as a program for monitoring and reporting on such mitigation measures, are required as conditions of this Order. These mitigation measures are listed in the MRP.
3. If the Discharger's facility requires additional management practices and/or physical improvements to comply with this Order, a detailed improvement schedule, acceptable to Regional Water Board staff, must be developed and implemented. Improvement progress must also be reported in the Annual Report.
4. If the Discharger observes deficiencies, defects, and/or impending failures in any of the manure-contacted water conveyances, controls, and/or retention structures, the Discharger shall take immediate action to correct and/or prevent any unauthorized release. Records of such actions shall be kept and maintained as required in the MRP. The facility management plans shall be updated to include corrective management measures needed to avoid a recurrence of the observed condition.
5. If onsite or offsite monitoring results (visual or water quality testing) indicate that the Discharger's facility (including land application areas) is causing a condition of nuisance, contamination, pollution, or degradation of surface water or groundwater, the Discharger shall take immediate corrective action to cease such pollutant discharges. The corrective action must be documented and submitted with a Noncompliance Report, as required by the MRP.
6. Monitoring data to meet the requirements of the Order must be collected and analyzed in a manner that assures the quality of the data. The Executive Officer may require that monitoring data be submitted in a format suitable for uploading to an electronic database specified by the Executive Officer. The MRP discusses the required method for submission of monitoring data.
7. Manifests are required to be kept onsite to record transfer of waste to outside facilities and must be kept as part of the NMP. The requirements for such third-party agreements are outlined in the NMP.

Waste Discharge Requirements for Dairies  
Order No. R1-2019-0001

8. The Discharger shall comply with all federal, state, county, and local laws and regulations pertaining to the discharge of wastes from the facility that are no less stringent than the requirements of this Order.
9. 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, or local laws, nor guarantee the Discharger a capacity right in receiving waters.
10. This Order does not convey any property rights or exclusive privileges. In accordance with Water Code section 13263(g), "No discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights."
11. This Order does not authorize any act that results in the taking of 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 Game Code §§ 2050-2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531-1544). Dischargers shall be responsible for meeting all applicable requirements of the Endangered Species Acts. A discharge that is deleterious to fish, plant life, mammals, or bird life or otherwise in violation of 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.
12. Upon presentation of credentials or in response to a complaint or report of noncompliance, 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. Access to review and/or 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.

13. The Discharger shall maintain a copy of this Order, the dairy's WQP, NMP, and RMP at the site so as to be available at all times to site-operating personnel. The Discharger shall ensure that all site-operating personnel are familiar with the content of this Order and each management plan. The WQP, NMP, and RMP must be available to Regional Water Board staff during inspections and must be submitted to the Regional Water Board staff upon request.
14. 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. If there is any conflicting or contradictory language between this Order and the associated attachments that outline technical requirements for the MRP, WQP, or NMP, the language in the Order shall govern over the other documents.
15. Compliance determination with the terms of this Order shall be based on the following:
  - a. Inspections by Regional Water Board staff;
  - b. Evaluation of the completed Annual Report and required information submitted according to the MRP, including monitoring results, completed WQP and NMP; and
  - c. Any other information deemed necessary by the Executive Officer.
16. 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 may be eligible for generating credits as allowed under an approved nutrient offset program, water quality credit trading program, or other similar TMDL implementation program. Any new TMDL's adopted for watersheds after the adoption of this Order may result in additional monitoring requirements in the MRP.

**D. MODIFICATIONS TO REQUIREMENTS**

The Executive Officer may consider written requests for modifications to specific Waste Discharge Specifications and Provisions of this Order. Any requested exceptions or modifications to these requirements must be justified and submitted to the Executive Officer at least 30 days prior to deadlines or potential threats of discharge to surface water or groundwater quality. Exceptions or modifications must be approved in writing by the Executive Officer, otherwise the specifications and provisions are required as defined in this Order.

**E. EXISTING DAIRIES**

1. Existing cow dairies already enrolled under a previous North Coast Dairy Order (R1-2012-0002, R1-2012-0003, R1-2015-0051, or R1-2016-0045), must submit a completed NOI (Attachment A) to the Regional Water Board by **November 30, 2019**. No filing fee is necessary.
2. Other existing dairies such as goat, sheep, or water buffalo dairies not previously enrolled in a North Coast Dairy Order, must submit a completed NOI to the Regional Water Board by **November 30, 2019**.

**F. REOPENING AN EXISTING BUT INACTIVE DAIRY**

In order to be eligible for coverage under this Order, those seeking to start-up a new dairy operation, utilizing an existing but inactive dairy facility, must comply with the following conditions prior to start-up and enrollment:

1. Dischargers must comply with the provisions of CEQA including the Mitigated Negative Declaration in Attachment F;
2. Dischargers must develop a site-specific WQP and NMP, in accordance with the technical standards outlined in this Order. All required plans must be submitted to Regional Water Board for review, either attached to a completed NOI, or separately, prior to permit coverage.
3. Retention ponds must comply with NRCS Waste Storage Facility Code 313, including a maximum specific discharge (unit seepage rate) of  $1 \times 10^{-6}$  cm/sec. Such ponds may not be used until the Discharger submits a report verifying that the pond liner meets this requirement.
4. If operations include the same or fewer dairy animals than the existing infrastructure is designed to accommodate, then the operation is designated as the reopening of an inactive dairy. If the inactive facility is going to be expanded to accommodate more animals than the existing infrastructure, then follow G. below for expanding facilities. If all or most buildings are going to be re-built, then follow G. below for new facilities. See NOI page 1 for designating the type of dairy facility.

**G. OPENING A NEW OR EXPANDING FACILITY**

In order to be eligible for coverage under this Order, Dischargers constructing a new or expanding facility must comply with the following conditions prior to start-up:

1. Dischargers must comply with the provisions of CEQA including the Mitigated Negative Declaration in Attachment F;

2. Dischargers must demonstrate compliance with the Coastal Act and that all local, state and federal permits have been obtained for the construction by submitting a completed NOI;
3. Dischargers must develop site-specific management plans applicable to the dairy operation in accordance with the technical standards outlined in this Order. Such plans include a WQP for confined areas and NMP for lands where manure products are applied; and
4. New retention ponds or existing retention ponds proposed for re-use must comply with NRCS Waste Storage Facility Code 313, including a maximum specific discharge (unit seepage rate) of  $1 \times 10^{-6}$  cm/sec. Such ponds may not be used until the Discharger submits a report verifying that the pond liner meets this requirement.

**H. PERMIT REOPENING, REVISION, REVOCATION, TERMINATION, AND RE-ISSUANCE**

1. The Regional Water Board may modify, revoke, and/or reissue this Order at any time.
2. 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 (NOT) 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.
3. To assume operation under this Order, the succeeding Discharger following a transfer must submit a completed NOI to the Regional Water Board within 30 days of receipt of such notice. The succeeding Discharger is not authorized to discharge under the Order and may be subject to enforcement until the Executive Officer approves the NOI.
4. In the event of closure or change in land use of the Discharger's facility, the Discharger shall file a NOT in the form of a letter that explains the extent of the change in operation, measures taken to close and/or change the operation, and Discharger contact information (if changed). Prior to NOT approval, all manure and waste-impacted soil is to be disposed of in a manner that will not pose a threat to surface water or groundwater quality or create a condition of nuisance. The NOT is to be submitted to the Regional Water Board office within 30 days of closure or change in land use.

5. The Regional Water Board staff shall review the NOT 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(s) regarding approval or disapproval of the NOT.
6. If more stringent requirements are necessary to implement or be consistent with any total maximum daily load (TMDL) adopted by the Regional Water Board to achieve applicable water quality standards pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise and modify this Order.
7. This Order may be reopened to address any changes in state or federal plans, policies, or regulations that would affect the quality requirements for the discharges and as authorized by federal and state law.
8. The Executive Officer may at any time terminate coverage under this Order as to a particular Discharger if the Discharger fails to comply with this Order; such termination is in the public interest; the activities could adversely affect beneficial uses of waters of the state; or the Executive Officer determines, based on changes to the Discharger's facility, that coverage under individual WDRs or an NPDES permit is more appropriate.

**I. ENFORCEMENT**

1. Section 13350 of the Water Code provides that any person who violates a waste discharge requirement, other conditions listed in section 13350, may be subject to administrative civil liability in an amount up to \$5,000 per day or violation, or \$10 per gallon of discharge. If the matter is referred to the Attorney General for judicial enforcement, a higher liability of \$15,000 per day of violation, or \$20 per gallon of discharge may be imposed.
2. Section 13268 of the Water Code provides that any person who fails to furnish a technical or monitoring program or who falsifies any information provided in a technical or monitoring report may be subject to administrative civil liability in an amount not to exceed \$1,000 per day of violation. If the matter is referred to the Attorney General for judicial enforcement, a higher liability of \$5,000 per day of violation may be imposed. Higher penalties may also be imposed for any person that knowingly commits any violation in section 13268 of the Water Code.
3. Large CAFO that discharges agricultural stormwater from land application areas under its control without implementing an adequate NMP is discharging without permit in violation of the CWA and may be fined for the discharge and/or required to enroll under an NPDES permit.

## **J. REQUIRED REPORTS AND NOTICES**

Pursuant to Water Code Section 13267, an MRP is included with this Order. The MRP requires the Discharger to design water quality protection plans, conduct monitoring, and to submit Annual Reports by November 30 of each year. The MRP requirements in this Order are necessary to determine compliance with the conditions of this Order and to determine the discharges impacts, if any, on water quality. As such, the burden, including costs, of this monitoring bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.

This Order and the associated MRP contains a schedule of compliance. The Discharger must complete the following tasks:

### **1. Notice of Intent**

An NOI (Attachment A) is required for all dairy facilities specified below. In order to obtain coverage under this Order, a dairy facility must complete and submit the NOI to the Regional Water Board and receive a letter from the Executive Officer acknowledging enrollment.

Dairies milking a minimum of 25 cows, 25 water buffalo, 100 goats, or 100 sheep, must submit the NOI including:

- a. Existing dairies previously covered by R1-2012-0002, R1-2012-0003, R1-2015-0051, or R1-2016-0045;
- b. Currently operating dairies, such as goat/sheep/water buffalo dairies, that were not previously covered by a Regional Water Board dairy permit;
- c. Dairies that are reopening on a previously inactive dairy site;
- d. New or expanding dairy facilities; and
- e. The NOI shall be completed by a representative of the dairy. The NOI must be submitted to the Regional Water Board no later than **November 30, 2019.**

### **2. Water Quality Plan (WQP)**

Existing dairies are required to prepare, implement, and submit a WQP, as described in Attachment D – Appendix 1, by **November 30, 2020.** Dairies opening after the adoption date of this Order are required to prepare, implement, and submit a WQP within one year of enrollment under this Order. The WQP is to ensure that the facility is designed, constructed, operated and maintained to meet all conditions of this Order including Statewide Minimum Standards and to prevent conditions of nuisance or adverse impacts to groundwater and surface water. The WQP includes a requirement to develop a Riparian Management Plan as described below. A copy of the WQP must be kept at the dairy and made available upon request by Regional Water Board staff during inspections.

**Riparian Management Plan (RMP):** The WQP contains requirements for a Riparian Management Plan, which states:

- a. Dischargers shall implement riparian management measures that achieve the performance requirements specified in B.4. above or alternative management measures developed in consultation with Regional Water Board staff that provide equal or better protection.
- b. By **November 30, 2020**, dischargers shall submit to the Regional Water Board, an RMP that describes the site-specific management measures used to comply with these performance requirements. Dairies without surface waterbodies (and therefore without riparian areas) shall submit a statement of this fact to meet this requirement.

### **3. Nutrient Management Plan (NMP)**

If solid or liquid manure or other fertilizer is applied to the dairy land, or dairy animals graze the dairy land for more than 30 days annually, then an NMP must be completed and implemented consistent with the technical standards specified in Attachment D - Appendix 2, by **November 30, 2020**. Dairies with a previous NMP may need to update the NMP by this date to address new NMP requirements of this Order. In the case of newly enrolling dairies, the NMP is due to be completed and implemented within two years of enrollment under this Order. Dischargers may develop their own NMP with the assistance of a qualified professional as defined in the NMP. Large CAFOs (700 mature cows or more, etc. see Definitions - Attachment C) must implement an NMP prior to enrolling under this Order.

The purpose of an NMP is to ensure that the facility is designed, constructed, operated, and maintained so that nutrients and wastes generated and applied to fields 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 kept onsite. The Regional Water Board recognizes that the Nutrient Management Plan and nutrient budget analysis is affected by geographic location and farming systems (e.g. dryland vs. irrigated agricultural systems). NMPs and nutrient budgets should be designed to reflect these differences.

### **4. Annual Reporting**

The Discharger must submit an Annual Report (Attachment D - Appendix 3) to the Regional Water Board by **November 30 each year starting in 2021**, in accordance with the MRP requirements. The Annual Report shall assess whether BMPs for waste containment, nutrient application to land at agronomic rates, and grazing management measures, 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 also include

documentation that seasonal inspections have been performed by the dairy operator, rainy-season preparations have been completed, and results of water quality sampling (if individual monitoring was performed). Surface water at a location downstream of the dairy must be tested for electrical conductivity, ammonia, and in some cases indicator bacteria, during or directly following three storm events as described in the MRP. In accordance with the schedule in the MRP, groundwater well samples at the dairy must be tested for nitrate, total dissolved solids, and in the case of domestic water supply wells, total coliform. If participating in an Executive Officer approved group monitoring plan, results must be reported by the group to the Regional Water Board, and a statement identifying the group must be included in each dairy's Annual Report.

## **5. Noncompliance Reports**

- a. The Discharger shall report any noncompliance that endangers human health or the environment as soon as practicable, but in no event later than 24 hours from knowledge of its occurrence. The incident shall be reported to California Office of Emergency Services (open 24 hours) (800) 852-7550) and the Regional Water Board (707) 576-2220. See also MRP Section II.B. Reporting. During non-business hours, the Discharger shall leave a message on the Regional Water Board's office voice mail. The message shall include the time, date, and place of the discharge.
- b. The Discharger shall submit a written report to the Regional Water Board within fifteen (15) business days of becoming aware of the incident. The report shall include complete details of the steps that the Discharger has taken or intends to take, to correct the condition and prevent recurrence. The written submission shall, at a minimum, contain:
  - i. The approximate date, time, and location of the discharge;
  - ii. A description of the noncompliance and its cause;
  - iii. The flow rate, volume, and duration of the discharge;
  - iv. A description of the noncompliance, its cause, duration, if the noncompliance has been corrected and/or the actual or anticipated time for achieving compliance; and
  - v. A time schedule and a plan to implement necessary corrective actions to prevent the recurrence of such discharges.
- c. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
- d. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the Order shall not be a defense for violations.

## 6. Reporting Provision

- a. All technical reports and/ or monitoring program reports submitted to the Regional Water Board shall be accompanied by a cover letter signed by the owner, operator, or duly authorized representative, with the following certification:

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

- b. Any Discharger authorized to discharge waste under this Order shall furnish, within a reasonable time, any information the Regional Water Board may request, to determine whether cause exists for modifying, revoking, and reissuing, or terminating coverage under this Order. The Discharger shall also furnish to the Regional Water Board, upon request, copies of records required to be kept by this Order.
- c. Except for data determined to be exempt from disclosure under the Public Records Act (California Government Code Sections 6275 to 6276), and data determined to be confidential under Water Code section 13267(b)(2), all reports prepared in accordance with the terms of this Order and submitted to the Executive Officer shall be available for public inspection at the offices of the Regional Water Board. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Water Code section 13387.

## 7. Report of Waste Discharge

The Discharger shall submit a report of waste discharge (ROWD) to the Regional Water Board at least 140 days prior to any significant changes or proposed changes in:

- a. The character, location, volume, or disposal methods of waste discharges;
- b. The size and/or use of the facilities; or
- c. The animal population, if it increases beyond the existing design capacity of the facility specified in the WQP or NMP.

## 8. Request for Modification

The filing of a request by the Discharger for modification, revocation, reissuance, or termination of this Order, or notification of planned changes or anticipated noncompliance, does not stay any condition of this Order.

**9. Technical Report**

The Discharger may be required to submit technical reports as directed by the Executive Officer in accordance with Water Code section 13267.

**10. Extension Request**

The Discharger may request an extension to deadlines by written request to the Executive Officer 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. Any requests for extension are subject to approval by the Executive Officer.

**K. APPLICATION REQUIREMENTS**

1. Existing cow dairies previously covered by Orders R1-2012-0002, R1-2012-0003, R1-2015-0051, or R1-2016-0045, shall apply for coverage under this Order by submitting a completed NOI by November 30, 2019. No application fee is necessary.
2. Goat, sheep, and water buffalo dairy facilities commercially milking at the time of adoption of this Order shall apply for coverage under this Order by submitting a completed NOI by November 30, 2019, along with the appropriate application fee.
3. New, expanding, or reopening of dairies at previously inactive dairy sites, shall apply for coverage under this Order by submitting a NOI along with the appropriate application fee. In addition, these dairies shall meet all other GWDR requirements, including receipt of a GWDR enrollment letter from the Executive Officer, prior to the commencement of operations.
4. Other existing Dischargers that the Executive Officer subsequently determines need coverage under this Order, shall submit a complete NOI and associated required information as instructed to comply with this Order.
5. If the Discharger becomes aware that a relevant fact was omitted in a NOI or incorrect information was submitted in a NOI or in any report to the Regional Water Board, it shall promptly submit the correct facts or information.
6. Completed forms and reports shall be sent to the Regional Water Board at the following email address: [Northcoast@waterboards.ca.gov](mailto:Northcoast@waterboards.ca.gov) or physical address:

North Coast Regional Water Quality Control Board  
ATTN: Dairy Program  
5550 Skylane Blvd, Suite A  
Santa Rosa, CA 95403

7. Coverage under this Order is subject to fees as determined by the SWRCB. The application fee/annual fee schedule is developed by the SWRCB annually.

Please visit the Water Quality Fees page of the [State Water Board website](#) for the latest information on enrollment fees and annual fees.

8. Facilities that are certified under a Quality Assurance Program, approved by the SWRCB or under a county regulatory program approved by the appropriate Regional Water Board, currently receive a 50 percent fee reduction. If the Regional Water Board issues a Notice of Violation for an off-property discharge, the facility's certification and fee reduction will be revoked. The fee reduction will be revoked for a minimum of one billing cycle, and for all subsequent billing cycles, until all corrective actions are complete as determined by the Regional Water Board and the facility's certification is restored.

**L. Except for enforcement purposes, the following Orders are hereby rescinded effective on December 31, 2019:**

1. General Waste Discharge Requirements for Existing Cow Dairies in the North Coast Region, Order No. R1-2012-0002;
2. Conditional Waiver of Waste Discharge Requirements for Existing Cow Dairies in the North Coast Region, Order No. R1-2012-0003;
3. Conditional Waiver of Waste Discharge Requirements for Mello 3/Llano Oaks Dairy, Order No. R1-2015-0051; and
4. Order No. R1-2016-0045 which is the renewal of the expired Conditional Waiver of Waste Discharge Requirements for Existing Cow Dairies in the North Coast Region, Order No. R1-2012-0003.

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing [petitions](#) [may be found on the Internet](#) or will be provided upon request.

Waste Discharge Requirements for Dairies  
Order No. R1-2019-0001

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 August 15, 2019



---

Matthias St. John  
Executive Officer

19\_0001\_Dairy\_GWDR

Attachment A - Notice of Intent (NOI)

Attachment B - Title 27 of the California Code of Regulations, sections 22560-22565

Attachment C - Definitions

Attachment D - Monitoring and Reporting Program (MRP) No. R1-2019-0001

Appendix 1 - Water Quality Plan (WQP) - contains Riparian Management Plan

Appendix 2 - Nutrient Management Plan (NMP)

Appendix 3 - Annual Report

Attachment E - Tribal Cultural Resources Mitigation Program

Attachment F - Initial Study and Mitigated Negative Declaration