

Appendix 1

General Waste Discharge Requirements Monitoring and Reporting Program Order No. R1-2019-0001 For Dairies in the North Coast Region

Water Quality Plan

Purpose: Owners and operators (hereinafter identified as “Discharger”) seeking coverage under the Waste Discharge Requirements for dairies in the North Coast Region, Order No. R1-2019-0001 (Order), are required to prepare and implement a Water Quality Plan (WQP). The purpose of the WQP is to ensure that the Facility is designed, constructed, operated, and maintained so that dairy wastes are managed in compliance with the Order for the protection of surface water and groundwater. Changes to the dairy operation must be updated in this WQP.

Due Date: The WQP must be prepared and submitted to the Regional Water Board:

1. By ~~November 30, 2019~~October 1, 2020 for dairies operating at the time of GWDR adoption, or
2. By the time of dairy enrollment in the GWDR (for dairies that are enrolled later such as new or expanding dairies, or dairies reopening at inactive sites).
3. All WQPs must include current photos of manure storage including manure lagoons.

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

General Dairy Information:

1. Dairy Name: _____

2. Dairy Physical address: _____

Mailing Address(es):

3. Contact person(s): _____

4. Phone number(s): _____

5. E-mail address(es):

6. When did the facility begin dairy operations? _____

7. When did the current operator begin operations at this facility? _____

8. Please complete the following table for present and maximum dairy animal populations owned by the dairy (on owned and leased dairy land including young stock):

	Present Number of Dairy Animals (check one) _ Dairy cows _ Water Buffalo _ Sheep _ Goats	Other Dairy Animal if applicable ¹ : _ Dairy cows _ Water Buffalo _ Sheep _ Goats	Maximum population that current facility can handle (cow dairies are not to exceed 2012 Dairy Program Notice of Intent)
Mature Dairy Animals (Milking + dry)			
Heifers (12 to 24 months)			
Calves (birth to 12 months)			
Mature Males: Bulls/Bucks/Rams			
Other (specify)			

9. **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 Only existing dairies need to stay at or below their maximum herd size from their 2012 NOI.

- a. Perimeter of land owned including pastures for grazing dairy cows, dry cows, heifers, and crop land;
- b. Perimeter of land leased including pastures for grazing dairy cows, dry cows, heifers, and crop land;
- c. Buildings with use identified;
- d. Manure ponds with perimeter outline of drainage area into pond;
- e. Solid manure storage area (indicate base, i.e. soil or concrete, on legend);
- f. Silage storage area (indicate base, i.e. soil or concrete, on legend);
- g. 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);
- h. Surface watercourses and conveyances (include streams, ditches, piping);
- i. Cattle exclusionary fence or zone;
- j. Extent of subsurface tile drainage system and associated discharge points;
- k. Pumping facilities;
- l. Flow meters;
- m. Underground pipelines used for transporting process water;
- n. Wells and type (domestic, agricultural, industrial, or monitoring well);
- o. Springs (indicate if used for water supply);
- p. Drainage controls (berms, levees, and/or ponds) used for tailwater and storm water;
- q. Arrows showing direction of flows;
- r. Storm water discharge point(s);
- s. Permanent pens / fences (indicate base, i.e. soil or concrete, on legend);
- t. Crop fields (identified by name or number);
- u. Pastures (identified by name or number);
- v. Any septic tanks and leach fields on the property; and
- w. Map legend.

In some cases, the map provided for the Nutrient Management Plan (NMP) may be utilized also for the WQP.

10. Number of acres owned _____ List APNs: _____

11. Number of acres leased _____ List APNs: _____

12. Type of operation (example: milking, cheese making, etc.). List products:

13. Average volume of wastewater generated daily and how this volume was determined (indicate units such as gallons, etc.): _____

14. Average annual number of acres that receive manure solids: _____

15. Average annual number of acres that receive process water: _____

16. Solids: Average annual amount of solid manure mechanically applied (indicate units such as pounds, tons, cubic yards, etc.): _____

17. Liquids: Average annual amount of process water applied (indicate units such as gallons, 1,000 of gallons, acre-inches, etc.): _____

18. Solids and Liquids: Describe frequency of mechanically applied manure on fields (ex: solids every August, or every other fall, or irrigate manure liquids June through September, etc.): _____

19. Are manure solids and liquids spread evenly on all fields or are there challenges such as steep slopes or lack of irrigation equipment for some fields that get less or none? Please describe: _____

20. Average annual amount of manure transferred offsite (sold or given away). Show units: _____

21. Average annual amount of process water transferred offsite (sold or given away). Show units: _____

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

23. Groundwater Wells. Please list: groundwater well name, depth to the water table and date of measurement, and depth of the well. Show location of well by name on the map requested above. -If well construction and/or total depth of wells and screen locations are provided to the Regional Water Board, then depth to water is not necessary. Known information about wells is required. If any of this information is not known by the discharger and obtaining the information would harm the well or well seal, then the discharger may simply state information that can be obtained.

Groundwater Well Name or #	Minimum Depth to Water Table	Depth of Well	Date of Measurement

I. Manure Ponds

What is the least annual groundwater separation below the manure pond? _____feet.
 Please explain how you determined this. _____

List protection at **each** groundwater wellhead to protect groundwater such as housing, fencing, fully vegetated, and number of feet between the wellhead and the protection:

Well Name or Number	Protective Practices to Prevent Animal Waste Discharges to Groundwater at Wellhead

Please complete the following table for manure ponds:

Pond name/number	Dimensions (feet) Length x width x depth	Pond berm height (above sea level at its lowest point of the berm)	Pond Volume, cubic feet (exclude freeboard, i.e. 2 feet for above ground, 1 foot for below ground ponds)
		Total Volume:	

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 capacity standards (Section 22562(a), then 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): _____

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. Section 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. Best Management Practices [BMPs]) taken to prevent cow access to surface waters in the production area: _____

Describe all measures taken to protect surface waters at livestock crossings in the production area: _____

B. Section 22562(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.*

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

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

- C. Section 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. NRCS and local RCDs can help fund rain gutter and other projects that divert clean rain water away from manured areas. Please consider calling your local agency to find out more.

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: _____

Which Production Area building roofs drain away from manured areas? _____

Which Production Area building roofs drain to manured areas and only on to the manure ponds? _____

Which Production Area building roofs drain to manured areas and do not drain to the manure pond?

How is stormwater mixed with manure prevented from discharging to surface waters?

D. Section 22562(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.*

Are your manure ponds protected from a 20-year peak stream flows, and if so, how?

Yes No _____

E. Section 22562(c)(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.

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. For instance, are the manure pond berms above the 100-year storm elevation:

F. Section 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? _____

G. Section 22562(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 a NPDES permit for discharge to surface waters, the only allowable discharge is to wastewater treatment facilities approved by the RWQCB.*

This Order authorizes the application of manure and process waters to land only if such application is in accordance with the conditions of the Order.

Waste Discharge: The discharge of manure, process wastewater or storm water containing manure or process wastewater to surface waters or groundwater is prohibited under the GWDR.

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

What has been done to prevent future discharges? _____

H. Section 22563 - Use or Disposal Field Management

(a) Reasonable Soil Amendment Rate –*Application of manure and wastewater to disposal fields or 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 sections below:

I. Section 22563 (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 groundwater.*

1. To reduce the potential for storm water runoff to transport contaminants to waters of the United States and the state, is nutrient application and associated irrigation completed by November 1st of each year? Yes No

~~Nutrient application is complete on the dairy by what date each year:~~

Nutrient application should be done according to the dairy Nutrient Management Plan. Fall or winter manure application is allowed on fully vegetated areas during dry weather when less than two inches of precipitation has fallen within the last 30 days and there is less than 30 percent chance of rain in the next 48 hours. This is provided best management practices are utilized and nutrients do not result in discharges or potential discharges to surface waters or groundwater. The majority of nutrient application is complete on the dairy by what date each year:

2. Describe the measures taken to minimize to process wastewater runoff to surface water and percolation to groundwater to avoid a discharge of pollutants (Example: Distance applied from creeks, gullies, and ditches, avoid adding manure to standing water such as in wetlands, apply during dry weather, apply manure to vegetated areas before the rainy season begins, etc.): _____

J. Section 22564-Management of Manured Areas

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

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

-
-
-
-
2. Describe the measures taken to separate or divert storm water from contacting manured areas, corrals, pens, and animal housing areas:
-
-

Nutrient Management Plans (NMPs)

For existing dairies that apply manure to crops or pastures, the NMP (Appendix 2) must be completed by **November 30, 2020**, if the dairy doesn't already have an NMP. If existing dairies already have an NMP from before adoption of this Order, then the NMP must be updated to meet the requirements in Appendix 2 by **November 30, 2020**. For re-opening, new, or expanding dairies, the NMP must be completed within two (2) years of dairy enrollment in the GWDR. Dairies that do not land apply manure are exempt from this NMP requirement. However, Comprehensive Nutrient Management Plans (CNMPs), such as those obtained from NRCS or RCDs, are recommended because they may help in obtaining grants and matching funds for infrastructure improvements.

For Facilities With a Prepared Nutrient Management Plan:

The purpose of a Nutrient Management Plan (NMP), Appendix 2, is to minimize adverse impacts to surface water and groundwater from runoff and leaching nutrients and pathogens from land application areas. An 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.

1. Does your Facility 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, then the most current version shall 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
3. Please indicate the last date that soil samples were taken for each field – if any (usually found in NRCS CNMP or NMP): _____
-

4. Soil samples for Phosphorus (P) are required at least every five (5) years under the NMP requirements.

~~At least annually, manure and other organic by-product analyses must include~~

5. Dairies may need to perform annual manure sampling if there is a high risk of discharge to surface waters or groundwater. Regional Water Board may contact the dairy to require analysis of manure and other organic by-products including total nitrogen (N), ammonium, total phosphorus (P) or P2O5, total potassium (K) or K2O, and percent moisture. If no operational changes occur, less frequent testing is allowable where operations can document a stable level of nutrient concentrations for the preceding three consecutive years.

-For Facilities Without a Prepared NMP:

An NMP must be completed by November 30, 2020, if the dairy applies manure to crops or pasture.

1. What is the dairy plan to meet this requirement? _____

2. In the interim (from now until the NMP is completed and nutrient management practiced) is manure and process water generated at your facility, applied to cropland and pastures at rates that are agronomically sound for the crop, soil, climate, special local situations, management system, and manure and process water characteristics? Yes No Please explain:

3. If you do nutrient budget calculation for the dairy, please explain below how you complete these calculations: _____

4. Have you ever had your dairy's manure, process water, or cropland soil tested for nutrient content? Yes No
If yes, what were the results and how were they used? _____

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 property including animal housing area, corrals, manure ponds, and manure storage areas: _____

List stream water quality protection measures at crop lands and pastures: _____

Is a setback, buffer, or other action needed to protect surface water? _____

1. Are manure, soil, plant waste, and other debris stockpiled away from areas where they could be washed or eroded into surface waters: _____

2. Are management practices, such as buffer strips and cover crops in place to minimize, control, and prevent the discharge of nutrients and erosion of sediments that could reach waterbodies. _____

C. Other Best Management Practices (BMPs): Describe BMPs, not discussed above:

1. Prevent waste discharges to surface waters including at animal crossings of streams, in pastures, and in crop land: _____

2. Prevent waste discharges to groundwater including in pastures and in cropland:_____

D. 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:_____

When do the weeds growing on manure pond berms get trimmed?_____

Describe your process and frequency for checking for manure pond leaks and how ~~are repairs done?~~

_____repairs are done:

Odors: GWDR Condition paragraph 6 on page 19-20 describes dairy activities that can lead to offensive odors. Dairy operators are required to implement BMPs to reduce emitting odors to neighboring properties and public roadways. 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. Another example to reduce odors is to convert from flush to dry scraping concrete animal housing areas. Manure piles are required to be spread on fields for plant fertilizer or hauled offsite regularly away from the dairy production area. In the winter rainy season, manure piles are required to be covered to protect air quality, reduce objectionable odors, and reduce the potential to discharge manure to surface waters or groundwater. What measures are currently being practiced on this dairy to reduce odors?

~~What measures are currently being practiced on this dairy to reduce odors?~~

What additional measures could be added to existing practices to reduce odors? Please include a timeline for odor control improvement. _____

E. Dead Animal Disposal: What actions are taken at your Facility 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 such as (Reference: Chapter 6.67, section 25270 to 25270.13) having a spill prevention plan doing daily inspections, and allowing UPA (Unified Program Agency) to conduct periodic inspections:
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=25270.4.5.&lawCode=HSC

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. 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 .

Does the facility have an emergency plan that includes unauthorized manure discharge response information? Yes No

I. Compost

1. Composting for use on the dairy is encouraged and is covered by this Order, however, conditions do apply. 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.

Does your dairy compost manure? _____

Is the compost utilized on the dairy (owned and leased property)?

Does the dairy sell compost?

Are there plans to compost in the future?

Is the compost included in the dairy Nutrient Management Plan?

Please list compost management measures practiced to prevent surface water degradation: _____

Please list compost management measures practiced to prevent groundwater degradation: _____

2. 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.

If the dairy composts, are dairy personnel aware of these prohibitions so that the above listed wastes are not composted? Yes No ~~Please explain how personnel will be informed of this prohibition:~~

Please explain how personnel will be informed of this prohibition:

3. Please be aware that dairies that sell compost and store the minimum amount of materials required by DWQ Compost Order 2015-0121, or revised tentative DWQ Compost Order, must comply with the DWQ Order. Otherwise, agricultural composting is exempt from the DWQ Order such as when utilized on the dairy (Reference: GWDR condition B.6. on page 19).

J. Water Conservation

The GWDR encourages water conservation for increased groundwater level protection and flow in streams. Farm water conservation, water management, and best management practices are encouraged that:

1. Mitigate the effects on the land of storm intensities and patterns of precipitation;
2. Promote carbon sequestration (i.e. long-term storage of carbon in plants and soil);
and
3. Make efficient use of all water resources.

Best management practices should reduce the potential for surface runoff across managed lands and increase infiltration of clean water. This is especially important during years with below-average rainfall.

Dairies are encouraged to use water efficiently, reduce the potential for surface runoff across dairy land, increase infiltration of clean water, utilize recycled water where practical, conserve and promote healthy soils, sequester carbon, utilize rain catchment, reduce fresh water use where possible, and practice conservation tillage (no-till). The goal is to use less groundwater and surface water so that flows continue for downstream users.

Please be aware that NRCS Environmental Quality Incentives Program (EQIP) helps to fund projects for agricultural producer that promote water conservation, healthy soils, and irrigation improvements. For more information, please visit your local NRCS office or see their website:

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>

Also, California Department of Food and Agriculture (CDFA) launched its own Healthy Soils Initiative in 2015, to increase soil carbon and reap other co-benefits such as improved plant health, enhanced microbial soil biodiversity, dust prevention, and increased water retention of soils. For more information, please visit:
<https://www.cdfa.ca.gov/oefi/healthysouils/>

[LandSmart®](#) is a regional collaborative program helping land managers meet their natural resource management goals while supporting productive lands and thriving streams. The LandSmart Water Resources Program provides a comprehensive set of tools to help agricultural and rural residential landowners in their voluntary water management and conservation efforts. In conjunction with the LandSmart program, participating Resource Conservation Districts work with landowners on a variety of water resource issues including: managing surface water, managing storm water, rainwater catchment, evaluating irrigation systems, improving agricultural irrigation efficiency, monitoring groundwater levels, water conservation, and understanding water rights.

IV. Completion

Existing dairies must submit this WQP by ~~November 30, 2019~~ **October 1, 2020**. New, expanding, or re-opening dairies must submit this WQP prior to Order enrollment. Please submit the WQP 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

This WQP submittal must include:

A. Completion of this WQP form; and

B. The discharger shall attach current photos of manure storage including manure lagoons.

Certification

"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 of Dairy Representative: _____

Signature: _____

Date: _____

Riparian Management Plan

Purpose: Dischargers shall implement riparian management planning and measures that prevent, minimize, and control the discharge of sediment, nutrients, and animal waste to watercourses within and adjacent to dairy land. Riparian management and protection measures shall comply with the specified performance requirements listed in the GWDR (Condition B.4.) and listed in I.A. through I.J. below. Alternative management measures that provide equal or better protection. ~~Alternative management measures that provide equal or better protection~~ must be developed in consultation with Regional Water Board staff.

Due Date: The Riparian Management Plan (RMP) must be prepared and submitted to the Regional Water Board:

1. By **November 30, 2020** for dairies operating at the time of Order adoption, or
2. By the time of dairy enrollment in the Order for new and reopening dairies at inactive sites.

Note that dairies without streams or adjacent riparian areas need to submit a statement describing how the dairy does not have the potential to adversely impact riparian areas.

Definition: *Riparian Area* is defined as the interface between land and a river or stream. Plant habitats and communities along the river or stream margins and banks are called riparian vegetation. Riparian areas are important because of their role in soil conservation, habitat biodiversity, and influence on aquatic ecosystems. Healthy riparian areas protect water quality by providing erosion control, filtering out silt and pollutants, stabilizing streambanks, and stabilizing the stream channel. Riparian vegetation is necessary along the banks of any stream of water that can carry sediment or nutrients to a larger water body such as a river, lake, slough, or estuary. Several references mention a riparian protection width of about 35 feet as measured from the stream bank; however, the width of the riparian area may be less for flatter slopes with dense vegetation, or more for steeper slopes especially if bare soil areas are present. Changes to the RMP must be updated in this document and submitted to the Regional Water Board annually or the Discharger may note minor changes in the Riparian Protection portion of the Annual Report (Appendix 4).

I. Performance Measures of Riparian Management Areas

Dairies are required to submit an RMP by November 30, 2020. Riparian areas on dairy property shall be managed to protect water quality including ~~the following performance requirements: 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.

II. **RMP Worksheet:** If the dairy does comply with the performance measures, please explain how. If the dairy does not currently comply with the performance measures, please describe the plan to comply with the performance measures such as: the installation of bridges, culverts, rocked crossings, fencing out animals, water troughs relocated away from streams, shade for animals away from streams, revegetation of bare areas, planting shade trees, etc. A time schedule for the improvement is required.

A. How are riparian areas managed to allow natural establishment and growth of native vegetation such as for shade and cool stream temperatures? Please explain your practices or plans for improvement including timing: _____

B. How are riparian areas are managed that allows sufficient vegetation growth to prevent surface erosion such as excluding animals in these areas to prevent soil compaction or avoiding tilling or scraping away the vegetation before the winter rainy season? Please explain your practices or plans for improvement including timing: _____

- C. How are riparian areas managed to maintain their essential functions supporting beneficial uses (e.g. sediment filtering, woody debris recruitment, streambank stabilization, nutrient cycling, pollutant filtering, or shading the stream)? Please explain your practices or plans for improvement, including timing:_____
- _____
- _____
- _____
- D. Is periodic grazing in riparian areas limited to periods when impacts to woody species are minimized? Please explain your practices or plans for improvement, including timing:_____
- _____
- _____
- _____
- E. Is grazing within riparian areas limited to short durations, and only when forage consisting of non-woody vegetation is available? Please explain your practices or plans for improvement including timing:_____
- _____
- _____
- _____
- F. Are livestock removed from riparian areas when stubble height reaches 4 inches, or livestock shift preference to browsing of woody species, whichever occurs first? Please explain your practices or plans for improvement, including timing:_____
- _____
- _____
- _____
- G. Are livestock prevented from disturbing sediment discharge sites and other unstable features in and adjacent to watercourses including streambanks? Please explain your practices or plans for improvement, including timing:_____
- _____
- _____
- _____
- H. Are creek crossings ~~are~~ designed and constructed in a manner that prevents animal waste and soil from entering the waterway? Please explain your practices or plans for improvement, including timing:_____

- I. In confined animal areas, are livestock excluded from any surface water or perennial streams passing through that could carry soil and manure to the stream? Please explain your practices or plans for improvement, including timing:

- J. Does grazing in riparian areas cause a discharge of waste to surface waters? Please explain your practices or plans for improvement, including timing:

III. The RMP includes:

A.C. **Completion of this RMP form;**

B.D. **Photos:** The discharger shall attach photos of riparian management measures when submitting this RMP to the Regional Water Board by the **November 30, 2020** due date; and

C.E. **Progress Reports:** The Annual Report must include a summary of progress toward implementing and maintaining management measures in the RMP to prevent potential water quality impacts. Annual Reports to be submitted each year thereafter must also include photos of all riparian areas on the dairy property.

Certification

~~"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."~~

IV. Certification

"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 of Dairy Representative: _____

Signature: _____ Date: _____

Appx 1 WQP Dairy GWDR.docx _____