
North Coast Regional Water Quality Control Board

June 15, 2021

Regional Water Board Review of Ramini Water Quality Plan as submitted March 22, 2021

Introduction: On March 22, 2021, Ramini Mozzarella Inc. submitted a Water Quality Plan/Riparian Management Plan along with a site map to the Regional Water Board (RWB).

This document reviews the Ramini Water Quality Plan/Riparian Management Plan and contains specific RWB replies and recommendations to fully comply with the requirements as described in GWDR Appendix 1.

1. Ramini Water Quality Plan (WQP) page 1, #13 states that the average volume of Wastewater Generated Daily/How Determined is 7 gallons/Wastewater Manifests.

RWB Reply: It appears that the Ramini response does not fully disclose the complete volume of wastewater discharged to the tank. For instance, if only 7 gallons per day is discharged to the tank, why is it frequently full and have to be pumped out by Joe's Septic regularly? Please explain.

2. Ramini WQP page 1, #14 states that the average annual number of acres receiving manure solids is "none."

RWB Reply: Areas that water buffalo graze constitutes manure application even though it is not mechanically applied. As such, please state the acreage where grazing occurs. Also, please describe where manure solids are stored that are removed from the corrals and pens.

3. Ramini WQP page 1, # 21 states that the average annual amount of process water transferred offsite is 14,000 gallons.

RWB Reply: Please explain this large volume of process water transferred offsite. Line 13 above states that only 7 gallons of wastewater are generated daily. When RWB staff inspected the dairy, the tank was nearly full even though the operator indicated just a few days earlier that the tank would be at least partially pumped out by Joe's Septic due to a predicted rain event. Any discharge of wastewater to a full tank means that the waste is being discharged to land around the tank. The tank is located roughly 200 feet

from the nearest bank of the creek. Please submit receipts to show that the tank is being pumped out regularly and the volume that is being pumped.

4. Ramini WQP page 2, #23 contains very little information about the groundwater well but states that the required information has been requested.

RWB Reply: The groundwater information has still not been submitted to the RWB. Please submit the well's depth to groundwater, date of measurement, and depth of the well.

5. Ramini WQP page 2, Section I. Manure Ponds – states that there are no manure ponds.

RWB Reply: RWB realizes that the dairy does not physically or purposely put manure in the concrete wastewater tank. However, this tank holds wastewater from cheese making, some wash water, and incidental rainwater mixed with manure while making cheese during rain events due to the plumbing/surface connection. Flow to the wastewater tank contains waste and needs to be described in this section. Dimensions and volume given in the WQP must only include the volume below the hole in the side of the tank where the flexible pipe enters. Any perceived volume above this hole does not hold wastewater.

6. Ramini WQP page 2. Missing information on Contingency Plan.

RWB Reply: Ramini Mozzarella did not use the GWDR Appendix 1 Water Quality Plan/Riparian Management Plan form provided on the Regional Water Board website. Some sections are not included in the Ramini WQP, for example, the section on a Contingency Plan. Please add this section. A Contingency Plan must include actions that the dairy will take to contain waste discharges from a 25-year 24-hour storm which for the local area which is about 5.58 inches of rain in one day:
https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html

Actions should include but not be limited to cleaning the wastewater tank, covering manure piles, and removing all manure from any area that might runoff to the creek. Projects such as rain gutters on buildings that would discharge clean stormwater runoff away from corrals might be included to avoid this extra rainwater from washing across manure laden areas and filling the wastewater tank.

7. Ramini WQP page 3, Section II. Water Quality Requirements. Design Storm Run-on/Runoff Control, Section 22562(a). The Ramini WQP states that the facility has a 10,000-gallon concrete storage tank to capture all facility wastewater generated plus incidental precipitation. It also states that the tank is designed to be monitored and the stored wastewater hauled away.

RWB Reply: The dairy operator must provide assurance that this tank is monitored, emptied, and that the wastewater is hauled off regularly before it discharges from the hole in its side. RWB staff inspections have observed evidence of wastewater flowing

around the outside of the tank. Please include receipts showing the amount of wastewater removed from this tank annually.

8. Ramini WQP page 3, Manured area run-on exclusion (Section 22562(b)). The Ramini WQP states that the facility has no manured areas.

RWB Reply: The dairy does have manured areas. This includes all surface areas that contain manure such as corrals, pens, pastures, and areas where the manure can flow such as below the corrals and pens and all around the wastewater tank. Section 22562(b) requires runoff control in areas where clean rainwater could flow onto manured areas and cause a discharge of waste to surface waters or groundwater. Rainwater can be prevented from mixing with manure through the installation of rain gutters on roofs, ditches above the manure areas, covering manure piles, or cleaning manure away from surfaces before rains begin. Please work with a specialist on projects to help control waste and nutrients.

9. Ramini WQP page 4, Use or Disposal Field Management, Section 22563. Ramini WQP states that no disposal of manure or wastewater to land is conducted by the operator.

RWB Reply: Water buffalo defecating on pastures constitutes application of manure to fields. Please discuss how this is managed to meet reasonable rates of nutrient application for the crop and local conditions. Are piles of manure left in place for long periods of time? Is accumulated manure from pens and corrals spread evenly on pasture? If not, where is it stored? A Nutrient Management Plan is required by the GWDR for Ramini Dairy and would help answer this question through measurements, calculations, testing of soil, manure, and forage, and a manure removal or application plan. Please report on the dairy's practices for ensuring manure is not over applied or stored in a location that could discharge to surface water or groundwater. Also please report on the status of the dairy's Nutrient Management Plan.

10. Ramini WQP page 4. Runoff and Percolation, Section 22563(b). Ramini WQP states that no disposal fields are maintained and no nutrient [application] or irrigation is conducted by the operator.

RWB Reply: Corrals and pens with accumulated manure and urine, plus the areas below where waste has already moved, has resulted in an accumulation of nutrients not utilized for crop production, thus constitutes a disposal field area. Please address how these areas will be cleaned to prevent nutrient runoff toward the creek and prevent infiltration to groundwater.

11. Ramini WQP page 4, Management of Manured Areas, Section 22564. The Ramini WQP had no response to this section.

RWB Reply: The Regional Water Board WQP form contains questions on ways that stormwater will be separated from contacting manure-laden areas. Please work with specialists to address inefficiencies at the dairy that could help improve water quality management.

12. Ramini WQP contains no information on the section on Nutrient Management Plans.

RWB Reply: The Ramini Water Quality Plan must contain information on obtaining a Nutrient Management Plan (NMP). As a reminder, on December 29, 2020, the Regional Water Board issued a letter enrolling the dairy and stating that: “4. The GWDR requires dairies to complete Nutrient Management Plans (NMP) (MRP Appendix 2) by November 30, 2020, for:

- a. Existing dairies that apply manure/process water to land as a nutrient, or
- b. Dairies at which animals graze the land for over 30 days annually.

The Natural Resources Conservation Service currently has a backlog in helping dairies to complete NMPs. Please contact the NRCS in Petaluma as soon as possible to be added to their wait list for help in completing a NMP: (707) 794-1242 or Andrew.loganbill@usda.gov and brooke.pippi@ca.usda.gov. There may be private consultants available sooner to help complete a NMP. The NMP is not required to be submitted to the Regional Water Board unless specifically requested.”

13. Ramini WQP, Section II. BMPs, page 4 describes rotational grazing, avoidance of grazing during saturated soil conditions, avoidance of grazing near the creek, and the use of fiber rolls above the creek near the wastewater tank. Marin Agricultural Land Trust is referenced.

RWB Reply: The Ramini WQP lists practices that are effective at minimizing some erosion and holding some nutrients back from the creek during low and average precipitation years only if adequate vegetation remains such as 3 to 4 inch high stubble. More improvements are needed to thoroughly prevent soil and nutrient discharges and to avoid the accumulation of nutrients present around and below the milk barn. This is true especially during average to high precipitation years when rains would flow over the fiber rolls and discharge nutrients that have accumulated behind these fiber rolls. All areas must be cleaned of manure and other nutrients prior to the winter rainy season and daily during this season so that average to heavy precipitation events do not discharge to the riparian and creek area. Please contact a specialist for help to prevent erosion and nutrient discharges.

14. Ramini WQP, page 4, Section B. Stream Protection, discusses the 50-foot fenced perimeter of Estero San Antonio Creek, however the Regional Water Board - Water Quality Plan form contains individual questions about stream protection that are not answered. Bare soil areas must be planted, covered, or somehow protected to prevent soil and nutrient discharge to the creek during rain events such as in the late fall/early winter when bare soil areas might be more common. Please answer Regional Water Board - Water Quality Plan questions in this section including:

- List all stream water quality protection measures throughout the dairy property including animal housing area, corrals, manure ponds [wastewater tank], and storage areas [manure piles],
- List stream water quality protection measures at crop lands and pastures,

- Is a setback, buffer, or other action needed to protect surface water?
- Are manure, soil, plant waste [feed], and other debris stockpiled away from areas where they could be washed or eroded into surface waters?
- 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?

The goal is to have a plan that addresses issues such as distributing or removing accumulated manure and other waste, protecting plants that hold the soil in place, planting bare soil areas prior to the winter rains, and maintaining pasture vegetation to help avoid nutrient discharges to surface waters and groundwater.

15. Ramini WQP, page 4, Section C: Other BMPs. The Ramini WQP states that water buffalo manure will be sc[r]aped and removed from shared corrals/temporary holding pens from between barns, on a regular basis before any forecasted rain and whey from cheese making is disposed of in the wastewater tank.

RWB Reply: The Ramini WQP does not describe where the manure is taken, just that it is not taken offsite, and is not spread on the fields. The Water Quality Plan map must show the location of manure storage. Please note that any location on the property has the potential to discharge to surface waters or groundwater if left to accumulate for years. This section of the Water Quality Plan must discuss plans to prevent discharges to surface waters and groundwater. Manure, feed waste, and whey must be spread evenly on pastures or hauled offsite to a location where it will not contaminate surface waters and groundwater.

16. Ramini WQP page 9, Certification.

RWB Reply: Please sign the Water Quality Plan to certify that the stated actions will be followed.

17. Ramini WQP submittal included a map, however one item was missing. Please label WQP item 9.e. Solid manure storage area. This must include all areas that manure is stored such as near the milk production area and up on the hill by the fence line.

18. Ramini WQP/Riparian Management Plan did not include photos. Please submit photos as required by Riparian Management Plan section II.B.