

California Regional Water Quality Control Board
North Coast Region

TIME SCHEDULE ORDER NO. R1-2015-0022
TO PROVIDE TIME SCHEDULES TO COMPLY WITH
ORDER NO. R1-2014-0026
(FOSTER DAIRY FARMS DBA HUMBOLDT CREAMERY)
NPDES NO. CA0005584

Humboldt County
WDID No. 1B80185OHUM

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

1. Foster Dairy Farms dba Humboldt Creamery (hereinafter Permittee) is the owner and operator of the Humboldt Creamery (hereinafter Facility), a dairy products processing plant, which discharges process wastewater under Waste Discharge Requirements (WDRs) contained in Order No. R1-2014-0026, adopted by the Regional Water Board on November 20, 2014. Order No. R1-2014-0026 also serves as the National Pollutant Discharge Elimination System (NPDES) permit (NPDES No. CA0005584).
2. Process wastewater is generated at the Facility from milk tanker truck washout, acidic and caustic rinse water, boiler blowdown, washdown processes (cleaning of dairy processing equipment), evaporated milk condensate and non-contact cooling water generated during production of dry milk powders and evaporated products, ice cream and frozen desserts, and fluid milk.
3. Order No. R1-2014-0026 allows the direct discharge of condensate from the dry condensed milk manufacturing process and non-contact cooling water (COW water) to the Eel River from October 1 through May 14 of each year. Process wastewater, which may include COW water, is treated using aeration and settling ponds. The treated wastewater is discharged via irrigation to approximately 140 acres of grazed pasture land bordering the Eel River north of the facility.
4. Order No. R1-2014-0026 implements section 13263 of the Water Code, which requires the Regional Water Board to prescribe requirements for proposed discharges, existing discharges, or material change in an existing discharge based upon the conditions of the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The prescribed requirements must implement water quality control plans and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, and the need to prevent nuisance.. In prescribing requirements, the Regional Water Board is not obligated to authorize the full waste assimilation capacities of the receiving water.
5. The requirements prescribed in Order No. R1-2014-0026 implement the Water Quality Control Plan for the North Coast Region (Basin Plan). The Basin Plan designates the following beneficial uses of groundwater at the Facility:
 - a. Municipal and domestic water supply (MUN);
 - b. Agricultural Supply (AGR);
 - c. Industrial Service Supply (IND);
 - d. Native American Culture (CUL);
 - e. Industrial Process Supply (PRO); and
 - f. Aquaculture (AQUA).

6. The Basin Plan establishes water quality objectives specific to the North Coast Region for the protection of past, present, and probable future beneficial uses of water. There are two types of objectives: narrative and numeric. Narrative and numeric water quality objectives define the upper concentration limits that the Regional Water Board considers to protect beneficial uses and prevent nuisance¹. The Basin Plan contains narrative water quality objectives for tastes and odors, bacteria, and radioactivity that apply to groundwater. The groundwater objective for chemical constituents is both narrative and numeric. The Regional Water Board considers maximum contaminant levels (MCLs) or taste and odor limits as the uppermost limits for waters with the municipal and domestic water supply (MUN) beneficial use. The Regional Water Board considers narrative water quality objective and numeric water quality objectives in Table 3-1 of the Basin Plan in order to protect groundwater from impairment of the agricultural beneficial use.
7. The State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (state Antidegradation Policy) applies to groundwaters in which the existing water quality meets or exceeds (is better than) water quality objectives. Such groundwaters are defined as high quality waters. The state Antidegradation Policy establishes two conditions that must be met before the quality of high quality waters may be lowered by nonpoint or point source waste discharges, whether or not such a discharge is allowed under a new, renewed, or revised permit.

First, the state must determine that lowering the quality of high quality waters:

- a. Will be consistent with the maximum benefit to the people of the state;
- b. Will not unreasonably affect present and anticipated beneficial uses of such water; and
- c. Will not result in water quality less than that prescribed in state policies (e.g., water quality objectives in Basin Plans).

Second, any activities that result in discharges to high quality waters are required to:

- a. Meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to avoid pollution or nuisance; and
- b. Maintain the highest water quality consistent with the maximum benefit to the people of the state.

If such treatment or control results in a discharge that maintains the existing high water quality, then a less stringent level of treatment or control would not be in compliance with the state Antidegradation Policy. Likewise, a discharge to high quality water could not be allowed under the state Antidegradation Policy if (a) the discharge, even after treatment or control, would unreasonably affect beneficial uses, or (b) would not comply with applicable provisions of water quality control plans.

¹ Under Water Code section 13050, subdivision (m), "nuisance" means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) Occurs during, or as a result of, the treatment or disposal of wastes.

An activity that results in a minor water quality lowering, even if incrementally small, can result in a violation of the Antidegradation Policy through cumulative effects, especially, for example, when the waste discharge contains a cumulative, persistent, or bioaccumulative pollutant or pollutants.

8. Water quality-based effluent limitations are established in Regional Water Board WDRs to ensure that water quality is attained or maintained at a level that protects human health, and other beneficial uses from adverse impacts. When developing effluent limitations and other numeric limits in WDRs staff implements the Antidegradation Policy, the Basin Plan and other applicable state policies and plans as appropriate. In general, the methods that staff uses to determine the most appropriate discharge limitation include:
 - a. Characterize the waste and characteristics of the site;
 - b. Identify the discharge point receiving water and any of the surrounding area that may be threatened by discharge of waste;
 - c. Identify all of the beneficial uses of the receiving water in question in order to determine the most sensitive use for which discharge limitations must be designed;
 - d. Identify the applicable water quality objectives from the Basin Plan;
 - e. Translate narrative water quality objectives into numeric criteria as necessary;
 - f. Apply other relevant policies and procedures (e.g. Antidegradation Policy); and
 - g. Apply the limitation that provides the best and most appropriate protection of the most sensitive beneficial use.

9. Among other constituents, section IV.B.1. of Order No. R1-2014-0026 implements water quality-based effluent limitations for total dissolved solids and sodium discharges to land. These effluent limitations were derived using currently available information to implement narrative water quality objectives for groundwater, based upon the following:

Total Dissolved Solids (TDS). The Order establishes effluent limitations for total dissolved solids at 450 mg/l. Total dissolved solids is a direct measure of salinity. Overall salinity affects underlying groundwater quality as it relates to drinking water and agricultural supply beneficial uses. Upon evaluation, agricultural supply was determined to be the most sensitive beneficial use to be protected in Facility groundwater. The limitation is based on a numeric value obtained from Table 1 below, obtained from *Ayers, R. S. and D. W. Westcot, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations - Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985)* and assigned to the narrative water quality objective for the protection of agricultural water supply.

Table 1

| Salinity (affects crop water availability) | Units | Degree of Restriction on Use | | |
|--------------------------------------------|-------|------------------------------|--------------------|--------|
| | | None | Slight to Moderate | Severe |
| TDS | mg/l | < 450 | 450 – 2000 | > 2000 |

Table Notes: Assumptions in the Guidelines - The water quality guidelines in Table 1 are intended to cover the wide range of conditions encountered in irrigated agriculture. Several basic assumptions have been used to define their range of usability. If the water is used under greatly different conditions, the guidelines may need to be adjusted. Wide deviations from the assumptions might result in wrong judgments on the usability of a particular water supply, especially if it is a borderline case. Where sufficient experience, field trials, research or observations are available, the guidelines may be modified to fit local conditions more closely.

Sodium. The Order establishes an effluent limitation for sodium at 60,000 mg/l. This limitation is based on the numeric value obtained from the USEPA Drinking Water Advisory assigned to the narrative objective for taste and odor in drinking water.

10. Existing Facility effluent and groundwater monitoring data indicates concentrations of TDS and sodium exceeding 450 mg/L and 60,000 mg/L respectively.
11. On November 10, 2014, the Permittee requested the opportunity to conduct site specific study and analyses evaluating appropriate TDS levels to protect beneficial uses of water influenced by Facility discharges.
12. The basis for the numeric TDS limit is dependent upon applicable policies and site specific factors and must result in controls on the pollutant of concern which are sufficient to attain and maintain applicable water quality objectives. It is within the discretion of the Regional Water Board to establish other, or additional, direction on protection of beneficial uses and compliance with objectives of the Basin Plan. To evaluate compliance with water quality objectives, the Regional Water Board will consider all relevant and scientifically valid evidence, including relevant and scientifically valid numeric criteria and guidelines developed and/or published by other agencies and organizations. Generally, numeric values used to translate narrative objectives are derived from relevant state or federal laws, regulations, plans, or policies; numeric water quality criteria, standards, or guidelines developed and published by governmental and non-governmental agencies and organizations; and relevant peer-reviewed scientific literature. Additional investigation and research is appropriate to refine numeric value(s) consistent with the Basin Plan narrative objectives for the Facility.
13. California Water Code section 13300 states:

"Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements."

For the reasons stated above, the Regional Water Board finds that a discharge of waste is taking place or threatening to take place that violates requirements prescribed in Order No. R1-2014-0026.
14. The Regional Water Board has notified the Permittee, interested agencies and persons, of its intent to issue a Time Schedule Order in accordance with Water Code section 13167.5.
15. This Order is an enforcement action by a regulatory agency is exempt from the provisions of the California Environmental Quality Act (Public Resources, Code, section 2100 *et seq.*) in accordance with the California Code of Regulations, title 14, section 15321.

IT IS HEREBY ORDERED, pursuant to California Water Code section 13300 the Permittee shall comply with the following schedule of actions to correct or prevent violations of Order No. R1-2014-0026:

1. Complete a site specific study to support numeric total dissolve solids concentrations for the protection of the most sensitive groundwater beneficial uses associated with concentrations of TDS within the area of Facility influence (TDS Values Study). The TDS Values Study shall be performed in accordance with the following schedule and include, but not be limited to the associated tasks:
 - Task A. By **July 24, 2015**, the Permittee shall submit for review and concurrence, a workplan to consider background water quality and evaluate how site-specific climate, soil and groundwater chemistry, rainfall, flooding, and other applicable environmental factors affect TDS tolerance levels for beneficial uses. The workplan shall incorporate a proposed schedule for interim tasks as appropriate.
 - Task B. By **September 15, 2015**, the Permittee shall submit a workplan for review and concurrence to evaluate the suitability of the existing monitoring well network, propose additional or replacement monitoring well locations, monitoring frequency and duration, based on available local groundwater quality data.
 - Task C. By **July 31, 2016**, the Permittee shall submit the TDS Values Study Report, which shall include technical justification and recommendations for TDS numerical value(s) consistent with the Basin Plan narrative objectives for the protection of groundwater beneficial uses.
2. Complete a Salinity Source Control/Best Practicable Treatment or Control (SSC/BPTC Study) to evaluate salinity source controls² associated with the industrial and agricultural operations, treatment and disposal alternatives associated with each component of the waste stream and the Facility's waste management system to determine BPTC for TDS and sodium.
 - Task A. By **October 16, 2015**, the Permittee shall submit for review and concurrence, a workplan to evaluate salinity source controls and reduction measure alternatives, existing and alternative treatment and disposal methods, and costs associated with the existing and alternatives. The workplan shall incorporate a proposed schedule for interim tasks including, as necessary, potential pilot studies as part of the SSC/BPTC Study.
 - Task B. By **November 1, 2018**, the Permittee shall submit for the Executive Officer's review and concurrence the SSC/BPTC Study Report, which shall include the evaluation of the alternatives with a recommendation of the preferred alternative(s) and time schedules for the Facility to comply with Order No. R1-2014-0026.

² Source controls include but are not limited to water conservation and chemical use reduction or substitution.

- Task C. The Permittee shall implement the approved alternative(s) by the time schedules from Task 2.B. Semi-Annually, by **February 1 and October 1** each year until completion of the SCC/BPTC, the Permittee shall submit progress reports, detailing activities performed toward investigation, evaluation, and compliance conducted during the previous six months.
3. In the interim period until the Permittee can achieve full compliance with Order No. R1-2014-0026, the Permittee shall operate and maintain, as efficiently as possible, all facilities and systems necessary to comply with all prohibitions, effluent limitations and requirements identified in Order No. R1-2014-0026 or any future waste discharge requirements issued for the Facility.
 4. If the Permittee is unable to perform any activity or submit any documentation in compliance with the deadlines set forth in Requirements above, the Permittee may request, in writing, an extension of the time. The extension request shall include justification for the delay and shall be submitted at least seven days prior to the respective deadline to be considered timely.
 5. If the Executive Officer of the Regional Water Board finds that the Permittee fails to comply with the provisions of this Order, the Executive Officer may take all actions authorized by law, including referring the matter to the Attorney General for judicial enforcement or issuing a complaint for administrative civil liability pursuant to Water Code sections 13350 and 13385. The Regional Water Board reserves the right to take any enforcement actions authorized by law.

Ordered by: _____
Matthias St. John
Executive Officer

April 6, 2015