

APPENDIX D - FACILITY-SPECIFIC NUTRIENT MANAGEMENT PLAN (FNMP)

Owners and operators of wine, beverage and food processors (hereinafter identified as “Dischargers”) seeking coverage under the General Waste Discharge Requirements for Discharges of Wine, Beverage, and Food Processor waste to Land, Order No. R1-2016-0002(Order) and who propose to either; 1.) Apply treated process wastewater to land at concentrations exceeding the effluent limits in Table 1 of the Order for ammonia, nitrate or nitrite or 2.) Apply solid non-hazardous, decomposable processor waste to land as a source of nutrients and a soil amendment; are required to develop and implement a Facility-specific Nutrient Management Plan (FNMP).

I. FNMP purpose and implementation

The purpose of the FNMP is to identify practices that will be used to minimize adverse impacts to groundwater and surface water from the land application of nutrients found in process wastewater and process solids.

The FNMP describes the agronomic rate application of the process wastewater and process solids to land and documents compliance with the Order requirements. It identifies the land application area, the crop or vegetation being grown, the nutrient requirements of that crop or vegetation, and the land application method.

The FNMP will be submitted when applying for coverage under the Order. Regional Water Board staff will review the FNMP to document the use of agronomic application rates, the application method and compliance with the requirements of the Order. Approval of the FNMP shall be referenced in the Notice of Coverage (NOC) letter. The approved FNMP shall be kept at the Facility for use by Facility staff and review by Regional Water Board staff during inspections.

The FNMP shall be revised if changes in conditions or practices at the Facility require modification of the FNMP. Conditions that may require modification of the FNMP include but are not limited to, changes in effluent nutrient concentration, changes in type of crop/vegetation grown, designation of a new land application area and any needed modification of land application practices to prevent the off-site movement of process wastewater or process solids.

Records on the timing and amounts of process waste water and process solids applied to land shall be collected and submitted in accordance with the Monitoring and Reporting Program (MRP) associated with the Order, MRP No. R1-2016-0002.

II. CONTENTS OF FNMP

At a minimum, the FNMP must contain the following components:

A. Contact Information

The name and phone number of (a) the facility owner, (b) the facility operator who is responsible for implementing the FNMP (if different from the owner), and (c) the developer of the FNMP.

B. Specific dates

The date that the FNMP was completed and the most recent annual review date.

C. Facility and Land Application area information

The following information must be included:

1. Name of the facility;
2. Facility address;
3. Assessor's Parcel Number(s) for the facility location and land application area;
4. The total acreage of the land application area; and the acreage used for the application of (a) process wastewater, (b) non-hazardous, decomposable, processing solids, or (c) both;
5. The type of crop(s) or vegetation being grown within the land application area; and
6. Copies of any written agreements that authorize the Discharger to apply process wastewater and process solids on property not owned or operated by the Discharger.

D. Maps and Drawings:

One or more United States Geological Survey quadrangle maps or equivalent showing the location of the facility and the land application area. One or more aerial photos or scaled map drawings showing the entire land application area. The aerial photo(s) and/or drawing(s) of the land application area should include a map legend and identify the locations of all of the following: surface water courses, drainage ditches and drainage controls (berms, levees, etc.); subsurface (tile) drainage systems and associated discharge points; groundwater wells and type (domestic, industrial, agricultural, or monitoring); and septic systems and leachfields.

E. Nutrient Budget Calculations

The FNMP must include a data table showing the total annual nitrogen load in pounds/acre/year being applied to the land application area from the reuse of process wastewater and process solids. The table should identify the annual load of nitrogen associated with both the process wastewater and the process solids. The average nutrient content and total annual volume of process wastewater and process solids being land applied shall be included in the table. The data table shall also include the annual agronomic nutrient need, of the crop(s) or landscape vegetation grown in the land application area.

An annual agronomic rate calculator for various types of crops and vegetation can be found on the Regional Water Board website at the following link:
http://www.waterboards.ca.gov/northcoast/water_issues/programs/wine_beverage_food/AgroCalculator.xlsm

The calculator may be used to determine the annual nutrient need of the crop. The calculator will be updated, as needed.

The data table must clearly demonstrate how the annual nitrogen agronomic nutrient rate for the crop(s) or vegetation will not be exceeded through the land application of the process wastewater and process solids. The data table must be reviewed annually and updated if there are any significant changes in conditions or practices at the facility that necessitate changes in the FNMP. The data table and calculations may be reviewed by Regional Water Board staff during inspections.

F. Land application practices and water quality protection

The FNMP must describe how and when process wastewater and solid non-hazardous, decomposable processor waste will be applied to the land application area(s). If the nutrient budget shows that the nutrients generated by the Facility exceed the amount needed by crops in the land application area, then the Discharger must include in the FNMP management practices that will be implemented to prevent impacts to surface water or groundwater due to application of excess nutrients. Such practices may include obtaining access to additional land for nutrient application, or exporting the solid non-hazardous, decomposable processing waste to a permitted composting facility or landfill.

III. RECORD-KEEPING AND FNMP REVIEW

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

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