

ATTACHMENT E

California Regional Water Quality Control Board San Francisco Bay Region

General Waste Discharge Requirements

Grazing Management Plan Minimum Requirements

Order No. R2-2016-0031 requires the preparation and implementation of a Grazing Management Plan (GMP) for confined animal facilities (CAFs) with grazing operations on grazing lands that encompass an area of 50 acres or more or encompass an area smaller than 50 acres and are identified by the Executive Officer as posing a threat to water quality. The purpose of the GMP is to identify the necessary site-specific grazing management measures to reduce animal waste and sediment runoff. In selecting what management practices to use at the facility, the Discharger shall take in consideration the vegetation, terrain, kind of livestock, and general ranch facility operation procedures. Dischargers have the option to combine the GMP elements with the facility's Nutrient Management Plan or Waste Management Plan.

A. General Requirements:

The Discharger is required to have a completed GMP kept onsite and available for review by Water Board staff during inspections. Elements of the GMP shall include:

1. A ranch facility map, or aerial photo on a 1:12,000 scale;
2. An inventory of grazing resources based on visual observations and/or existing reports;
3. An assessment of facility conditions, per the checklist titled *Checklist Form For Assessing Grazing Operations** (attached), identifying controllable discharge points for pathogens, nutrients, and sediment;
4. Identification of sediment legacy discharge points, if appropriate;
5. An annual assessment of residual dry matter (RDM) as specified in the University of California 2002, California Guidelines for Residual Dry Matter Management on Coastal and Foothill Annual Rangelands, Rangeland Monitoring Series Publication 8092; and
6. A description of the of the GMP's objectives.

* The checklist is intended to guide the Discharger in the inventory of resources and the preparation of the GMP. Alternative checklists may be used, provided the Executive Officer approves of them in writing.

B. Best Management Practices

1. The GMP must include pollution prevention measures and/or best management practices (BMPs) that reduce nonpoint source pollution due to grazing and protect water quality. In selecting what BMPs to use at the facility, the Discharger must take in consideration the vegetation, terrain, kind of livestock, and general facility operation procedures. A complete and effective GMP will accomplish the following:
 - a. Minimize delivery of sediment from ranching lands to surface waters.
 - b. Minimize delivery of pathogens and nutrients from ranching lands to surface waters.

- c. Establish manure management operations designed to minimize runoff from entering watercourse.
 - d. Manage animal use areas to minimize sediment/pathogen/nutrient runoff to water course(s).
 - e. Construct and maintain access and ranch roads to minimize erosion.
 - f. Manage existing grazing operations to prevent additional erosion of legacy sediment delivery sites.
 - g. Manage and design animal crossings to minimize pathogen/sediment/nutrient runoff into watercourses.
 - h. Protect vegetation along flowing watercourses from overgrazing to maintain natural water temperatures and protect stream banks.
2. The GMP shall also include:
- a. A description of all management practices currently implemented at the facility;
 - b. A schedule for implementation of newly-selected management practices to comply with the above BMPs;
 - c. An implementation schedule for management of grazing activities, structural improvements, livestock management, and land treatments necessary to comply with the above BMPs; and
 - d. An implementation schedule for road-erosion control and prevention actions and actions to avoid increases in erosion of existing unstable areas due to grazing practices to comply with the above BMPs.
3. The implementation schedules shall be included in the GMP and may be updated yearly thereafter.
4. A list of potential BMPs may be found in the Natural Resource Conservation Service Field Office Technical Guide or equivalent rangeland management guidance documents. The Conservation Service Field Office Technical Guide can be obtained at local offices of the USDA Natural Resources Conservation Service or the Conservation District office.

C. Special Requirements for Walker Creek Watershed

In selecting BMPs that reduce nonpoint source pollution due to grazing, Dischargers in the Walker Creek watershed, downstream of the Gambonini Mine, must choose BMPs that will minimize the discharge of mercury or the production of methylmercury. Any proposed BMPs that involve work within the floodplain, or any proposal to implement BMPs that may have the potential for increasing the discharge of mercury or the production methylmercury, must be reviewed by Water Board staff prior to implementation. This review is typically made as part of required review and approval for other relevant permits.

If Water Board staff determine that the proposed management practice/control measure does have the potential to increase the discharge of mercury or the production of methylmercury, then the management practice/control measure will not be covered by this Order, and a separate Report of Waste Discharge, pursuant to CWC section 13260 shall be submitted by the Discharger.

Checklist Form For Assessing Grazing Operations

Date: _____ **Weather:** _____

Name of Person Completing checklist: _____

Facility Information

Facility Name:	Owner Name & Address (if different):
Address:	Nearest Water Body:
Operator Name & Address:	Number of Animals:
Operator Telephone Number:	Type of Animals:
Facility's Assessor's Parcel Number:	

Erosion and Sediment Sources

Sediment from Sheet, Rill, and Gully Erosion: Sheet and rill erosion generally occurs on crop-fields or overgrazed pastures and corrals. Gullies can occur from these same conditions, or can be caused by natural occurrences, such as from burrowing animals.

Pastures	Yes	No
Upon close inspection, is bare soil visible in pastures?		
At a distance of 20 feet, can you distinguish small objects such as roots and cow pies?		
Are there gullies or headcuts in pastures?		
Crop Fields		
Do crop-fields have rill or other signs of surface erosion?		
Are crop-fields clean cultivated so that all plant residue is tilled under?		
Road Erosion		
Do ranch roads show signs of surface erosion such as rills or gullies?		
Are there any gullies caused by unprotected culverts?		
Are drainage ditches eroding?		
Do road surfaces consist of bare soil?		

Other types of erosion noted: _____

Suggestions for correcting problems indicated by yes answers above: _____

Nutrients and Pathogens

Pollution from animal waste: This generally occurs where animals congregate or are confined, or where animals have access to creeks. Nutrient pollution problems are best evaluated during the rainy season when water testing can be used to locate problems.

	Yes	No
Are there possible sources of nutrients and pathogens from direct animal access to creeks?		
Are feeding areas, water troughs, or salting areas near creeks?		
Are manure stock piles located where runoff could flow into creeks?		

Locations of problem areas: _____

Other types of animal waste pollution noted: _____

Suggestions for correcting problems indicated by yes answers above: _____

Riparian Areas

Condition of Creek and Streams: Riparian areas are sensitive to damage from livestock. Livestock should be excluded from or carefully managed in riparian areas. Condition of riparian areas can be evaluated at any time of the year.

	Yes	No
Do creek banks lack good cover of grasses trees and shrubs?		
Are creeks exposed to full sun?		
Is there excessive growth of algae in creeks?		
Are creek banks actively eroding or trampled?		
Do livestock have access to riparian areas?		
Do livestock congregate in riparian areas?		
Are waterway crossings secure and bermed?		
Are water troughs located away from riparian areas?		

Location of problem areas: _____

Other types of riparian areas degradation noted: _____

Suggestions for correcting problems indicated by yes answers above: _____

