CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

APPENDIX MRP-1 TO ORDER R5-2015-XXXX
MANAGEMENT PLAN REQUIREMENTS FOR SURFACE WATER

WASTE DISCHARGE REQUIREMENTS
FOR

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
AND
UNITED STATES DEPARTMENTO OF THE INTERIOR
BUREAU OF RECLAMATION

SURFACE WATER DISCHARGES FROM THE
GRASSLAND BYPASS PROJECT

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MRP-1: Management Plan Requirements for Surface Water

I. Management Plan Development and Required Components

This appendix describes requirements for the development of surface water quality management plans (SQMPs) under Waste Discharge Requirements for the Grassland Bypass Project for the San Luis & Delta-Mendota Authority and the U.S. Bureau of Reclamation (Dischargers) in Order R5-2015-XXXX (hereafter "Order"). When a SQMP has been triggered, the Dischargers shall ascertain the potential source(s) of the water quality exceedance(s) and determine appropriate actions that may be implemented to mitigate the exceedance.

The Discharger shall submit the SQMP to the Central Valley Water Board within a sixty (60) day period that begins the first business day after the Discharger's receipt of the field or laboratory results that report the triggering exceedance. The Central Valley Water Board will post the proposed SQMP for public review and comment as stated in section II.a below.

The SQMP shall contain the required elements presented and discussed in the following sections. The Dischargers may develop one management plan to cover all areas where plans have been triggered rather than developing separate management plans for each management area where plans have been triggered. The Dischargers will maintain the overarching plan as new information is collected, potentially triggering additional management areas and completion of other management plans.

If multiple constituents of concern (COCs) are to be included in a single management plan, a discussion of the prioritization process and proposed schedule shall be included in the plan.

If a number of management plans are triggered, the Dischargers shall submit a prioritization list to the Central Valley Water Board Executive Officer. This list may prioritize the order of management plan development based on, for example, 1) the potential to harm public health; 2) the beneficial use affected; and/or 3) the likelihood of meeting water quality objectives by implementing specific activities. The Executive Officer may approve or require changes be made to the management plan priority list. The Dischargers shall implement the prioritization schedule approved by the Executive Officer.

A. Introduction and Background

The introduction portion of the management plan shall include a discussion of the constituents of concern (COCs) that are the subject of the plan and the water quality objective(s) or trigger(s) requiring preparation of the SQMP. The introduction shall also include an identification (both narrative and in map form) of the boundaries (geographic and surface water basin[s] or portion of a basin) to be covered by the SQMP including how the boundaries were delineated.

B. Physical Setting and Information

The SQMP needs to provide a discussion of the physical conditions that affect surface water in the management plan area and the associated existing data. At a minimum, the discussion needs to include the following:

a. Land use maps which identify the crops being grown in the watershed. Map(s) must be in electronic format using standard geographic information system software (ArcGIS shapefiles).

b. Identification of the potential sources of the COC(s) for which the management plan is being developed. If the potential sources are not known, a study may be designed and implemented to determine the source(s). Requirements for source identification studies are

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given in section I.G below. In the alternative, instead of conducting a source identification study, the Dischargers may develop a management plan for the COC(s) that meets the management plan requirements as specified in this appendix.

c. A summary, discussion, and compilation of available surface water quality data (as applicable) for the parameters addressed by the management plan. Available data from existing water quality programs may be used, including but not limited to: Surface Water Ambient Monitoring Program (SWAMP), United States Geological Survey (USGS), California Department of Public Health (DPH), California Department of Pesticide Regulation (DPR), California Department of Water Resources (DWR), and local surface water management programs.

C. Management Plan Strategy

This section provides a discussion of the strategy to be used in the implementation of the SQMP and should at a minimum, include the following elements:

1. A description of the approach to be utilized by the SQMP (e.g., multiple COC's addressed in a scheduled priority fashion, multiple areas covered by the plan with a single area chosen for initial study, or all areas addressed simultaneously [area wide]).
2. The plan must include actions to meet the following goals and objectives:
   a. Compliance with the Order's receiving water limitations (section III of the Order).
   b. Educate growers about the sources of the water quality exceedances in order to promote prevention, protection, and remediation efforts that can maintain and improve water quality.
   c. Identify and implement activities to reduce loading of COC's, thereby improving water quality.
3. Identify the duties and responsibilities of the individuals or groups implementing the SQMP. This section should include:
   a. Identification of key individuals involved in major aspects of the project (e.g., project lead, data manager, sample collection lead, lead for stakeholder involvement, quality assurance manager).
   b. Discussion of each individual's responsibilities.
   c. An organizational chart with identified lines of authority.
4. Strategies to implement the management plan tasks. This element must:
   a. Identify the entities or agencies that will be contacted to obtain data and assistance.
   b. Identify activities that may be used to control sources of COCs from subsurface agricultural drainage that are 1) technically feasible; 2) economically feasible; 3) proven to be effective at protecting water quality, and 4) will comply with sections II.A, B and C of the Order. The task shall include an estimate of implemented activity effectiveness or any known limitations on the effectiveness of the activity.
   c. Identify outreach that will be used to disseminate information to the Grassland Area Farmers. This discussion shall include: the strategy for informing growers of the water quality problems that need to be addressed, and a description of how the effectiveness of the outreach efforts will be evaluated. The Dischargers may conduct outreach efforts or work with the assistance of the County Agricultural Commissioners, U.C. Cooperative Extension, Natural Resources Conservation Service, Resource Conservation District, California Department of Food and Agriculture, or other appropriate groups or agencies.
   d. Include a specific schedule and milestones for the implementation of activities and tasks outlined in the SQMP. The schedule must include the following items: time estimated to

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identify activities necessary to meet the Order's surface receiving water limitations (section II of the Order) and a timetable for implementation of identified activities (e.g., at least 75% of growers identified in management plan area have attended meetings in first year of outreach implementation).

e. Establish measureable performance goals that are aligned with the elements of the management plan strategy. Performance goals include specific targets that identify the expected progress towards meeting a desired outcome.

D. Monitoring Design

The monitoring system must be designed to measure effectiveness at achieving the goals and objectives of the SQMP and capable of determining whether activities implemented in response to the management plan are effective and can comply with the terms of the Order.

Field studies may be used to approximate the contribution of the Dischargers to the COC. Where the Dischargers determines that field studies are appropriate or the Executive Officer requires a technical report under CWC 13267 for a field study, the Dischargers must identify a reasonable number and variety of field study sites that are representative of the crop type being evaluated.

The strategy to be used in the development and implementation of the monitoring methods for surface water should address the general requirements and, at a minimum, include the following elements:

a. The location(s) of the monitoring site and schedule (including frequencies) for monitoring should be chosen to be representative of the COC discharge.

b. Surface water monitoring data must be submitted electronically per the requirements given in section II.E of the MRP.

E. Data Evaluation

Methods to be used to evaluate the data generated by the SQMP monitoring and to evaluate the effectiveness of the implemented activities must be described. The discussion should include at a minimum, the following:

1. Methods to be utilized to perform data analysis (graphical, statistics, modeling, index computation, or some combination thereof).

2. Identify the information necessary to quantify program effectiveness going forward, including the tracking of implemented activities to meet water quality objectives or limitations. The approach for determining the effectiveness must be described. Acceptable approaches include field studies of implemented activities at representative sites and modeling or assessment to associate the degree of implementation to changes in water quality. The process for tracking implementation must also be described. The process must include a description of how the information will be collected, the type of information being collected, how the information will be verified, and how the information will be reported.

F. Records and Reporting

By 1 June of each year, the Dischargers must prepare a Management Plan Progress Report that summarizes the progress in implementing management plans. The Management Plan Progress Report must summarize the progress for the calendar year. The Management Plan Progress Report shall include the following components:

(1) Title page

(2) Table of contents

(3) Executive Summary

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(4) Location map(s) and a brief summary of management plans covered by the report
(5) Updated table that tallies all exceedances for the management plans
(6) A list of new management plans triggered since the previous report
(7) Status update on preparation of new management plans
(8) A summary and assessment of management plan monitoring data collected during the reporting period
(9) A summary of management plan grower outreach conducted
(10) Results from evaluation of implemented activity effectiveness
(11) An evaluation of progress in meeting performance goals and schedules
(12) Any recommendations for changes to the management plan

G. Source Identification Study Requirements

Should the Dischargers conduct a Source Identification Study to comply with this Order, the Dischargers must first receive approval from the Executive Officer. Once approved, the Discharger may proceed with its study.

The minimum components for a source identification study are:

(1) An evaluation of the potential sources.
(2) Continued monitoring at the management plan site/area and increased monitoring if appropriate.
(3) An assessment of the potential pathways through which the constituents of concern can occur.
(4) A schedule for conducting the study.

Specific field studies (including edge-of field studies) may be required to approximate the contribution of the Dischargers to the water quality exceedance. At a minimum, the Dischargers must evaluate the feasibility of field studies as part of their source identification study proposal. Where field studies are deemed appropriate, the Dischargers should identify a reasonable number and variety of field study sites that are representative of the particular activity being evaluated. If field studies are not proposed, the Dischargers must demonstrate how the alternative source identification method will produce data or information that will enable the determination of contributions from the Dischargers to the water quality problem.

If an approved study shows that the Dischargers are not a source, then the Dischargers can request the Executive Officer to approve completion of the associated management plan. Where the Dischargers are identified as a source, a full management plan shall be prepared and implemented.

II. Approval and Review of the Management Plan

The following discussion describes the review and approval process for draft management plans submitted to the Executive Officer for approval. Any proposed changes to the management plan must be approved by the Executive Officer prior to implementation.

a. Water quality management plan approval – Prior to Executive Officer approval of any management plan, the Central Valley Water Board will post the draft management plan on its website for a review and comment period. Stakeholder comments will be considered by Central Valley Water Board staff. Based on information provided by the Dischargers and after consideration of comments provided by other interested stakeholders, the Central Valley Water Board's Executive Officer will either: (1) approve the management plan; (2) conditionally approve the management plan or (3) disapprove the management plan. Review of the

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management plan and the associated action by the Executive Officer will be based on findings as to whether the plan meets program requirements and goals and contains all of the information required for a management plan.

b. Periodic review of water quality management plans – At least once every five years, the Central Valley Water Board intends to review available data to determine whether the approved management plan is resulting in water quality improvements. Central Valley Water Board staff will meet with the Dischargers and other interested parties to evaluate the sufficiency of management plans. Based on input from all parties, the Executive Officer will determine whether and how the management plan should be updated based on new information and progress in achieving compliance with the Order's receiving water limitations, as applicable (see section III of the Order). The Executive Officer also may require revision of the management plan based on available information indicating that the Dischargers are not in compliance with surface receiving water limitations (as applicable) of the Order. The Executive Officer may also require revision to the management plan if available information indicates that degradation of surface water calls for the inclusion of additional areas, constituents of concern(s), or additional activities in the management plan. During this review, the Executive Officer will make one of the findings described below:

    1. Adequate progress – The Executive Officer will make a determination of adequate progress in implementing the plan if water quality improvement milestones and compliance time schedules have been met or the receiving water limitations of the Order are met.

    2. Inadequate progress – The Executive Officer will make a determination of inadequate progress in implementing the plan if the Order's receiving water limitations are not being met; and water quality improvement milestones and compliance time schedules in the approved management plan have not been met.

The actions taken by the Executive Officer upon a determination of inadequate progress include, but are not limited to one or more of the following for the area in which inadequate progress has been made:

- Field monitoring studies – The Dischargers may be required to develop and implement a field monitoring study plan to characterize the discharge of the constituent of concern and evaluate the pollutant reduction efficacy of implemented activities to reduce the constituent of concern. Based on the study and evaluation, the Executive Officer may require the management plan to be revised to include additional activities to achieve compliance with the Order's receiving water limitations.
- Independent, on-site verification of implemented activities and evaluation of their adequacy.

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III. Management Plan Completion

The SQMP can be completed in one of two ways: 1) if an approved source study shows that the activities of the Dischargers are not causing or contributing to the water quality problem; or 2) if the implemented activities have resolved the water quality problem.

The goal of the SQMP is to identify the source(s) of COCs, track the implementation of effective activities, and ultimately ensure that waste discharges from the GBP are meeting the receiving water limitations of the Order. If an approved source study shows that the Dischargers' activities are not a source, then the Dischargers can request the Executive Officer to approve completion of the associated management plan.

A request for approval of completion of a SQMP will require credible evidence that the water quality problem has been resolved. The Executive Officer will evaluate each request on a case-by-case basis. The following key components must be addressed in the request:

a) Demonstration through evaluation of monitoring data that the water quality problem is no longer occurring (i.e., 3 or more years with no exceedances during the times of the year when previous exceedances occurred) or demonstrated compliance with the Order's receiving water limitations.
b) Documentation of Dischargers education and outreach to applicable Growers in the Grassland Drainage Area where water quality impairment occurred.

A SQMP may be completed for all or some of the constituents that prompted preparation of the management plan. When Executive Officer approval is given for completion of a SQMP for one or more constituents, each constituent shall revert to regular, ongoing monitoring requirements (as described in the MRP).

Requests for a SQMP completion must summarize and discuss all information and data being used to justify completion. The Dischargers shall not discontinue any of the associated management plan requirements prior to Executive Officer approval of its completion request.

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