Hilmar SEP
Second Quarterly Report to the Central Valley Regional Water Quality Control Board

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Introduction

This report was prepared consistent with the SEP communications plan to keep the CVRWQCB staff, Hilmar, the peer review panel and the stakeholders panel apprised of status of the SEP. Progress remains in line with the project timeline. Tasks 4, 5, 6, and 8 are underway. In addition, our website http://hilmarsep.com designed to improve access to our work as we proceed is now operational. It may accessed directly via the Web or via either the Hilmar or Central Valley Regional Water Board websites. Dr. Sunding is in discussions with a replacement for Keith League on the Peer Review Panel and hopes to present his credentials to Hilmar and the Board shortly.. Finally, we plan to convene a stakeholders meeting in late January 2007 to present further information on our progress and to solicit feedback from stakeholders. Stakeholders will be contacted soon to determine a convenient date and location.

Task Status

Tasks 1-3

These tasks are complete.

Task 4 Characterize Wastewater Discharges from the Food Processing Industry

This task is underway. The status by subtask is as follows:

Task 4A Review and Synthesize Available Literature

This subtask is ongoing. Several literature reviews are nearing completion.

Task 4B Collect and Combine Existing Data

Data for food processors and POTWs (with food-processing related activities) from the following counties have been collected: Madera, Merced, Stanislas, and San Joaquin. This is referred to as Area A. An extensive amount of data regarding discharge amounts and characteristics have been scanned and stored electronically. A template for storing discharge data was developed. Analysis of Area A is complete. Copying and scanning of data for Area B, consisting of the following counties: Fresno, Kern, Kings, Madera, and Tulare is underway. See Attachment I to identify the locations. To date we have scanned 169 files. This includes food processors and municipal POTWs. This includes 90 files from Area A and 79 files from Area B. These figures may include single processors who have two different Order Numbers and WDID for different parts of their operation. Each Water Board Order Number is one separate file. Note that there are about 4-6 POTWs that are not on this list that we are still in the process of completing the data acquisition .

Task 4C Describe Food Processing Industry Waste Streams

Detailed descriptions are being developed based on the data collected in 4B. A basic template for this has been developed. Two examples (incomplete and pending further checks) are presented in Attachment V and at the website.

Task 4D Develop GIS Database of Plant Locations

This task has been completed. A map of plant locations can found at our website.

Task 4F Define and Develop Representative Areas (RAs)

We continue to develop and test the numerical models for the Modesto, Merced River, and Fresno/Kings River study areas.(See maps attached to the first quarterly report.) The exact and number of actual studies to be executed is TBD.

Task 4E Conduct Screening Analysis

Preliminary drafts have been developed for tomato processors and wineries. A similar exercise is underway fro meat processors and cheese manufactures. These food processor types were selected for initial study based on a screening exercise accounting for numerous factors including chemical and geochemical factors, environmental risk factors, agronomic factors, and because of their relative importance to the economies of the Central Valley Counties measured by output and employment. Attachment II, summarizes these economic measures. This information will also be important for Tasks 5.2, 6, and 7.

Task 4G Develop Growth Projections

We continue to collect population and industry growth projections from local, regional, and state sources. GIS-based land use maps describing both current and projected uses throughout the Central Valley are being collected. Attachment III summarizes the current status of this effort. We now have land use projections for most of the study region.

Task 5 Identify and Quantify Impairments to Beneficial Uses

This task is underway. Task 5.1 includes the development of numerical models for flow and transport in soils. We continue to test models. The numerical model that we have adopted for modeling the subsurface transport food processors discharges is MIN3P (Mayer, Frind and Blowes, Water Resources Research, 38(9), 2002).

Numerical modeling scenarios and conditions leading to favorable and unfavorable environmental conditions are under development. We have begun modeling discharges from tomato and wine processors. Combined with land use data collected in Task 4G, we are beginning to study the intersection of salinity discharge, salinity ground water concentrations and land use. Attachment IV demonstrates this effort. It shows the land

uses surrounding a food processor. This is information is mapped against projected salinity discharge transport.

Task 6 Identify and Evaluate Salinity Management Options

This task is underway. We are investigating discharge prevention methods, discharge treatment methods, and disposal methods. Initial efforts have focused on the collection of information from prior studies, academic research and discussions with engineering experts. Engineers will play a more direct role in this task as we proceed.

Task 8 Review Existing Regulatory Policies and Basin Plans

This task is underway. We are reviewing the current Basin plan under Task 8A as well as plans elsewhere in the state. Under Task 8B we are examining salinity policies in England and Australia. This task was initially projected for completion by the end of December 2006. This may slip several weeks, but this will not impede progress on other tasks.

List of Attachments:

I. Area A and B designation
II. Food Processor Output and Employment
III. GIS Matrix
IV. Land Use Map
V. Template Examples