

MONITORING PLAN
TITLE
(SWRCB Agreement #)
ORGANIZATION
(Date)

I. INTRODUCTION

Brief one paragraph introduction including the purpose of this monitoring.

II. BACKGROUND

Can use information from Application

III. OVERVIEW

QAPP Preparer has prepared this monitoring plan for use by Grantee personnel. Grantee personnel are responsible for coordinating and performing the sampling events, including providing sampling equipment, obtaining sample bottles from the lab, taking field notes, and ensuring delivery of the samples to the analytical laboratories. The following sections provide details of the monitoring plan, including constituents, sampling locations, frequency, and sampling team. In a separate document, the QAPP will discuss the details of how the samples are collected to provide data that are representative and scientifically defensible.

IV. WATER QUALITY SAMPLING

(Sample introduction →) Samples will be collected at several points within the drainage system to characterize water quality associated with storm water runoff and irrigation tailwater return flows in drains and spills during storm and non-storm events. As the project progresses, there may be a need to add or remove sampling sites and to adjust the timing of the sampling events. This monitoring plan will be updated with changes to the locations and schedule as needed.

Constituents

(Sample Introduction →) A limited list of constituents will be monitored, including key constituents of concern to the California Bay Delta Authority Drinking Water Quality Program, 303(d)-listed constituents, and field measurements of general water quality. The list of sampling constituents and rationale for each are summarized in Table 1 below.

Table 1 Sampling Constituents (Sample list)

Constituent	Purpose	Comment
pH	General water quality	Electronic meter/probe , telemetry

Electrical Conductivity (EC)	Constituent of concern for drinking water, characteristic of general water quality	Electronic meter/probe , telemetry
Dissolved Oxygen	General water quality	Electronic meter/probe
Temperature	General water quality	Electronic meter/probe, telemetry
Flow	To characterize relative significance of sources and loads	Flow meter, staff gauge, telemetry
Turbidity	General water quality	Electronic meter/probe
Total Organic Carbon	Constituent of concern for drinking water quality	Laboratory
Organophosphate pesticides (diazinon, chlorpyrifos)	303(d) listed	Laboratory
Ammonia	303(d) listed (Harding Drain), Impacts on downstream algae growth and dissolved oxygen	Laboratory
Nutrients (nitrate, total phosphorus, TKN)	Impacts on downstream algae growth and dissolved oxygen	Laboratory

(Sample language) Samples will not be collected where there have been prolonged periods of stagnant surface water conditions. Where available, telemetry, which provides automated data on field parameters (including flow), will be used to determine if surface waters were flowing 24 hours prior to the sampling event.

Sampling Locations

Sampling sites have been selected to: **List criteria for sample site selection, i.e., what each site represents.** The sample locations will be documented with GPS coordinates.

Describe any pertinent information.

Based on field conditions, the program may be modified by the project team during the sampling event to provide for field safety and make the collection accurate and thorough. Any changes made to the plan will be documented within the field notebooks and added to this Monitoring Plan as Appendices.

Table 2. Sampling Locations

Sample Site Designation	Sample Site Location	Purpose and other comments
Site Name	Specific location Latitude	

Sample Site Designation (Site Code)	Sample Site Location	Purpose and other comments
	Longitude	

Sampling Frequency and Schedule

(Sample language →) Sampling events will be conducted on a quarterly basis through the last quarter of 2005 for a total of five events. Each sampling event requires approximately one day to collect and record water column samples, measure field parameters, prepare samples for transport, and deliver and mail samples for overnight delivery to the respective laboratories. Specific dates on which the sampling events will occur within each quarter will be determined by Grantee personnel. The aim will generally be to characterize water quality during the time period when crops are on the fields and/or when representative agricultural activities are occurring. Both non-storm and storm conditions will be targeted over the five events.

The expected sampling dates are listed below in Table 2; however, unexpected circumstances may require that a sampling date be rescheduled. The monitoring plan will be updated with any changes.

Table 3. Quarterly Sampling Schedule (Sample schedule)

	Sampling Dates*	Targeted Conditions
Fall 2004	11/1/04 thru 12/31/04	Storm Event
Winter 2005	1/1/05 thru 3/31/05	Storm Event
Spring 2005	4/1/05 thru 5/31/05	Low Canal Flows
Summer 2005	7/1/05 thru 8/30/05	High Canal Flows
Fall 2005	11/1/05 thru 12/31/05	Storm Event

*Specific sampling dates will be determined by Grantee personnel.

Sampling Team

The sampling team is composed of two Sample Agency personnel that collect samples, measure field parameters, and take flow measurements. There may be times when the conditions are safe enough to necessitate only one sampler for an event. This decision will be made by Sample Agency personnel based on flows, antecedent precipitation, and sampling site characteristics. However, having only one sampler may significantly slow the sampling process. Responsible Person from Sample Agency provides project oversight and Responsible Person from Sample Agency is the leader of the sampling team. Responsible Person will also provide technical assistance as needed.

V. REPORTING

Results obtained from both the field investigation parameters and laboratory data are to be validated for quality, accuracy, and completeness according to the guidelines set forth

in the QAPP document. The data are then to be tabulated in database format compliant with the SWAMP program, saved, and maintained by Grantee or designate personnel. Results of these reports will be provided as described in the contractual agreement with the State (SWRCB agreement #).

VI. REFERENCES