



# SAN FRANCISCO ESTUARY INVASIVE SPARTINA PROJECT

2612-A 8<sup>th</sup> Street • Berkeley • California 94710 • (510) 548-2461

Preserving native wetlands

## ADDENDUM TO THE AQUATIC PESTICIDE APPLICATION PLAN

Dated August 2009 and  
Updated December 13, 2009

April 8, 2010

The following quality assurance measures are added to the Aquatic Pesticide Application Plan (APAP), and will be incorporated into the text at the document's next annual revision:

### 1. Project Data Quality Objectives

#### a. Data Quality Indicators for Field Activities

Insert the following text within the section entitled "Field Sampling Procedures" (pg 52):

"To assure accurate and reliable temperature, electrical conductivity, salinity, and dissolved oxygen measurements, the YSI Model 85 meter will be calibrated, operated, and maintained in accordance with the manual specifications found at <http://www.ysi.com/media/pdfs/038503-YSI-Model-85-Operations-Manual-RevE.pdf>. To assure accurate and reliable pH measurement, the pHTester 1 meter will be calibrated, operated, and maintained in accordance with the manual specifications found at [http://www.4oakton.com/Manuals/pHORPion/WPpHTestr1\\_2mnl.pdf](http://www.4oakton.com/Manuals/pHORPion/WPpHTestr1_2mnl.pdf)."

### 2. Field Preparation and Documentation

#### a. Field Data Sheets

Delete the last sentence of the section entitled "Field Sampling Procedures," and add the following paragraph to that section:

"At each sampling location, the sample ID number, the time of the sampling, the sample depth, and the water temperature, pH, dissolved oxygen, conductivity, and salinity measurements, will be entered on a Field Data Collection Form ("FDCF", attached). Also recorded on the FDCF will be site information, including the site ID number, the station location (application point, upstream, downstream), station type (reference, treated), wind conditions, tidal cycle, water color, and the type of herbicide and surfactant that might be present. Any other unusual conditions or concerns will be noted, and any fish, birds, or other wildlife present will be recorded. The FDCFs will be dated and numbered consecutively for each site on that date. On return to the office, the data will be entered into an electronic spreadsheet for processing, and the FDCFs will be compiled into a data log and kept permanently in the office."

MAXENE SPELLMAN  
PROJECT MANAGER  
510.286.0332  
mspellman@scc.ca.gov

PEGGY OLOFSON  
PROJECT DIRECTOR  
prolofson@spartina.org

INGRID HOGLE  
MONITORING PROGRAM  
MANAGER  
ihogle@spartina.org

ERIK GRIJALVA  
FIELD OPERATIONS  
MANAGER  
ekgrijalva@spartina.org

DREW KERR  
FIELD OPERATIONS  
ASSISTANT MANAGER  
dwkerr@spartina.org

JEN MCBROOM  
CLAPPER RAIL  
MONITORING MANAGER  
jtmcbroom@spartina.org

Major Project Funders:

State Coastal  
Conservancy

American Resource &  
Recovery Act

National Oceanic &  
Atmospheric  
Administration

Coastal & Marine  
Restoration Grants  
Program

U.S. Environmental  
Protection Agency

San Francisco Bay Water  
Quality Improvement  
Fund

Association of Bay Area  
Governments

State Wildlife  
Conservation Board

CALFED Bay Delta  
Program

U.S. Fish and Wildlife  
Service

National Fish and  
Wildlife Foundation

Website:  
www.spartina.org



b. Field Variances:

The ISP usually selects and plans to monitor two or three more sites each season than is necessary for compliance with the NPDES Permit, to allow for failed sampling events or analyses. If a situation should arise that precludes being able to collect a water quality sample at a designated point at a site at a time suitably close to the specified times (within 24 hours prior to herbicide treatment, within five hours post-treatment, and one week post-treatment), the Water Quality Monitoring Manager (WQMM) will determine whether (1) sampling at the site type is needed to complete the sampling events required by the NPDES permit, or (2) sampling at the site type is not needed for permit compliance, and the site/event can be dropped. If the site type is needed, then the WQMM will consider whether surrogate sampling of some sort (e.g., sampling at a point reasonably nearby the initial point, or at a later or earlier time) would provide an acceptable substitute. If so, the variation will be carefully documented and justified on the Field Data Sheet. If the WQMM determines that surrogate sampling would not be suitable, then an alternate, similar site will be selected and sampled prior to, within five hours post, and within one week post treatment, as a complete replacement for the initial site. Data from samples already collected at the initial site will be kept and reported, along with an explanation of the reason for substitution. Any significant problems with sampling events that cannot be remedied in such a way, or any other significant water quality issues that should arise, will be reported to the US EPA Region 9 Project Manager, or their designee.

3. Quality Control for Samples Collected for Offsite Analysis

a. Data Quality Indicators for Off-Site Analysis:

Each season, the contracted analytical laboratory (“lab”) is required to provide a Quality Assurance Plan that meets USEPA standards prior to initiating analysis. The lab plan must specify the method of analysis to be used, and describe any variations from a standard protocol. The WQMM will review the lab QAP and determine if it is adequate. At a minimum, the following DQIs will be required for the lab:

<i>Criteria</i>	<i>Method</i>	<i>Indicator Goal</i>
Accuracy of measurement	Analyze matrix spikes and spike duplicates	1 matrix spike per 10 samples (10%) > 65% @ 2.0 ug/L
Agreement between measurements	Analyze lab duplicates and/or matrix spike duplicates	Relative percent difference < 25%
Completeness	Percent of usable data (completed/submitted)	95% return
Comparability of results	Standard reporting units  Use of standardized analysis methods	All data reported in micrograms per liter (ug/L) or parts per billion (ppb)  Standard method used if possible, any modifications identified, described, and supported.
Detection Limits	Method detection limit Lab reporting limit	MDL <= 0.2 ppb LRL <= 0.5 ppb

b. Assessment of Field Contamination:

- i. Field Blanks. To help assess contamination from field equipment, ambient conditions, sample containers, transit, and the laboratory, one field blank will be collected and submitted for analysis each sampling day. Field blank samples will be obtained by pouring deionized water into a sampling container at the sampling point.
- ii. Temperature Blanks. For each cooler that is shipped or transported to an analytical laboratory, a 40mL VOA vial will be included that is marked "temperature blank." This blank will be used by the sample custodian to check the temperature of samples upon receipt by the laboratory.

Attached: Field Data Collection Form.