

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2006-0065

FOR

CALIFORNIA DEPARTMENT OF FISH AND GAME
LAGUNA DE SANTA ROSA HERBICIDE APPLICATION

Sonoma County

INTRODUCTION

This Monitoring and Reporting Program (MRP) is issued pursuant to 13267(b) and requires monitoring of visual, chemical, and physical parameters and submission of technical reports to allow North Coast Region Water Quality Control Board (Regional Water Board) staff to determine compliance with permit and basin plan standards.

VISUAL MONITORING

The Discharger shall conduct daily visual surface inspections of all designated treatment and application areas including: 1) Overall visual record of the site including the approximate percent of vegetative coverage, appearance of vegetation, signs and appearance of wildlife, etc; 2) Appearance of designated waterway such as sheen, color, clarity, etc; and; 3) Current weather conditions and abiotic factors which may directly affect water quality. Results of the visual monitoring shall be recorded in a log book and retained for review by Regional Water Board staff.

PHYSICAL & CHEMICAL SURFACE WATER MONITORING

The purpose of physical and chemical surface water monitoring is to determine compliance with quality objectives for surface water within and immediately surrounding the treatment area. The physical and chemical surface water monitoring program shall be as follows:

1. Monitoring Locations

The monitoring locations shall be representative of conditions within and immediately surrounding designated treatment areas. According to the Discharger, three sample locations have been designated for sampling. WQ1 is immediately upstream of the treatment area at Occidental Road, WQ2 is within the treatment area, and WQ3 is immediately downstream of the treatment area near the confluence of Santa Rosa Creek and the Laguna de Santa Rosa. Additional monitoring sites shall be added to the monitoring network as needed. Samples shall be collected for physical parameters specified in Table 1 and chemical constituents specified in Table 2.

2. Monitoring Schedule

Event monitoring shall comply with the parameters, constituents, methods, and frequencies established in Tables 1 and 2 listed below. In the event that Regional Water Board staff will require the use of the continuous monitoring equipment (YSI 6600 Datasondes) for additional sampling efforts not associated with the *Ludwigia* Control Project, the Laguna Foundation shall supplement the continuous monitoring requirements listed in Tables 1 and 2 with the methods and frequencies listed in Table 3 below.

Surface water samples shall be analyzed for the following physical parameters:

Table 1: Surface Water Monitoring - Physical Parameters

Parameter	Type of Sample	Lab Method	Location	Frequency
Temperature	Grab	Field Testing	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
Temperature	Continuous	Field Testing	WQ1, WQ3	Continuous: pre-application through mechanical removal
Specific Conductivity	Grab	Field Testing	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
Specific Conductivity	Continuous	Field Testing	WQ1, WQ3	Continuous: pre-application through mechanical removal

Surface water samples shall be analyzed for the following chemical constituents:

Table 2: Surface Water Monitoring - Chemical Constituents

Constituent	Type of Sample	Lab Method	Location	Frequency
Glyphosate	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
Triclopyr (TEA)	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
Cygnat Plus Surfactant	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
StaPut Anti-drift agent	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.

Table 2: Surface Water Monitoring - Chemical Constituents (Continued)

Constituent	Type of Sample	Lab Method	Location	Frequency
Aminomethyl-phosphonic acid (AMPA)	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
Oxamic Acid	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
Limonene	Grab	SM 6551	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
pH	Grab	Field Testing	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.
pH	Continuous	Field Testing	WQ1, WQ3	Continuous: pre-application through mechanical removal
Dissolved Oxygen (DO)	Continuous	Field Testing	WQ1, WQ3	Continuous: pre-application through mechanical removal
Hardness (CaCO ₃)	Grab	SM 2340 C	WQ1, WQ2, WQ3	<ul style="list-style-type: none"> • 24-hours prior to application • Immediately after app. (WQ3 only) • 3-7 days after app.

Surface water samples shall be analyzed for the following parameters and constituents:

Table 3: Surface Water Monitoring – Supplement for Continuous Monitoring Requirements (To be used exclusively when YSI 6600 Datasondes are not available.)

Parameter or Constituent	Type of Sample	Lab Method	Location	Frequency
Temperature	Grab	Field Testing	WQ1, WQ3	Every 4 hours during operation
pH	Grab	Field Testing	WQ1, WQ3	Every 4 hours during operation
Dissolved Oxygen (DO)	Grab	Field Testing	WQ1, WQ3	Every 4 hours during operation
Specific Conductivity	Grab	Field Testing	WQ1, WQ3	Every 4 hours during operation

ANNUAL REPORT

The Discharger shall submit an annual report to the Regional Water Board no later than March 1st of the following year. The report shall include, at a minimum, the following:

1. *A Letter of Transmittal*: Each report shall be submitted with a letter of transmittal. This letter shall include the following:

- a. Identification: Name, address, and WDID No. 1B05082NSON;
- b. Date of report and monitoring period;
- c. Identification of all violations of permit conditions during the monitoring period;
- d. Details of any violations: parameters, magnitude, test results, frequency, and dates;
- e. The cause of violation;
- f. Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time schedule of action implementation;
- g. Authorized signature and certification statement.

2. *Results of Analyses and Observations*

- a. Visual observations within and immediately surrounding the treatment site;
- b. Tabulations of all required analyses, including parameter and/or constituent, sample date and time, sample station, sampling agency or organization and test result;
- c. Photographs of sampling locations and pre/post project sites.

3. *Report Summary*

- a. An Executive Summary discussing General Permit compliance or violation and the effectiveness of the APAP to reduce or prevent the discharge of pollutants associated with aquatic pesticide applications;
- b. A summary of monitoring data, including the identification of water quality improvements or degradation, and recommendations for improvements to the APAP, including proposed Best Management Practices (BMPs), based on the monitoring results. All receiving water monitoring data shall be compared to applicable water quality standards;
- c. Identification of BMPs and a discussion of their effectiveness in meeting the General Permit requirements;
- d. A discussion of BMP modifications addressing violations of the General Permit;
- e. A map showing the location of each application and treatment area;
- f. Types and amounts of aquatic pesticides used at each application event during each application;
- g. Information on surface area and/or volume of treatment area and any other information used to calculate dosage and quantity of each pesticide used;
- h. A detailed summary of the effectiveness of controlling *Ludwigia* by herbicide application and biomass removal. Included in this summary, at a minimum, shall be the approximate percentage and acreage of *Ludwigia* successfully controlled by

- herbicide application, the approximate percentage and acreage of *Ludwigia* successfully removed by mechanical operations, any additional results from research and/or activities conducted within the watershed by various groups and organization which may provide evidence of effectiveness, and an evaluation of the extent of populations remaining after cessation of the project;
- i. Recommendations to improve the monitoring program, BMPs, and APAP to ascertain compliance with the General Permit in consideration of the possibility of submitting an application for a General Permit coverage in following years;
 - j. A summary of the current progression of long-term *Ludwigia* control efforts including, but not limited to: research, planning and restoration activities taking place within the watershed by various groups and organizations. A report of these activities as prepared by the Laguna Foundation will satisfy this requirement.

4. *Report Submittal*

Copies of each monitoring report shall be mailed to:

North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Failure to comply with the terms of this Order may result in civil liabilities of up to \$5,000 per day under Water Code Section 13268(a)(b)&(d)(1), or misdemeanor prosecution under Water Code Section 13268(c)&(d)(2).

Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected by this Order may request the Regional Water Board to reconsider this Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Regional Water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights. If you choose to appeal this Order, be advised that you must comply with this Order while your appeal is being considered.

Ordered by: _____

Catherine E. Kuhlman
Executive Officer

June 16, 2006