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DIVISION OF WATER QUALITY

Attachment E – Notice of Intent

WATER QUALITY ORDER NO. 2013-0002-DWQ
GENERAL PERMIT NO. CAG990005

STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) PERMIT FOR RESIDUAL AQUATIC PESTICIDE DISCHARGES TO WATERS OF
THE UNITED STATES FROM ALGAE AND AQUATIC WEED CONTROL APPLICATIONS

I. NOTICE OF INTENT STATUS (see Instructions)

Mark only one item	A. <input checked="" type="radio"/> New Applicator	B. <input type="radio"/> Change of Information: WDID# _____
	C. <input type="checkbox"/> Change of ownership or responsibility: WDID# _____	8 33AP00002

II. DISCHARGER INFORMATION

A. Name Riverside-Corona Resource Conservation District			
B. Mailing Address 4500 Glenwood Dr. Bldg A.			
C. City Riverside	D. County Riverside	E. State CA	F. Zip 92501
G. Contact Person Kerwin Russell	H. E-mail address Russell@rcrcd.org	I. Title Natural Resources Manager	J. Phone (951) 683-7691 x. 203

III. BILLING ADDRESS (Enter Information only if different from Section II above)

A. Name Riverside-Corona Resource Conservation District			
B. Mailing Address 4500 Glenwood Dr. Bldg A.			
C. City Riverside	D. County Riverside	E. State CA	F. Zip 92501
G. E-mail address Lamb@rcrcd.org	H. Title District Manager	I. Phone (951) 683-7691 x. 202	

IV. RECEIVING WATER INFORMATION

A. Algaecide and aquatic herbicides are used to treat (check all that apply):

1. Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.
Name of the conveyance system: Boulder Heights detention basin

2. Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.
Owner's name: Riverside County, City of Riverside, City of Corona
Name of the conveyance system: _____

3. Directly to river, lake, creek, stream, bay, ocean, etc.
Name of water body: Santa Ana River and associated tributaries within District service area

B. Regional Water Quality Control Board(s) where treatment areas are located
(REGION 1, 2, 3, 4, 5, 6, 7, 8, or 9): Region 8
(List all regions where algaecide and aquatic herbicide application is proposed.)

V. ALGAECIDE AND AQUATIC HERBICIDE APPLICATION INFORMATION

A. Target Organisms: _____

Exotic non-native plants.

B. Algaecide and Aquatic Herbicide Used: List Name and Active ingredients
Aquamaster/Roundup Custom - Glyphosate
Habitat - isopropylamine salt of imazapyr: (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)

C. Period of Application: Start Date 10-1-2016 End Date End of permit

D. Types of Adjuvants Used:
- Nonylphenol based surfactants such as Activator 90

VI. AQUATIC PESTICIDE APPLICATION PLAN

Has an Aquatic Pesticide Application Plan been prepared and is the applicator familiar with its contents?
 Yes No

If not, when will it be prepared? _____

VII. NOTIFICATION

Have potentially affected public and governmental agencies been notified? Yes No

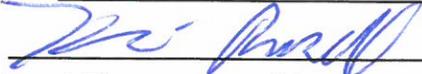
VIII. FEE

Have you included payment of the filing fee (for first-time enrollees only) with this submittal?
 YES NO NA

IX. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I certify that the provisions of the General Permit, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: Kerwin Russell

B. Signature: 

Date: 8-11-2016

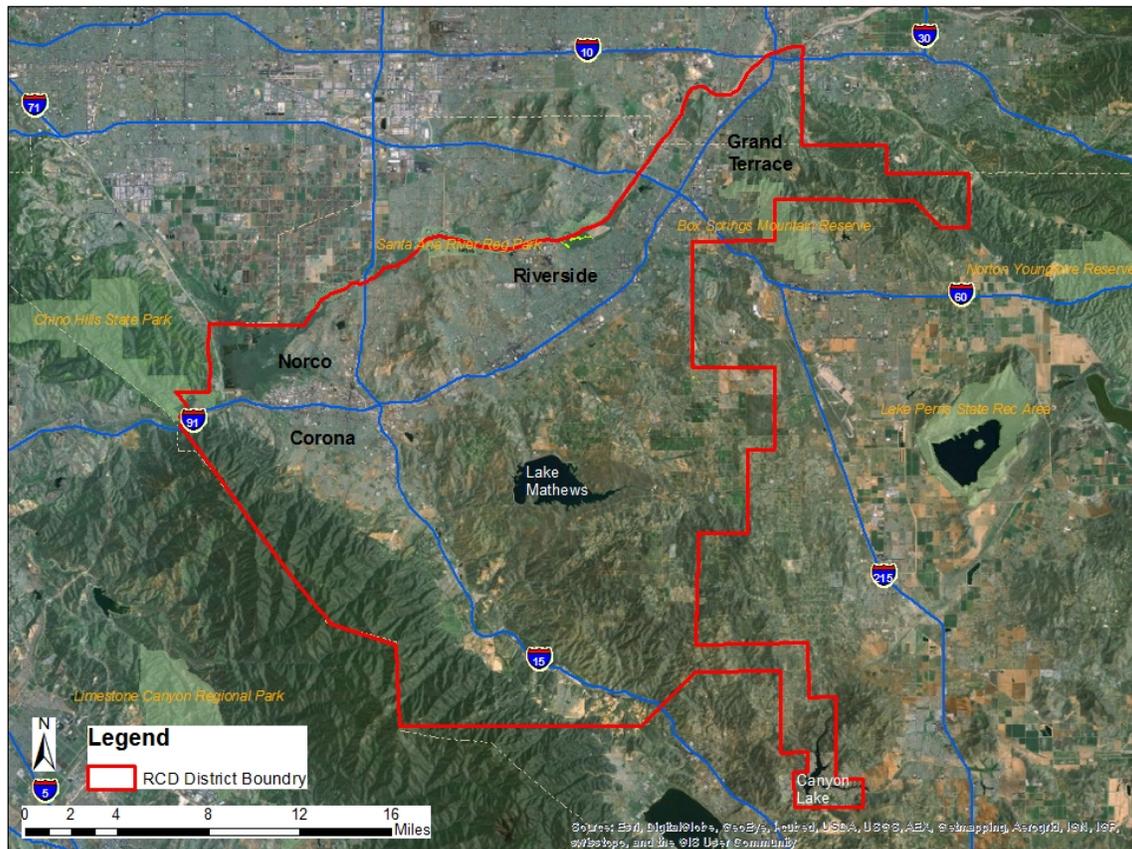
C. Title: Natural Resources Manager

XI. FOR STATE WATER BOARD STAFF USE ONLY

WDID:	Date NOI Received:	Date NOI Processed:
Case Handler's Initial:	Fee Amount Received: \$	Check #:
<input type="checkbox"/> Lyris List Notification of Posting of APAP	Date _____	Confirmation Sent _____

Aquatic Pesticide Application Plan

For the Riverside-Corona Resource Conservation District Service Area



Prepared By:

Riverside-Corona RCD

4500 Glenwood Dr. Bldg. A

Riverside, CA 92501

August 2016

PURPOSE: TO MEET THE REQUIREMENTS AND ENSURE COMPLIANCE WITH WATER QUALITY ORDER No. 2013-0002-DWQ, STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR RESIDUAL AQUATIC PESTICIDE DISCHARGES TO WATERS OF THE UNITED STATES FROM ALGAE AND AQUATIC WEED CONTROL APPLICATIONS, GENERAL PERMIT NO. CAG990005, ADOPTED BY THE STATE WATER RESOURCE CONTROL BOARD ON MARCH 5, 2013.

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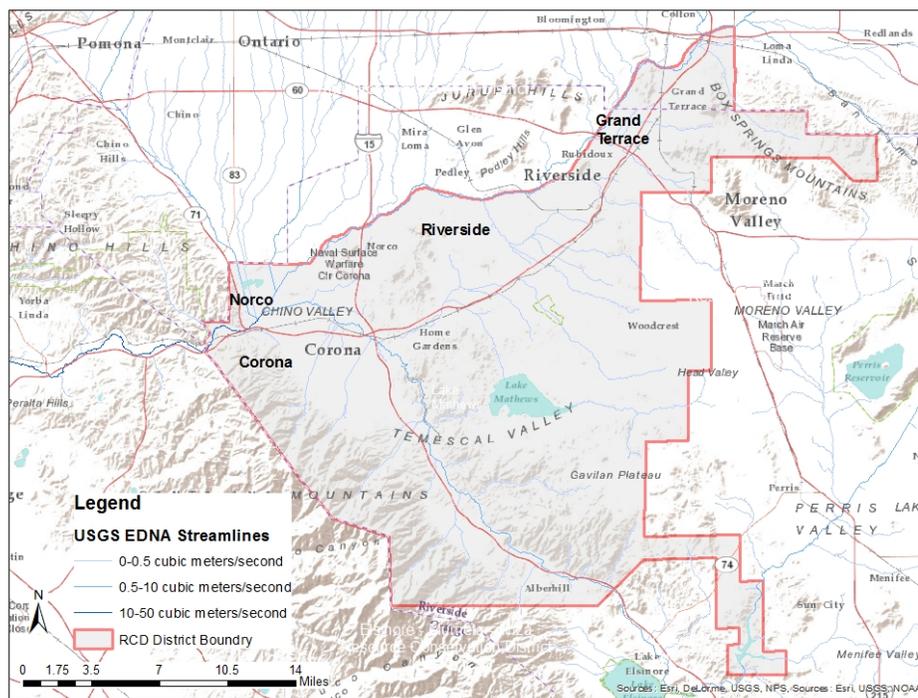
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Background

The Riverside-Corona Resource Conservation District (RCRCD) is a local government agency that works to conserve the natural resources (soil, water, native plants and wildlife) of areas within Western Riverside and San Bernardino Counties in southern California. RCRCD advocates that each acre of land be managed according to its needs and promotes the sustainable use of natural resources for each land-use. RCRCD works to sustain natural resources in a variety of ways, including restoring habitat through the removal of invasive species and reestablishment of native species.

Description of Water Bodies and Systems Controlled

RCRCD manages and maintains various waterways within conservation easements and fee title conserved lands within its service area. These water bodies range from portions of the Santa Ana river main stem to ephemeral creek beds and dry washes draining to tributaries of the river and include: Portions of the Santa Ana River, perennial tributaries to the river and their confluences, ephemeral, intermittent, and perennial streams draining in to those tributaries, ponds associated with those tributaries, and various additional drainages with ephemeral, intermittent, and perennial flows. These drainages are all within the Santa Ana River watershed which drains approximately 2,000 square miles of land before the end of the RCRCD service area. Most of these areas consist of habitat that was recently restored and is currently being managed by RCRCD to maintain the restored habitat in its current state or habitat that is in need of restoration work including weed removal which RCRCD plans to conduct to raise the habitat values to a higher state for native flora and fauna. Most of these waterways have naturally lined beds that allow for vegetation growth. Waterways within the district service area are shown on the following map.



Description of Application and Treatment Area

RCRCD will apply herbicide directly to target vegetation growing in channel bottoms and slopes and will not apply herbicide directly to bodies of water although incidental contact with water may occur from overspray associated with application. Because of this the treatment area is the same as the application area for aquatic herbicide applications. RCRCD will apply herbicide in a manner consistent with labeling. Applications will be conducted within channels where the vegetation is categorized as a targeted weed according to the criteria listed in the following section.

Description of Weeds

Weeds targeted for treatment within the RCRCD service area fall in to one of these categories:

Non-native invasive plants – These plants are either listed in the Cal-IPC invasive plant inventory or are newly invading species expected to be included in the inventory in the future. These weeds are targeted to keep them from gaining a foothold and degrading healthy natural habitat values for native flora and fauna. If they are already present at a site in large quantities they are targeted to remove their negative effects so that the habitat can be restored, passively or actively, to higher values for native flora and fauna.

Native plants encroaching on RCRCD access points – These plants are interfering with or restricting access at set access points to RCRCD sites where access by boat or vehicle is required. This includes, but is not limited to, shrub, tree, reed, and other aquatic species.

Native plants in flood control structures – These plants are in structures required by regulatory agencies to be kept clear of vegetation for flood control purposes. This includes all types of vegetation present in the waterway.

Discussion of Factors Influencing Aquatic Pesticide Use

RCRCD will apply pesticide directly to vegetation in channels when the following conditions have been met: The vegetation is determined to be a weed targeted for treatment in one of the categories listed in the section on “Description of Weeds” within this document; The use of aquatic pesticide is reached as the best method of control using the decision matrix shown in the section on “Alternative Control Measures” within this document.

Types of Aquatic Pesticides Used and Application Methods

All aquatic weed control pesticides will be applied by trained District personnel or contractors according to product label instructions, BMPs, and consistent with all local, State, and Federal regulations. The application method may vary in order to use the most appropriate method possible to suit the target weed and environmental conditions but in most cases a backpack sprayer will be used.

RCRCD may apply the following aquatic herbicides:

- Glyphosate
- Isopropylamine salt of imazapyr

RCRCD may apply the following surfactants in association with aquatic herbicides:

- Nonylphenol based surfactants such as Activator 90

Monitoring Plan

This monitoring plan is constructed to comply with the requirements set forth in the 2013 General Permit.

The goals of the MRP are to:

1. Identify and characterize aquatic herbicide application projects conducted by the Discharger;
2. Determine compliance with the receiving water limitations and other requirements specified in this General Permit;
3. Measure and improve the effectiveness of the APAP;
4. Support the development, implementation, and effectiveness of BMPs;
5. Assess the chemical, physical, and biological impacts on receiving waters resulting from aquatic herbicide applications;
6. Assess the overall health and evaluate long-term trends in receiving water quality;
7. Demonstrate that water quality of the receiving waters following completion of resource or weed management projects are equivalent to pre-application conditions; and
8. Ensure that projects that are monitored are representative of all aquatic herbicide and application methods used by the Discharger.

This monitoring plan is also constructed to address the two key questions in attachment C of the General Permit:

Question No. 1: Does the residual aquatic herbicide discharge cause an exceedance of receiving water limitations?

Question No. 2: Does the discharge of residual aquatic herbicides, including active ingredients, inert ingredients, and degradation byproducts, in any combination cause or contribute to an exceedance of the “no toxics in toxic amount” narrative toxicity objective?

Application projects

Santa Ana River – Aquatic herbicide treatments will occur in portions of the river and as spot treatments.

Temescal creek and other tributaries of the Santa Ana River – Aquatic herbicide treatments will occur in sections of the tributaries and as spot treatments.

Ponds associated with Temescal Creek - Aquatic herbicide treatments will occur in sections of shorelines, portions of the ponds themselves if aquatic weeds are present out in the water, and as spot treatments.

Compliance with Permit Requirements

The following monitoring is required by the General Permit for each sampling:

1. Background Monitoring. Background monitoring samples shall be collected upstream at the time of the application event* or in the application area* just prior to (up to 24 hours in advance of) the application event.

2. Event Monitoring. Event monitoring samples shall be collected immediately downstream of the treatment area (but upstream of any secondary discharge or disturbance such as tributaries). in flowing waters or immediately outside of the treatment area in non-flowing waters, immediately after the application event, but after sufficient time has elapsed such that treated water would have exited the treatment area.

3. Post-Event Monitoring. Post-event monitoring samples shall be collected within the treatment area within one week after application.

All aquatic herbicides being used are registered for aquatic use with CADPR and USEPA. Information concerning the environmental effects and transport are detailed on the EPA's website and will be consulted for reference as necessary.

It is not expected that applications of aquatic herbicide made following the label requirements and the requirements of this plan will cause impacts to designated use or receiving water quality in the waterways in which they are made.

Monitoring Preparation and Logistics

Site selection and safety

Representative sampling locations will be determined based on planned application locations and the environmental factors at those locations. If there are applications planned associated with flowing and non-flowing water bodies then separate samples will be taken that are representative for flowing water application sites and non-flowing water application sites. Information for these locations will include location based on GPS, photos, and a written description of the area including any reasons why it was chosen as representative.

The following criteria will be evaluated when choosing sampling locations:

- access is safe,
- permission to cross private property is granted,
- sample can be taken in main stream current or where homogeneous mixing of water occurs,
- sample is representative of the part of the water body of interest,
- sample can adequately demonstrate whether the pre and post treatment water quality is equivalent.

Prior to final site selection, permission to access the site will be obtained from the property owners. RCRCDD will document permission and terms obtained from landowners. If access to the site becomes a problem, RCRCDD will select a new site. Monitors will record a narrative description of the site, a photo, geographic location, and a map for entry into the organizations site catalogue the first time a site is sampled.

Safety measures will be discussed with all monitors. No in stream sampling will be conducted if there are small creek flood warnings or advisories.

Sampling Method Requirements

RCRCDD will maintain a Monitoring Manual describing the appropriate sampling procedure for collecting samples for water chemistry. Water sampling apparatus may include pH and Conductivity meters, Oakton Oxygen Samplers, extension pole type sampling devices, and hand held plastic containers and glass bottles. Sampling devices and sample bottles (that are not pre-sterilized and do not contain preservatives/fixing agents) will be rinsed three times with sample water prior to collecting each sample. Sterile bottles, whirl-

paks, and sample bottles, which do contain preservatives/fixing, agents (e.g., acids, etc.) will never be rinsed with sample water prior to collecting the sample. Also, sample bottles containing preservatives/fixing agents will never be used for sampling; in these cases a sampling device will always be used to collect the sample prior to transferring the sample into the bottle.

Monitors will be instructed to only sample so that the water body is not disturbed from wading. All water body samples are taken approximately in mid-stream, at least one inch below the surface. If it is necessary to wade into the water, the sample collector stands downstream of the sample, taking a sample upstream. If the collector disturbs sediment when wading, the collector will wait until the effect of disturbance is no longer present before taking the sample.

The following table shows sampling bottles preservation methods, maximum holding times, testing method, and any modifications for each physical parameter as well as hardness and dissolved oxygen. Active ingredient and Nonylphenol tests will be conducted by a lab certified to perform them and RCRC will follow any sampling guidelines set forth by the lab being used.

Parameter	Sample Bottle	Preferred/Maximum Holding Times	Method	Modification
Temperature	Clear plastic bottle or sample directly	Immediately / None	Thermometric	Alcohol-filled thermometer marked in 0.5oC increments; Digital thermometer
pH	Plastic/PFTE/Glass or sample directly	Immediately / 15 minutes	Electrometric	none
Turbidity	Plastic/PFTE/Glass or sample directly	immediately / store in dark for up to 48 hr.	Nephelometric	none
Electrical Conductivity	Plastic/PFTE/Glass or sample directly	immediately / refrigerate up to 28 days	Electrometric	none
Hardness	Plastic/PFTE/Glass	immediately / fix with nitric acid to pH 2, refrigerate up to 6 months	Titration with EDTA	none
Dissolved Oxygen	Glass or sample directly	immediately / for wet chemistry fix per protocol instructions, continue analysis within 8 hr.	Winkler Method, Azide Modification	Prepackaged reagents, 20 ml sample size
			Membrane Electrode	none
			Colorimetric indigo carmine	Vacuum ampoules

The following table is taken from appendix C of the General Permit and describes the sample type, parameters to be tested, units to be used, method of collection, minimum frequency, event types, and the analytical test method required.

General Permit Table C-1 Monitoring Requirements

Sample Type	Constituent/Parameter	Units	Sample Method	Minimum Sampling Frequency	Sample Type Requirement	Required Analytical Test Method
Visual	1. Monitoring area description (pond, lake, open waterway, channel, etc.) 2. Appearance of waterway (sheen, color, clarity, etc.) 3. Weather conditions (fog, rain, wind, etc.)	Not applicable	Visual Observation	1	Background, Event and Post-event Monitoring	Not applicable
Physical	1. Temperature ²	°F	Grab ⁴	5	Background, Event and Post-event Monitoring	6
	2. pH ³	Number				
	3. Turbidity ³	NTU				
	4. Electric Conductivity ³ @ 25°C	µmhos/cm				
Chemical	1. Active Ingredient ⁷	µg/L	Grab ⁴	5	Background, Event and Post-event Monitoring	6
	2. Nonylphenol ⁸	µg/L				
	3. Dissolved Oxygen ²	mg/L				

1 All applications at all sites.
2 Field testing.
3 Field or laboratory testing.
4 Samples shall be collected at three feet below the surface of the water body or at mid water column depth if the depth is less than three feet.
5 Collect samples from a minimum of six application events for each active ingredient in each environmental setting (flowing water and non-flowing water) per year, except for glyphosate. If there are less than six application events in a year, collect samples during each application event for each active ingredient in each environmental setting (flowing water and non-flowing water). If the results from six consecutive sampling events show concentrations that are less than the receiving water limitation/trigger for an active ingredient in an environmental setting, sampling shall be reduced to one application event per year for that active ingredient in that environmental setting. If the yearly sampling event shows exceedance of the receiving water limitation/trigger for an active ingredient in an environmental setting, then sampling shall return to six application events for that active ingredient in each environmental setting. For glyphosate, collect samples from one application event from each environmental setting (flowing water and non-flowing water) per year.
6 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136.
7 2,4-D, acrolein, diquat, endothall, fluridone, glyphosate, imazamox, imazapyr, penoxsulam, and triclopyr.
8 It is required only when a surfactant is used.

Sample handling

Identification information for each sample will be recorded on the sample collection field data sheets when the sample is collected. Samples not processed immediately in the field will be labeled with the location, date, time, and whether they represent Background, Event, or Post-Event samples. The locations will be recorded in a monitoring database with all necessary metadata. The monitors will keep records of locations covered for each sampling event and these records will be retained by RCRC.

In the field, all samples will be packed in frozen ice packs during shipment, so that they will be kept at approximately 4°C. Samples will be shipped in insulated containers. All caps and lids will be checked for tightness prior to shipping.

Custody Procedures

Water quality monitoring tests performed in the field do not require specific custody procedures. In certain circumstances (such as driving rain or extreme cold), samples will be taken to a nearby location for analysis. Samples requiring chemical preservation will be fixed prior to transport.

Ice chests are sealed with tape before shipping. Samples are placed in the ice chest with enough ice to completely fill the ice chest. Custody documentation forms are placed in an envelope and taped to the top of the ice chest or they may be placed in a plastic bag and taped to the inside of the ice chest lid. It is assumed that samples in tape-sealed ice chests are secure whether being transported by staff vehicle, by common carrier, or by commercial package delivery. The receiving laboratory has a sample custodian who examines the samples for correct documentation, proper preservation and holding times.

Contract laboratories will follow sample custody procedures outlined in their QA plans. Contract laboratory QA plans are on file with the respective laboratory.

Chain-of-custody procedures require that possession of samples be traceable from the time the samples are collected until completion and submittal of analytical results. A complete chain-of-custody form is to accompany the transfer of samples to the analyzing laboratory.

When samples are transferred from one monitor to another member of the same organization for analysis, or from the RCRC to an outside professional laboratory, then a Chain of Custody form will be used. This form identifies the water body name, sample location, sample type (Background, Event, Post-Event), date and time of collection, sampler's name, and method used to preserve sample (if any). It also indicates the date and time of transfer, and the name and signature of the sampler and the sample recipient. In cases where the sample remains in the custody of the monitoring organization, then the sample collection field data sheet may be allowed to double as the chain of custody form. When a sample leaves the custody of the monitoring group, then the Chain of Custody form used should be the one provided by the outside professional laboratory. Similarly, when a professional lab performs quality control checks, their samples will be processed under their chain of custody procedures with their labels and documentation procedures.

Water Quality Monitoring

Monitoring Frequency

Samples will be collected from a minimum of six application events for each active ingredient. If there are less than six application events in a year for an ingredient, samples will be collected during each application event for each active ingredient. If the results from six consecutive sampling events show concentrations that are less than the receiving water limitation/trigger for an active ingredient, sampling shall be reduced to one application event per year for that active ingredient. If the yearly sampling event shows exceedance of the

receiving water limitation/trigger for an active ingredient, then sampling shall return to six application events for that active ingredient.

When Nonylphenol based surfactants are used samples will be collected in the same manner as the herbicide they are applied with.

Determining Sample Locations and Sample Types

Sample locations will be determined using the methods described under “Site selection and safety” above and will vary depending on application location. Sample types will be determined using the information found in Table C-1 above.

Quality Assurance and Quality Control (QA/QC)

In order to prevent sample contamination from persons, equipment, and vehicles associated with aquatic herbicide application the following procedures will be used:

- Background monitoring samples will be collected immediately before application but before any pesticides or pesticide related equipment and PPE is removed from the vehicle used to transport it and staged at the treatment site.
- Event monitoring samples will be collected by someone not exposed to the pesticide application or by someone who has removed all PPE that could have come in contact with pesticides and washed their hands with clean potable water.
- Samples, sampling equipment and associated PPE will be transported separately from pesticides and their related equipment and PPE at all times.
- Samples will be collected using clean disposable gloves and will be stored in bottles within a closed ice chest.

Notification and Reporting

Annual Notification

RCRCD will notify potentially affected public agencies and landowners of intended pesticide application at the beginning of every calendar year at least 15 days prior to the first application.

Annual Report

Annual reporting will comply with the requirements of the General Permit, as described in Attachment B: Standard Provisions and Attachment C: Monitoring and Reporting.

RCRCD shall submit to the Deputy Director and the Santa Ana Regional Water Quality Control Board Regional Executive Officer an annual report consisting of a summary of the past year’s (January 1st to December 31st) activities, and certify compliance with all requirements of this General Permit. If there is no discharge of aquatic herbicides, their residues, or their degradation byproducts, RCRCD shall provide the Deputy Director and the appropriate Regional Water Board Executive Officer a certification that aquatic herbicide application activities did not result in a discharge to any water body. The annual report shall be submitted by March 1st and contain the following information:

1. An executive summary discussing compliance or violation of this General Permit and the effectiveness of the APAP; and
2. A summary of monitoring data, including the identification of water quality improvements or degradation as a result of the aquatic pesticide application

RCRCD shall also complete and retain all information on the previous reporting year beginning January 1 and ending December 31. When requested by the Deputy Director or Executive Officer of the Santa Ana Regional Water Quality Control Board, the RCRCD shall submit the annual information which must include the following:

- An executive summary discussing compliance or violation of this General Permit and the effectiveness of the APAP to reduce or prevent the discharge of pollutants associated with aquatic herbicide applications;
- A summary of monitoring data, including the identification of water quality improvements or degradation as a result of the aquatic pesticide application, if appropriate, and recommendations for improvements to the APAP (including proposed best management practices (BMPs)) and monitoring program based on the monitoring results. All receiving water monitoring data shall be compared to receiving water limitations and receiving water monitoring triggers;
- Identification of BMPs currently in use and a discussion of their effectiveness in meeting the requirements in this General Permit;
- A discussion of BMP modifications addressing violations of this General Permit;
- A map showing the location of each treatment area;
- Types and amounts of aquatic herbicides used at each application event;
- Information on surface area and/or volume of treatment areas and any other information used to calculate dosage, concentration, and quantity of each aquatic herbicide used;
- Sampling results shall indicate the name of the sampling agency or organization, detailed sampling location information (including latitude and longitude or township/range/section if available), detailed map or description of each sampling area (address, cross roads, etc.), collection date, name of constituent/parameter and its concentration detected, minimum levels, method detection limits for each constituent analysis, name or description of water body sampled, and a comparison with applicable water quality standards, description of analytical QA/quality control plan. Sampling results shall be tabulated so that they are readily discernible; and
- Summary of aquatic herbicide application logs.

Twenty-Four Hour Report

RCRCD shall report to the State Water Board and appropriate Regional Water Board any noncompliance, including any unexpected or unintended effect of an aquatic herbicide use that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Coalition or Discharger becomes aware of the circumstances and will include the following information:

- a. The caller's name and telephone number;
- b. Applicator name and mailing address;
- c. Waste Discharge Identification (WDID) number;
- d. The name and telephone number of a contact person;
- e. How and when RCRCD become aware of the noncompliance;
- f. Description of the location of the noncompliance;
- g. Description of the noncompliance identified and the U.S. EPA pesticide registration number for each product RCRCD applied in the area of the noncompliance; and

h. Description of any steps that RCRC D has taken or will take to correct, repair, remedy, cleanup, or otherwise address any adverse effects.

If RCRC D is unable to notify the State and the appropriate Regional Water Board within 24 hours, RCRC D must do so as soon as possible and also provide the rationale for why RCRC D was unable to provide such notification within 24 hours.

Five Day Written Report

RCRC D shall also provide a written submission within five (5) days of the time RCRC D becomes aware of any noncompliance. The written submission shall contain the following information:

- a. Date and time RCRC D contacted the State Water Board and the appropriate Regional Water Board notifying of the noncompliance and any instructions received from the State and/or Regional Water Board; information required to be provided in Section D.1 (24-Hour Reporting);
- b. A description of the noncompliance and its cause, including exact date and time and species affected, estimated number of individual and approximate size of dead or distressed organisms (other than the pests to be eliminated);
- c. Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc);
- d. Magnitude and scope of the affected area (e.g. aquatic square area or total stream distance affected);
- e. Aquatic herbicide application rate, intended use site (e.g., banks, above, or direct to water), method of application, and name of herbicide product, description of herbicide ingredients, and U.S. EPA registration number;
- f. Description of the habitat and the circumstances under which the noncompliance activity occurred (including any available ambient water data for aquatic herbicides applied);
- g. Laboratory tests performed, if any, and timing of tests. Provide a summary of the test results within five days after they become available;
- h. If applicable, explain why RCRC D believes the noncompliance could not have been caused by exposure to the aquatic herbicides from the RCRC D's application; and
- i. Actions to be taken to prevent recurrence of adverse incidents.

Description of Implemented BMPs

The following BMPs will be implemented by RCRC D.

Licensing

RCRC D will use pesticide applicators with a Qualified Applicator Certificate (QAC) License or Qualified Applicator License Categories D & F (QAL). All applications will be performed under the direction of applicators with these qualifications.

Applications Made According to Label

Aquatic pesticide applications made by RCRCO or its contractors will follow all FIFRA pesticide label instructions and any Restricted Material Use Permits issued by a County Agricultural Commissioner. Proper use according to labeling will also minimize fish kills and damage to any non-target species.

Alternative Control Measures

For each site RCRCO will examine the alternatives to aquatic herbicide use to reduce the need for applying herbicides. The most common alternatives are evaluated below.

Evaluating the following management options

No action

In the short term this method has no impact on water quality. Over the long term this may decrease or increase water quality depending on the weed species and water conditions in consideration. Over the short term this method has no impact to non-target organisms such as wildlife using the area and native plants which can be beneficial or detrimental depending on whether or not the weed under consideration is having a detrimental effect on the non-target organisms in concern. Over the long term this method is usually, but rarely not, detrimental to several non-target organisms that would have better habitat if the weeds in question were removed and possibly replaced with native vegetation. In cases where the weeds in question are resistant to aquatic herbicide this action may be considered but it is unlikely to be chosen. This method is often not feasible since many areas where RCRCO addresses aquatic weeds are mitigation lands where regulatory agencies have requirements that most or all weeds be removed. This action is only cost effective when no treatment of the weeds is expected to be done in the future or when the weed population is not spreading.

Prevention

This method is ideal if possible but it is often not feasible since most lands RCRCO obtains have preexisting weed populations. This method is effective for preventing new infestations where possible using best management practices for preventing the spread of invasive plants. This method generally has no real impact on current water quality and non-target organisms. It is a useful way to keep herbicide resistant weeds from entering a site and is generally more cost effective than allowing an infestation to occur and then having to remove it. This method is only feasible using BMPs for preventing the transfer of weeds from other sites where no construction or alteration of the landscape is required as those actions are generally not allowed on conserved land and would decrease the habitat value as well. There are some sites where this method is not feasible due to seeds, etc. entering the area from nearby sites which cannot be blocked or removed due to a lack of permission by neighboring landowners.

Mechanical or physical methods

These methods include removal using shovels and other hand tools, hand pulling, mowing, etc. Depending on the placement of the targeted weeds (on bank, emergent, etc.) this method can often have a negative impact on water quality due to sediment disturbance. This can negatively affect non-target organisms if they are present in close enough proximity to the target weeds that they are within the area affected by the tool or equipment being used. Smaller tools generally have less impact but are less feasible to use for larger infestations. This method may also negatively affect non-target wildlife during certain time periods if using powered equipment because of the amount of noise it can make. This method is useful when dealing with weeds that are resistant to chemical treatments. This method is feasible in areas where the target population is small enough and the area is degraded enough that the potential negative effects to water quality and non-

target organisms are very low. It is also useful where there are young vulnerable non-target species interspersed within the population which are being targeted for preservation. This method is generally more costly and requires more time than chemical treatment so it is generally not used on larger populations or where a project has little funding.

Cultural methods

These methods can vary widely from site to site and may involve coordination between RCRC and local landowners. These methods can have positive or negative impacts to water quality and non-target organisms. These methods are not likely to have a negative effect on aquatic herbicide resistance. Because of the number of factors often involved the feasibility and cost effectiveness of this method are often low if used alone although RCRC often uses public outreach to promote cultural methods that may help prevent or lessen the occurrence of new infestations.

Biological control agents

RCRC does not have the ability to release biological control agents so this method is not considered feasible.

Aquatic herbicides

When used correctly this method has minimal effect on water quality. This method often has a negative effect on any non-target plants within a treatment area. It is not likely to be effective against any weeds which are resistant to herbicide so in those cases another type of treatment is generally necessary. This method is feasible in most situations but requires environmental conditions to be appropriate (no wind, rain, etc.) so it is more likely than some other methods to require rescheduling due to improper treatment conditions. This method is usually the most cost effective method for weed treatment as it generally entails the least amount of labor.

Using the least intrusive method of aquatic herbicide application

If there are no practical alternatives to aquatic herbicides, RCRC shall use the minimum amount of aquatic herbicides that is necessary to have an effective control program and is consistent with the aquatic herbicide product label requirements.

Applying a decision matrix

The best method for weed control for each site will be decided on using the matrix below. Each method will be rated from 0-3 on each of the values listed and the method with the highest total value will be used. The 0 value is reserved for unacceptable negative effects or otherwise impossible conditions and any method that is rated with a 0 in ANY category will not be used.

	Water Quality	non-target organism health	Susceptibility to herbicide	Feasibility	Cost effectiveness	Total
No Action						
Prevention						
Mechanical/Physical Methods						
Cultural methods						
Aquatic Herbicides						

Site Evaluation and Pre-treatment Monitoring

RCRCD will evaluate each treatment site by using the decision matrix within this plan and considering any other site-specific factors that may influence the efficacy of different control methods. Different methods may be determined to be suitable for different weed species and at different stages of a weed species' life cycle. If aquatic herbicide is determined to be used, RCRCD or a licensed contractor will select the appropriate chemicals, application methods and concentrations to be used.

BMPs Done Prior to and During Treatment

- All RCRCD staff and contractors will follow label and MSDS instructions as well as USEPA and DPR storage, transport, and spill control rules, regulations and procedures to prevent aquatic herbicide spills and for spill containment during the event of a spill.
- All RCRCD staff working with aquatic herbicide will be trained by a licensed pesticide applicator on how to avoid any potential adverse effects from the aquatic herbicide applications and will work under the direction of a licensed applicator.
- Education of the staff of contractors employed by the RCRCD will be done by, and is the responsibility of, the contractors.
- Prior to treatment at a new site RCRCD will ascertain whether or not there are any with nearby farmers and/or agencies with water rights diversion that could be affected by aquatic pesticide treatment. If there are any found, RCRCD will contact and coordinate with them so that beneficial uses of the water (irrigation, drinking water supply, domestic stock water, etc.) are not impacted during the treatment period.
- All pesticides will be used according to labeling in order to minimize fish kills and damage to any non-target species.
- RCRCD staff and contractors will follow all other requirements set forth in this plan as part of their standard BMPs.

Post Treatment Evaluation

The treatment area will be visually surveyed for the effects of treatment within one to two weeks of treatment. If the treatment was not effective RCRCD will review and revisit the decision matrix for the site and consider other treatment options including pesticide treatment at another time more suited for effective control.

Evaluation of Other Available BMPs

Other BMPs published by organizations such as the California Invasive Plant Council may be used in conjunction with the BMPs set forth in this plan if they are found to be applicable to treatments at RCRCD sites provided they do not conflict in any way with the requirements set forth in this plan.

Attachments

Application and monitoring forms.

RCRCD Aquatic Pesticide Application Log

Applicator:	Date:	Time started:	Time ended:	Location:
Weather:	Target weeds:	Infestation area:	Water body: Flowing / Non-Flowing	GPS coordinates Lat: Long:
Pesticide Used:	Concentration:	Adjuvant used:	Concentration:	Equipment used:
Quantity applied:	Application area:	Application rate:	Notes:	
Draw Application area:				

*For additional Pesticides used use additional forms.

Aquatic Pesticide Application Water Quality Monitoring Form

Sampling crew (circle recorders name): _____
Date: _____ **Time:** _____ **Site ID:** _____
Sampling Location (Lat, Long): _____
Coordinate System: _____ **Accuracy:** _____ (ft. / m.) **Photo start/end #s:** _____
This is a (Background / Event / Post-Event) sample.
Active ingredient(s) of interest: _____
Testing for Nonylphenol? Y / N

Creekside and Environmental Observations

Air Temperature (°F): _____

Sky clear partly cloudy overcast	Wind none light moderate heavy	Precipitation fog light rain moderate rain heavy rain	Hydrology pond lake open waterway channel other: _____
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Is there oil present? Y / N **Oil location:** bank / water **Oil amount:** Thick / Thin / Sheen

Is there algae present? Y / N **Algae location:** Only on rock / Suspended / Surface cover
Algae color: Brown / Red / Green / Blue / Olive-green / Yellow

Is there floating material? Y / N **Type:** Oily sheen / Sewage / Garbage / Other: _____

Flow: None (no water present) ponded/stagnant trickle/intermittent steady flooded	Water source: fresh/stormwater runoff spring	Clarity: clear muddy cloudy milky other
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Color: Colorless Brownish Reddish Greenish Bluish Olive greenish Yellowish	Odor: none sewage abnormally fishy smell musty chlorine ammonia petroleum Chemical Rotten eggs/sulfur	Dominate Substrate: metal concrete rocks sandy silty/sandy PVC
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Physical and Chemical Field Tests

Dissolved Oxygen (mg/L): _____ **pH:** _____ **Water Temperature (°F):** _____
Electrical Conductivity (µs/cm): _____ **Turbidity (NTU):** _____ **Hardness (mg/L):** _____

General notes on observation including alterations to the site since last time site was sampled: _____

