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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. X New Applicator B. Change of information: WDID# 5A51NP00018

C. ☐ Change of ownership or responsibility: WDID#

II. DISCHARGER INFORMATION

A. Name DEPARTMENT OF WATER RESOURCES Sutter Maintenance Yard			
B. Mailing Address P.O. BOX 40			
C. City Sutter	D. County Sutter	E. State CA	F. Zip 95982
G. Contact Person Joel Farias	H. E-mail address jfarias@water.ca.gov	I. Title Assistant Superintendent	J. Phone 530-755-0071

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

A. Name			
B. Mailing Address			
C. City	D. County	E. State	F. Zip
G. E-mail address	H. Title	I. Phone	

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: _____
2. ☐ Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.
   Owner's name: _____
   Name of the conveyance system: _____
3. Directly to river, lake, creek, stream, bay, ocean, etc.
   Name of water body: _____

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

V. ALGAECIDE AND AQUATIC HERBICIDE APPLICATION INFORMATION

A. Target Organisms: PRIMROSE, PARROT FEATHER, SMARTWEED

B. Algaecide and Aquatic Herbicide Used: List Name and Active Ingredients
RODEO – GLYPHOSATE

C. Period of Application: Start Date JUNE 1 End Date SEPT. 1

D. Types of Adjuvants Used:
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
PAYMENT HAS BEEN submitted

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: Joel Faris

B. Signature: _____ Date: 2-27-14

C. Title: Assistant Superintendent

XI. FOR STATE WATER BOARD STAFF USE ONLY

WDID:	Date NOI Received:	Date NOI Processed:
Case Handler's Initial:	Fee Amount Received: $	Check #:
☐ Lyris List Notification of Posting of APAP	Date _____	Confirmation Sent _____

AQUATIC PESTICIDE APPLICATION PLAN (APAP)

DEPARTMENT OF WATER RESOURCES

SUTTER MAINTENANCE YARD

February 2014

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Introduction

The State Water Resources Control Board (SWRCB) adopted the statewide general NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algea and Aquatic Weed Control Applications, Water Quality Order 2013-0002-DWQ, for the reissuance of General NPDES Permit #CA990005 in June 2013. General Permit #CAG990005 became effective on December 1, 2013 and is required of dischargers performing aquatic herbicides applications to waters of the United States.

The general permit covers single dischargers as well as regional dischargers for releases of potential and actual pollutants to waters of the U.S. Eligible dischargers are public agencies that conduct resource control measures including local, state, and federal agencies responsible for control of algae, aquatic weeds, and other organisms that adversely affect operations and use of drinking water reservoirs, water conveyance facilities, irrigation canals, flood control channels, detention basins, and natural bodies of water.

The general permit only covers pesticides that are applied according to their label directions and that are registered for aquatic use with the California Department of Pesticide Regulation. This permit does not cover indirect or non-point source discharges.

This Aquatic Pesticide Application Plan (APAP) contains the following topics as required under Permit #CA990005.

- Description of Water System
- Description of Treatment Area
- Types of Weeds to be Controlled, Pesticide Product to be Used, Byproducts of Pesticide if known, Method of Application, Surfactant and Adjuvant to be Used
- Decision to Use Pesticides for Weed Control
- List and Inspection Schedules of Gates and Control Structures to be Used in Receiving Water
- SIP Exception
- Description of Monitoring Program
- Water Sampling; locations, collection, analysis, prevention of contamination
- Best Management Practices; Spill and Spill Containment Prevention, Minimum and Consistent Amount of Pesticide Used, Educate Applicators, Informing Downstream Users, Preventing Fish kill
- Evaluation of Alternatives

Description of Water System

The Department of Water Resources' Sutter Maintenance Yard (SMY) is located in Sutter County, CA. The SMY maintains water control facilities throughout the Sacramento Valley. The SMY area of coverage is located north of the Feather River/Sutter Bypass convergence, west of the Feather River, east of the Sutter Bypass, and south of the Oroville Afterbay. The SMY maintains approximately 50 miles of collecting canals that drain into the Sutter Bypass. The collecting canal system is surrounded by approximately 20,000 acres of agricultural land (mainly rice fields). Excess storm water and irrigation water is routed through the collecting canals to the three Sutter Bypass pumping plants where the excess water is pumped into the east borrow canal of the Sutter Bypass. See Figure 1.

Description of Treatment Areas

The SMY maintains water conveyance throughout the Sutter Bypass and collecting canal system east of the Sutter Bypass. The collecting canals, which convey excess irrigation and storm water, lead to the east levee of the Sutter Bypass where the waters enter the Sutter Bypass either by gravity drains or mechanical pumps. The collecting canals maintained by the SMY are prone to infestation by floating, emerged, and submersed vegetation. The vegetation can greatly impact drainage of the collecting canals by stopping and/or slowing the flow of water resulting in localized flooding. The vegetation can also damage the pumps at the pumping plants. In order to maintain the open flow of storm water and excess irrigation water, SMY applies aquatic herbicides as identified in the Notice of Intent to Comply submitted to the Central Valley Regional Water Quality Control Board (RWQCB).

Types of Weeds to be Controlled

SMY's collecting canal system is prone to infestation of floating, emergent aquatic weeds, and submersed vegetation. Vegetation in the collecting canal system consists mainly of Water Primrose (*Ludwigia* hexapetala), Parrot Feather (*Myriophyllum Aquaticum*), and smartweed (*Polygonum spp*.). Other vegetation scattered throughout the system consists of Blackberries (*Rubus Armeniacus*), Coontail (*Ceratophyllum Demersum*), Pondweed (*Potamogeton*), and Watermilfoil (*Myriophyllum Sicatum*).

Product: Glyphosate Adjuvant: Activator 90

The SMY will use Glyphosate with a boom sprayer, handgun, or backpack sprayer for all weed

control applications. The SMY's Pest Control Advisor will provide all application specification to the Qualified Applicator to ensure the proper herbicide and quantity of herbicide is applied. All applications will be made is accordance with the product label.

Decision to Use Pesticides for Weed Control

Several alternatives to herbicide application have been used and/or discussed over the previous years; however, environmental, financial, and stability issues with these methods have prevented these options from being preferred. The mechanical method (excavator) is the only method that provides the weed removal of both submerged, emergent, and terrestrial weeds, however; this method has a large financial (labor intrusive) and environmental impact (giant garter snake, nesting birds, and fish habitat). Other methods such as burning, tiling, and grazing only provide control of emergent and terrestrial weeds. The establishment of native vegetation has proved unsuccessful due to the high volume of non-native vegetation and agricultural uses surrounding the collecting canals.

List and Inspection Schedules of Gates and Control Structures

There are no gates or control structures in the application areas that will affect the receiving waters.

SIP Exception

DWR's SMY does not anticipate the need for a SIP Exception. Should the need arise, the SMY will apply for the exception and update this section of the APAP as required.

Description of Monitoring Program

The Monitoring and Reporting Program guidelines as set forth in Attachment C of the General Permit will be followed for all spray applications covered in this APAP.

DWR's Pest Control Advisor (PCA) and Qualified Applicator (QA) will perform visual monitoring of all sites prior to application. All applications and site conditions will be recorded by the PCA and QA.

A chemical analysis will be performed following the constituents and parameters as outlined in the General Permit:

1. Herbicide active ingredients
2. Dissolved oxygen
3. Temperature
4. PH

5. Turbidity
6. Electrical Conductivity
7. Salinity
8. As necessary, water hardness and other water quality parameters that may influence pesticide persistence or toxicity,
9. As necessary, additional chemical panel screens to determine if non-program related chemicals are present in water column.

Water Quality sampling will be conducted for all applications as described in the General Permit:

- >6 application events; collect samples from a minimum of 6 events for each active ingredient in each environmental setting (flowing & non-flowing water).
- <6 (or =6) application evens: collect samples for each event for each active ingredient in each environmental setting (flowing & non-flowing water).

Annual Reporting

The SMY will provide an annual report to the RWQCB by March 1st of the year outlining the activities from January 1st to December 31st of the previous year. In years where there are no aquatic herbicides used, a letter (instead of a report) will be submitted to the RWQCB stating that no herbicides were used. The following line items, as outlined in the General Permit, will be covered in the annual report:

- An executive summary discussing compliance or violation of this General Permit
- Types and amounts of herbicides used
- A map showing the application areas.
- A summary of monitoring data and sampling test results
- A map showing the application areas.
- Identification of BMPs
- Recommendations to improve and/or change the APAP

In addition to the Annual Report, the SMY will report to the State Water Resource Control Board (SWRCB) and the RWQCB any non-compliance or negative environmental effects due to the herbicide applications within 24 hours of the SMY becoming aware of the incident. This notification will be followed with a written report outlining the incident, results of, remediation, and actions to be taken to prevent any future non-compliance incidents.

Water Sampling

Sample Locations

All sampling will be performed as outlined in Attachment C of the General Permit and will include background (BG) monitoring, event monitoring (DS-Int), and post event monitoring (DS-F1 and DS-F2).

All locations to be treated in the SMY, as covered in this APAP, are considered *moving water* in the General Permit.

- BG monitoring – The background sample will be collected near the upstream end of the area being treated.
- DS-Int monitoring – The downstream initial sample will be collected near the end of the treatment area immediately after an application, when the treated water is anticipated to reach the sampling site (dependant of the flow rate at each site).
- DS-F1 monitoring – The downstream final sample will be taken near the location the DS-Int was taken within one week on the after the aquatic herbicide application.
- DS-F2 monitoring – The downstream final sample will be taken anywhere in the application area within one week of the aquatic herbicide application.

The QA will fill out an aquatic herbicide application log for each site where pesticides/herbicides are applied. In addition, the PCA will fill out an aquatic herbicide monitoring and sampling log for each monitored/sampled site. Sampling sites will be determined by the PCA to provide a representative example of all the applications once the seasonal need and conditions are determined to identify the exact application areas.

Collection of Samples

Samples will be collected with a sampling container attached to a long handled sampling pole. The samples will be collected at a mid depth of water. The samples will be poured into glass sample containers and transported to a laboratory for analysis. All sample containers will be washed with distilled water thoroughly between samples to prevent sample contamination. Water temperature will be measured in the field during sample collection. Measurements of dissolved oxygen, ph, turbidity, electric conductivity, and salinity may be taken in the field with field meters if available. If the field meters are not available at the time of application then the measurements will be performed from water samples at the laboratory.

All water samples will be taken to the laboratory for analysis within 24 hours of being taken. The samples will be stored in a cooler with ice until the time they reach the laboratory. The cooler will contain protective material to ensure the protection of the glass bottles from breaking. Each sample taken to the laboratory will be properly labeled with the following information and a duplicate copy kept by the PCA for records:

- An identifying name of the sample
- Date and Time sample was taken
- Location sample was taken
- Analysis required on sample
- Name of person who collected sample
- Date sample was provided to the laboratory
- Name of person at laboratory receiving the sample

Sample Analysis

All samples will be analyzed following the requirements outlined in Attachment C, Table C-1 Monitoring Requirements in the General Permit.

How to prevent Sample Contamination

Samples will be taken at a distance, determined by field conditions, to ensure there is no contact between sampling equipment and application equipment. Application and sampling personnel will make every effort possible to not come into contact with treated water or vegetation. Samples will be taken at a mid depth of the water to prevent sampling of surface water algaecides.

All sampling equipment will be washed thoroughly with non-phosphate cleaner and distilled water between samples. Gloves or other personal protective equipment that comes into contact with a sample will be replaced or washed prior to collecting a sample from another site.

Best Management Practices

Spill and Spill Containment Prevention

All aquatic herbicide applications are performed by the SMY and are performed by staff that has passed the Qualified Applicator Certification (QAC) exam issued by the California Department of Pesticide Regulation. In addition, the QAC will be supervised by a licensed Pest Control Advisor (PCA) at all times. The QAC's and PCA are continually trained in the safe practices of handling and use of aquatic pesticides. To ensure the proper handling, mixing, and applications of aquatic pesticides, the SMY only allows the QAC's and PCA to work with the pesticides. By having only trained personnel working with the pesticides, the risk of spilling and exposure to both personnel and the environment is greatly reduced. All SMY aquatic pesticide application vehicles and storage areas are equipped with the proper spill clean-up/containment

supplies. All spills will be cleaned up and disposed of according to their label instructions. When required, spills will be reported to the proper State, Federal, and local authorities.

Minimum and Consistent Amount of Pesticide Used

The SMY's PCA will perform a site visit to determine the type of weed to be treated, mass of weed to be treated, and velocity of the water prior to any aquatic pesticide application. The PCA will then write a site specific aquatic pesticide application plan outlining the mixing instructions and application rate to be used for each site.

Educate Applicators

As the application or treatment season approaches, the PCA will meet with the SMY maintenance staff to discuss the need for aquatic pesticide use. The PCA and QAC will plan field visits to the potential application sites to determine the proper application rates and products to be used (if any). Once specific areas are determined to need an aquatic pesticide application, agencies, downstream water users, and land owners will be notified of the scheduled applications.

Informing Downstream Users

Once specific water bodies are determined to be treated with aquatic pesticide, the PCA will make a schedule outlining when the applications will be made, where they will be made, what products will be used, and the potential effects of the treatment. The schedule and contact information of the SMY's PCA and QAC will be provided to the local agency, property owners, and downstream water users.

Preventing Fish kill

All aquatic pesticide applications will be made in accordance with the product labels. All precautions outlined on the product labels to avoid fish kill will be followed. Dissolved oxygen levels of the water bodies where aquatic pesticides are applied will be strictly monitored.

The SMY's PCA will perform a site evaluation at each location, provide a written recommendation for each site, including conditions to avoid impacts to fish, and perform all water testing during and after applications. In addition, a QAC will perform all applications. By having the QAC perform all applications this ensures the correct quantities and rate of applications are made.

Evaluation of Alternatives

Several alternatives to herbicide application have been used and/or discussed over the previous years; however, environmental, financial, and stability issues with these methods have prevented these options from being preferred.

The following alternatives and their accompanying reasoning have been considered by the SMY as a means to control the weed growth.

No Action

Under the "No Action" scenario, there would be no action taken to control the weed infestation. This alternative goes against the SMY's mission of flood control maintenance. This scenario significantly slows the velocities in the channels causing more sediment to build up in the channels and increases the possibility of localized flooding. In addition, the weed infestation can damage both irrigation and flood control pumps, and decrease the ambient dissolved oxygen in the water.

Mechanical Method

The mechanical method consists of removing the weed infestation by dredging or cutting the weeds. The mechanical method can be very invasive to the surrounding environment and costly. This process can create a large volume of detached debris to move downstream and damage irrigation and flood control pumps. It can negatively affect fish and giant garter snakes in the areas. The cutting method has also proved to increase the growth rate of some weeds requiring the area to be cut a few times throughout the season. Dredging can also have a negative impact on water quality and habitat outside the channels that is typically inhabited by giant garter snake and nesting waterfowl. The mechanical method can prove to be very costly financially and also requires extensive environmental permitting.

Other Methods

Other methods such as burning, tiling, and grazing only provide control of emergent and terrestrial weeds along the banks of the channels. These methods have proven to be ineffective in controlling aquatic weeds and can cause a greater negative impact environmentally. These methods increase erosion along the channels and negatively impacts wildlife habitat surrounding the channels.

The establishment of native vegetation has proved unsuccessful due to the high volume of non-native vegetation and agricultural uses surrounding the collecting canals.

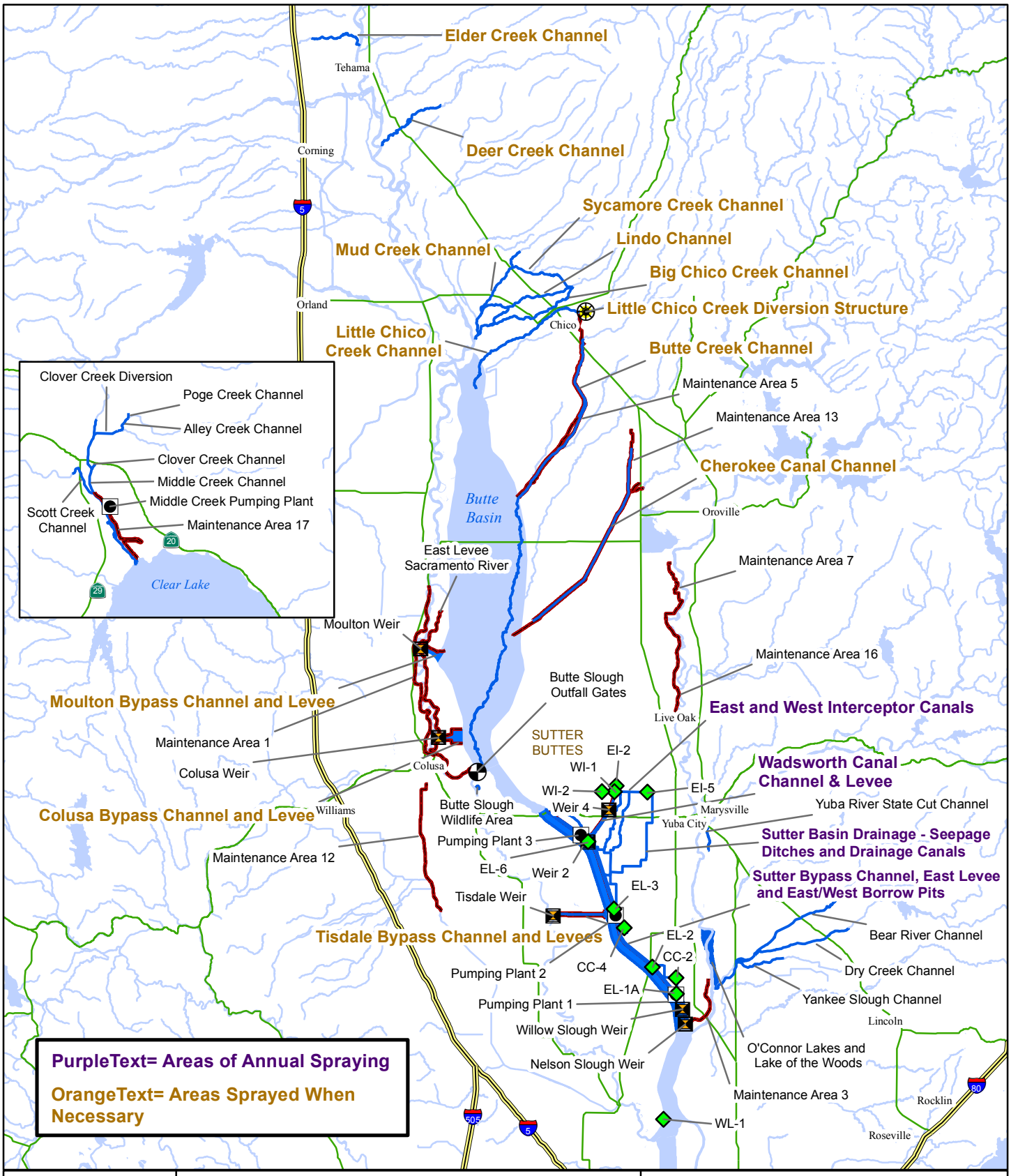
Chemical Method

Aquatic Herbicides are the most common and adaptable approach for controlling excessive aquatic weeds. Aquatic herbicides provide long lasting control, minimal labor, and a greater flexibility. This method is also less costly than the other methods due to the minimal labor and equipment needed for applications.

References

California State Water Resource Control Board, Water Quality Order 2013-0002-DWQ, General Permit #CAG990005.

California State Water Resource Control Board, APAP Review Checklist for Order 2013-0002-DWQ Aquatic Weed Control Permit.



Division of Flood Management
Flood Maintenance Office

DWR Sutter Yard
Maintenance Responsibilities:
Spraying Areas
Department of Fish and Game Routine Maintenance Agreement

Date: March 14, 2012

Prepared By: Erica Fong

File: G:\Projects\RMA\Sutter Yard\Sutter Yard Maps\SutterYardSprayingAreas