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APR 20 2016

Attachment E – Notice of Intent

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

DIVISION OF WATER QUALITY

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. New Applicator	B. Change of Information: WDID# _____
	<i>5 2014 P0002</i>	
	C. <input type="checkbox"/> Change of ownership or responsibility: WDID# _____	

II. DISCHARGER INFORMATION

A. Name Madera-Chowchilla Water & Power Authority			
B. Mailing Address P.O. Box 905			
C. City Madera	D. County Madera	E. State California	F. Zip 93610
G. Contact Person Douglas Welch	H. E-mail address dwelch@cwdwater.com	I. Title General Manager	J. Phone 559-674-8891

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):
- Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.
Name of the conveyance system: _____
 - Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.
Owner's name: United States Bureau of Reclamation
Name of the conveyance system: _____
 - 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: _____

Algae

B. Algaecide Used: List Name and Active ingredients

Copper Sulfate

C. Period of Application: Start Date January 1 End Date December 31

D. Types of Adjuvants Used:

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

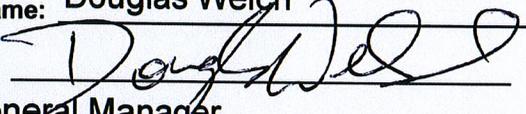
VIII. FEE

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: Douglas Welch
 B. Signature:  Date: 4/11/16
 C. Title: General 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 Pesticides Application Plan (APAP)

Water Quality Order
No. 2013-0002-DWQ

***Madera-Chowchilla Water & Power Authority
P.O. Box 905
327 S. Chowchilla Blvd. Chowchilla, CA 93610
Office: (559) 674-8891
April 19, 2016***

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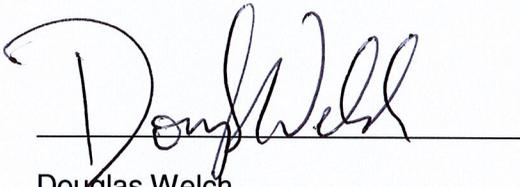
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Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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 and imprisonment for knowing violations."

Signed and Agreed:

A handwritten signature in black ink, appearing to read "Douglas Welch", is written over a horizontal line.

Douglas Welch
General Manager
Madera-Chowchilla Water & Power Authority

EXECUTIVE SUMMARY

Madera-Chowchilla Water & Power Authority (MCWPA) has prepared this Aquatic Pesticides Application Plan (APAP) in accordance with Water Quality Order No. 2013-0002-DWQ (Order) for the 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 (General Permit # CAG990005).

The APAP is an organized plan developed by MCWPA to address the following eleven (11) sections.

1. Description of the water system to which algaecides are being applied;
2. Description of the treatment area in the water system;
3. Description of types of algae that are being controlled and why;
4. Algaecide products or types of algaecides expected to be used and if known their degradation byproducts, the method in which they are applied;
5. Discussion of the factors influencing the decision to select algaecide applications for algae control;
6. If applicable, list the gates or control structures to be used to control the extent of receiving waters potentially affected by algaecide application and provide an inspection schedule of those gates or control structures to ensure they are not leaking;
7. If the Discharger has been granted a short-term or seasonal exception under State Water Board Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays,* and Estuaries of California (Policy) section 5.3 from meeting acrolein and copper receiving water limitations, provide the beginning and ending dates of the exception period, and justification for the needed time for the exception. If algaecide applications occur outside of the exception period, describe plans to ensure that receiving water criteria are not exceeded because the Dischargers must comply with the acrolein and copper receiving water limitations for all applications that occur outside of the exception period;
8. Description of monitoring program;
9. Description of procedures used to prevent sample contamination from persons, equipment, and vehicles associated with algaecide and aquatic herbicide application;
10. Description of the BMPs to be implemented. The BMPs shall include, at the minimum:
 - 10.1. Measures to prevent algaecide and aquatic herbicide spill and for spill containment during the event of a spill;
 - 10.2. Measures to ensure that only an appropriate rate of application consistent with product label requirements is applied for the targeted algae;
 - 10.3. The Discharger's plan in educating its staff and algaecide applicators on how to avoid any potential adverse effects from the algaecide applications;
 - 10.4. Discussion on planning and coordination with nearby farmers and agencies with water rights diversion so that beneficial uses of the water (irrigation, drinking water supply, domestic stock water, etc.) are not impacted during the treatment period; and

10.5. A description of measures that will be used for preventing fish kill when algaecides will be used for algae control.

11. Examination of Possible Alternatives. Dischargers should examine the alternatives to algaecide use to reduce the need for applying algaecides. Such methods include:

11.1. Evaluating the following management options, in which the impact to water quality, impact to non-target organisms including plants, algaecide resistance, feasibility, and cost effectiveness should be considered:

11.1.1. No action;

11.1.2. Prevention;

11.1.3. Mechanical or physical methods;

11.1.4. Cultural methods;

11.1.5. Biological control agents; and

11.1.6. Algaecides;

If there are no alternatives to algaecides, Dischargers shall use the minimum amount of algaecides that are necessary to have an effective control program and is consistent with the algaecide product label requirements.

11.2. Using the least intrusive method of algaecide application; and

11.3. Applying a decision matrix concept to the choice of the most appropriate formulation.

The purpose of this APAP is to provide detailed information of the use of aquatic pesticides in MCWPA facilities to control the growth of Blue Green and filamentous algae. This APAP provides a description of the facilities where pesticides will be applied, a description of the targeted aquatic pests, a list of aquatic pesticides used, and other pertinent information as described in Section 5 of the Order. This APAP is intended to be a living document that is revisited and updated on an annual basis to maintain compliance with General Permit # CAG990005 and any amendments.

Madera Canal contact person: Ken McCoy

Email: MCWPA2000@hotmail.com

Phone: (559) 706-8891

SECTION 1: DESCRIPTION OF WATER SYSTEM

The MCWPA operates and maintains the Madera Canal water distribution system, which is approximately 35.9 miles of open flow canal. The canal begins at Millerton Lake, a reservoir on the San Joaquin River which serves as the county line between Fresno County to the south and Madera County to the north. The canal runs northwest along the eastern edge of the San Joaquin Valley, ending at the Chowchilla River. The Madera Canal has an initial capacity of 1275 cubic feet per second (cfs), decreasing to a capacity of 625 cfs at the Chowchilla River. MCWPA is a partnership of Madera Irrigation District (MID) and Chowchilla Water District (CWD). The Madera Canal delivers water at mileposts designated 6.2, 13.06, 18.81, 20.57, 24.2, 30.35, 32.2 and 35.9. A diversion at milepost 5.38 is sealed shut (currently inoperable) I. The Madera Canal distribution system requires the application of aquatic pesticides as a method of aquatic weed control.

SECTION 2: DESCRIPTION OF THE TREATMENT AREA

All portions of the MCWPA facilities may or may not receive algaecide applications depending upon the effectiveness and aquatic weed growth. The Madera Canal is broken up into two primary treatment areas. The first area begins at milepost 0.03 and ends near the Madera Canal Equalization Reservoir. The second treatment area starts on the downstream side of the reservoir at milepost 21.7, and continues until milepost 35.9. A map of Madera Canal can be seen in Appendix A.

SECTION 3: TARGETED WEEDS

The MCWPA targets a variety of aquatic weeds that may be submerged or floating. Table 1 provides the names and descriptions of the weeds controlled utilizing aquatic pesticides.

Table 1: Weeds to Be Controlled

Weed Name	Description
Blue-Green Algae	Algae cells that form thick accumulations on the surface of the water.
Filamentous Algae	Algae cells that form threads into a mat-like surface. Algae can be submerged and/or floating

Failure to adequately control aquatic weed growth in MCWPA facilities has detrimental effects. Aquatic weed growth significantly limits the amount of water that can be conveyed through MCWPA facilities. Substantial aquatic growth also clogs irrigation structures, increasing the risk of flooding and canal breaks. Consistent and effective aquatic control not only improves the

MCWPA's ability to serve its customers, it also provides cleaner water and improves public safety during high flows. Aquatic growth also causes maintenance issues for farmers when it clogs pumps, filters, and other irrigation equipment. This discourages the use of surface water.

SECTION 4: AQUATIC PESTICIDES USED AND APPLICATION METHOD

Table 2 provides the names and descriptions of the aquatic pesticides used, along with their respective application methods. All algaecide applications are made in accordance with the manufacturer's product label.

Table 2: Aquatic Pesticides Used

Active Ingredient	Aquatic Pesticide	Application Method
Copper	Copper Sulfate	Slug Method

Note: Table 2 will be updated if the MCWPA changes aquatic pesticides.

SECTION 5: AQUATIC PESTICIDE APPLICATION FACTORS

The objective is to prevent aquatic overgrowth whenever possible, which is accomplished through the application of aquatic pesticides. MCWPA facilities are carefully inspected during the irrigation water season. When visual confirmation of any significant type of algae growth is identified, it is scheduled for treatment. The threshold for what is considered significant growth can vary between facilities with different cross sectional areas, lengths, and waterline relative to the canal bank.

SECTION 6: GATES AND CONTROL STRUCTURES MAINTENANCE

The gates and control structures are inspected and maintained annually throughout the Madera Canal. Maintenance is performed as necessary throughout the year. The gates are exercised to verify they are functional. The number of locations that are serviced varies each year and is dependent upon weather conditions and the length of the irrigation water season. In urgent cases, the repair of gates and control structures can be done during the irrigation water season. Where applicable, the MWCWP will close gates and/or structures that would unintentionally discharge treated water into adjacent water bodies.

SECTION 7: EXCEPTION PERIOD

MCWPA does not have a Section 5.3 Policy seasonal exception at this time and is currently in the process of obtaining a seasonal exception for the use of Copper by public entities. The desired exception period is from the months of March through October during the typical irrigation season. Once an exception is granted by the State Water Resources Control Board, MCWPA will be allowed to temporarily exceed residual copper limitations.

SECTION 8: MONITORING PLAN

8.1 MONITORING AND SAMPLE TYPE

Aquatic pesticide application in MCWPA facilities is in accordance with the regulations of the United States Environmental Protection Agency (USEPA), California EPA (Cal/EPA), Department of Pesticide Regulation (DPR), and the Madera County Department of Agriculture. The pesticide application log shown in Appendix C will be kept by the applicator for each aquatic pesticide application.

The log will contain a minimum of the following criteria:

- 1) Date and start/stop time
- 2) Location
- 3) Name of applicator
- 4) List of gates or controls structures in the treatment area that may discharge to surface waters, if applicable.
- 5) Time of gate or control structure closure and reopening, if applicable, including calculations used to determine closure and reopening times
- 6) Water temperature
- 7) Flow or level of water body
- 8) Aquatic pesticide application rate and concentration
- 9) Visual monitoring assessment
- 10) Certification that the applicator followed the APAP

Samples shall be collected from a minimum of six application events for each active ingredient in each environmental setting per year. In the event that there are less than six application events in a year, samples shall be collected during each application event for each active ingredient in each environmental setting.

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 per year for that active ingredient in that environmental setting. If the yearly sampling event shows exceedance of the 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.

- Background Monitoring – Background samples shall be collected upstream at the time of the application event, or they may be collected at the treatment area, just prior (up to 24-hours in advance of application) to the application event.
- Event Monitoring – Event monitoring samples shall be collected immediately downstream of the treatment area in flowing waters, immediately after the application event or shortly after application, but after sufficient time has elapsed such that treated water will have entered downstream area
- Post-Event Monitoring – Post-event monitoring samples shall be collected within the treatment area within one week after application.

A minimum of the following records shall be kept for each representative sample:

- a) Date and time
- b) Exact place
- c) Name(s) of individual(s) who performed the sampling
- d) Date the analysis was performed
- e) Names(s) of individual(s) who performed the analysis
- f) Analytical techniques or methods used
- g) Results of each analysis

These records are organized in Appendix D.

8.2 MONITORING REQUIREMENTS

The examiner will keep a recorded of the receiving water sampling and note the presence or absence of:

1. Floating or suspend matter;
2. Discoloration;
3. Bottom deposits;
4. Aquatic life;
5. Visible films, sheens, or coatings;
6. Fungi, slimes, or objectionable growths; and
7. Potential nuisance conditions.

The receiving water condition shall also be summarized in the monitoring report.

8.3 Reporting Requirements

A reporting year begins January 1 and ends December 31. The annual information shall be submitted, when requested by the Deputy Director or Executive Office of the applicable Regional Water Board. The annual information shall contain the following:

1. 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 algaecide applications;

2. A summary of monitoring data, including the identification of water quality improvements or degradation as a result of the algaecide 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;
3. Identification of BMPs currently in use and a discussion of their effectiveness in meeting the requirements in this General Permit;
4. A discussion of BMP modifications addressing violations of this General Permit;
5. A map showing the location of each treatment area;
6. Types and amounts of algaecides used at each application event;
7. Information on surface area and/or volume of treatment areas and any other information used to calculate dosage, concentration, and quantity of each algaecide used;
8. 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
9. Summary of algaecide and aquatic herbicide application log.

Any noncompliance, including any unexpected or unintended effect of an algaecide use that may endanger health or environment must be reported to the State Water Board and appropriate Regional Water Board. The Twenty-Four Hour Report shall be provided orally within 24 hours from the time MCWPA becomes aware of the circumstances. The information must include:

1. The caller's name and telephone number;
2. Applicator name and mailing address;
3. Waste Discharge Identification (WDID) number;
4. The name and telephone number of a contact person;
5. How and when the Coalition or Discharger become aware of the noncompliance;
6. Description of the location of the noncompliance;
7. Description of the noncompliance identified and the USEPA pesticide registration number for each product the Discharger applied in the area of the noncompliance; and
8. Description of any steps that the Discharger has taken or will take to correct, repair, remedy, cleanup, or otherwise address any adverse effects.

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

Following the Twenty-Four Report, MCWPA will submit a Five-Day Written Report within five (5) days of the time MCWPA becomes aware of the noncompliance. The written report shall contain the following information:

1. Date and time the Discharger 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);

2. 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);
3. Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc.);
4. Magnitude and scope of the affected area (e.g. aquatic square area or total stream distance affected);
5. Algaecide application rate, intended use site (e.g., banks, above, or direct to water), method of application, and name of algaecide product, description of algaecide ingredients, and U.S. EPA registration number;
6. Description of the habitat and the circumstances under which the noncompliance activity occurred (including any available ambient water data for aquatic algaecides applied);
7. Laboratory tests performed, if any, and timing of tests. Provide a summary of the test results within five days after they become available;
8. If applicable, explain why the Discharger believes the noncompliance could not have been caused by exposure to the algaecides from the Discharger's application; and
9. Actions to be taken to prevent recurrence of adverse incidents.

The State Water Board staff or Regional Water Board staff may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours.

SECTION 9: PROCEDURES TO PREVENT SAMPLE CONTAMINATION

Samples shall be collected upstream of potential sources of contamination and will be done in a manner that prevents contact with application equipment, containers, related vehicles, and protective equipment. Sampling equipment will be thoroughly cleaned before and after each sampling trip, including between samples. Decontamination shall be performed with a detergent that does not leave a residue on sampling equipment, then triple-rinsed with uncontaminated water. The rinse water shall be disposed away from the sampling location.

SECTION 10: BEST MANAGEMENT PRACTICES (BMPs)

The primary purpose of Best Management Practices (BMPs) is to protect beneficial uses of water resources from the use of algaecides and aquatic herbicides.

10.1 SPILL PREVENTION AND CONTAINMENT

Applicators are required to take the necessary precautions to ensure the safe handling and transportation of each aquatic pesticide. Application equipment and vehicles are regularly

inspected and maintained to identify potential sources, spills, or leaks. When applicable, chemicals are prepared at the MCWPA's yard prior to visiting the application site(s). Bags of copper sulfate are counted prior to transport. Only the minimum amount of copper required is transported to the application site(s).

In the event of an aquatic pesticide spill MCPWA's staff will prevent the contaminated water from reaching adjacent water bodies wherever feasible. The use of absorbent granules and pads will be deployed as needed. MCPWA will report spills as required by the local, state, and federal regulations.

10.2 AQUATIC PESTICIDE APPLICATIONS

All pesticide applicators must either be licensed by the California Department of Pesticide Regulation (DPR) with a valid Qualified Applicator Certificate (QAC) or work under the supervision of someone who is licensed. Qualified applicators will ensure that all equipment is regularly maintained, that application rates are within product label specifications and regulatory requirements, and that only the targeted plants are treated.

Prior to any application of aquatic pesticides, a qualified applicator will visually inspect a site for aquatic weed growth. If aquatic weed growth has exceeded the acceptable tolerances, the qualified applicator will determine the appropriate aquatic weed treatment. The qualified applicator may also determine the aquatic weed treatment based upon the site history and anticipated aquatic weed growth.

10.3 STAFF EDUCATION PLAN

In accordance with the DPR, staff with a QAC are required to maintain 20 hours of continuing education every two years for certificate renewal and up to date latest information for pest control.

10.4 PUBLIC NOTICE OF APPLICATIONS

Each calendar year, MCWPA shall notify potentially affected water users prior to the first application of aquatic pesticides.

The notifications shall contain a minimum of the following information:

1. Statement of intent to apply aquatic pesticide(s)
2. Name of pesticide(s)
3. Purpose of use
4. Approximate time period and expected locations of use
5. Applicable water use restrictions and precautions during treatment
6. Contact information for interested persons to obtain additional information

10.5 FISH KILL PREVENTION MEASURES

The Madera Canal is drained on an annual basis after water deliveries are completed. The canal typically remains dry throughout the year for at least three months. As a result, the canal is not a suitable habitat for fish, and fish kills within the canal are unlikely. To prevent fish kills in the

downstream adjacent water bodies, aquatic pesticide applications will be made as far as possible upstream of the discharge location. In general, it is expected that the residual amounts of aquatic pesticides present in the discharged water is not high enough to cause significant fish kills.

10.6 WEATHER CONDITIONS

Weather conditions will be checked by the qualified applicator before each aquatic pesticide application. The applicator will apply aquatic pesticide during favorable weather conditions to minimize environmental hazards and allow for the effective treatment of weeds. For example, the applicator will not apply pesticide in rainy or windy conditions to avoid pesticide runoff and overspray outside of the target area.

10.7 EVALUATION EFFECTIVENESS

The effectiveness of BMPs will be evaluated during the aquatic pesticide applications and at the end of each irrigation water season. The water quality data will be reviewed as part of the evaluation process. If aquatic pesticides are detected, the BMPs will be reviewed and modified as needed. The effectiveness of aquatic pesticides, efficiency of application methods, and field staff organization will also be analyzed annually.

In addition to the aforementioned BMPs, the following BMPs are specific to the type of application.

10.8 COPPER APPLICATIONS

Copper will be applied downstream of Friant Dam and Equalization Reservoir from potential points of discharge into rivers or creeks.

SECTION 11: ALTERNATIVE CONTROL METHODS

MCWPA shall examine possible alternatives to algaecides to reduce the amount of applications.

11.1 EVALUATION OF MANAGEMENT OPTIONS

11.1.1 NO ACTION

Not controlling the algae population within Madera Canal is not a feasible alternative. Excessive algae growth interferes with automated water control structures and measurement facilities. The MCWPA's ability to deliver agricultural water to farmers will be severely diminished and impacts would be manifested in reducing agricultural production in Madera County. The increased presence of algae in the distribution system will reduce the volume of water that can be delivered, and decrease the ability to accurately control water deliveries. Without the ability to control algae growth in Madera Canal, the implementation of highly water efficient irrigation methods employed by farmers served by the Madera Canal will not be possible.

11.1.2 PREVENTION

MCWPA regularly maintains its canal system when dry through sloping and dipping the bottom and sides of the channels, which includes sediment removal. As a result, aquatic weeds may generally take longer to return due to the soil disturbance and the removal of sandy deposits.

11.1.3 MECHANICAL OR PHYSICAL METHODS

At control structures, trash screens, and road crossings, manual and automated removal of aquatic weeds is employed.

11.1.4 CULTURAL METHODS

MCWPA applicators monitor algae populations to determine optimum application periods. By making applications during specific algae growth stages, a reduced application rate is required to maintain the population below the desired threshold. Due to the nature of the on demand water distribution system, it is typically not feasible to manage canal water levels as a method of algae control.

11.1.5 BIOLOGICAL CONTROL AGENTS

Biological control methods such as fish are not feasible for use in the Madera Canal. Given that the canal system is typically drained for at least three months per year, it does not provide suitable habitat for fish.

11.1.6 ALGAECIDES AND AQUATIC HERBICIDES

Due to the very limited feasible alternatives mentioned in the previous sections, MCWPA has decided to continue to use aquatic pesticides as a primary method of treating algae populations.

11.2 APPLICATION METHODS

MCWPA applies aquatic pesticides based on manufacturer recommendations. These methods are typically unobtrusive and require only one or two applicators in a single vehicle along the Madera Canal bank. Table 2 includes the application method used.

11.3 DECISION MATRIX

Due to various factors that influence applications (canal flow, temperature, target weeds, etc.) it is not feasible to apply a traditional decision matrix. The site conditions can significantly vary each day, which requires diligent evaluation by MCWPA applicators. Applications are made based on historical observations.

APPENDICES

Appendix A – Madera Canal Distribution System

Appendix B – Water Quality Sample Sites

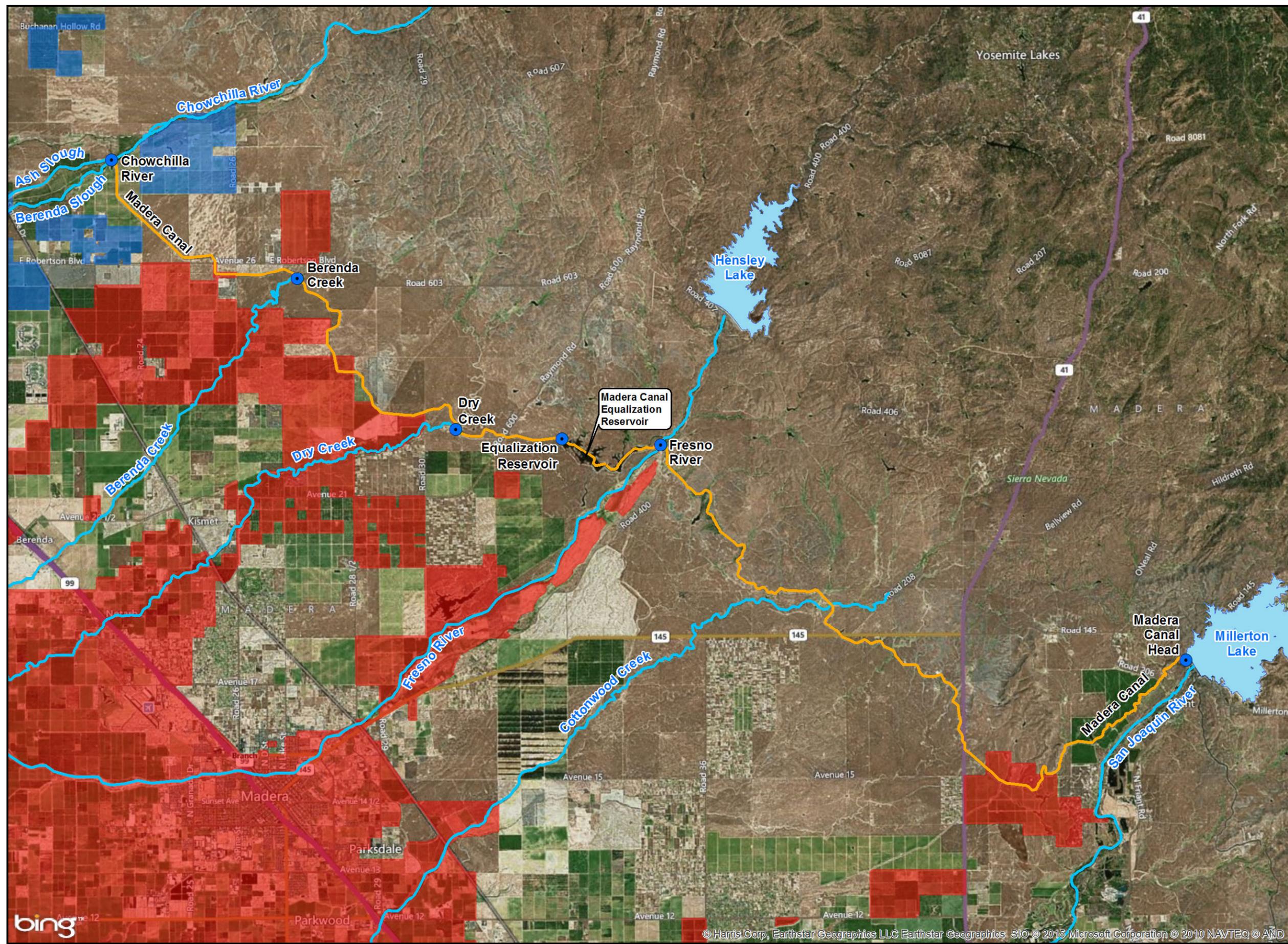
Appendix C – Aquatic Pesticides Application Log

Appendix D – Aquatic Pesticides Field Monitoring & Sampling Form

Appendix E – Sample Public Notice Letter

Madera-Chowchilla Water Power Authority Water Quality Sampling Sites

- Legend**
- Monitoring Location
 - Madera Canal
 - Waterways
 - Chowchilla Water District
 - Madera Irrigation District



bing

APPENDIX C – AQUATIC PESTICIDES APPLICATION LOG

Aquatic Pesticide Application Log	
To Be Completed for Every Pesticide Application	
General Information	
Date: _____	
Location: _____	
Personnel: _____	
Treatment Information	
Start time: _____	Stop Time: _____
Targeted Weed(s): _____	
Vegetative Growth Stage: _____	
Water Body Type: _____	Weather: _____
Water flow (cfs): _____	Air Temperature (°F): _____
Water Temperature (°F): _____	
Pesticide #1 Used _____	Rate or Concentration: _____
Application Method: _____	
Pesticide #2 Used _____	Rate or Concentration: _____
Application Method: _____	
Adjuvant #1 Used _____	Rate or Concentration: _____
Application Method: _____	
Adjuvant #2 Used _____	Rate or Concentration: _____
Application Method: _____	
<i>I certify that the APAP has been followed.</i>	
Print Name	
_____ Sign Here	

APPENDIX D – AQUATIC PESTICIDES FIELD MONITORING & SAMPLING FORM

Aquatic Pesticide Field Monitoring and Sampling Form				
Sample # 1: Background Monitoring (Up To 24 Hours Before Treatment)				
Date:		Sample Time:		Location:
Aquatic Pesticide Applied:			Temperature (°C)	
Turbidity (NTU):		pH:	Electrical Conductivity: (mho/cm):	
Dissolved Oxygen (mg/L) _____			Color:	None Brown Green Other
Weather: Clear Cloudy Other: _____		Sheen: Yes No		
Notes:				
Employee ID		Print Name		Sign Name
Sample # 2 Event Monitoring				
Date:		Sample Time:		Location:
Aquatic Pesticide Applied:			Temperature (°C)	
Turbidity (NTU):		pH:	Electrical Conductivity: (mho/cm):	
Dissolved Oxygen (mg/L) _____			Color:	None Brown Green Other
Weather: Clear Cloudy Other: _____		Sheen: Yes No		
Notes:				
Employee ID		Print Name		Sign Name
Sample # 3 Post-Event Monitoring				
Date:		Sample Time:		Location:
Aquatic Pesticide Applied:			Temperature (°C)	
Turbidity (NTU):		pH:	Electrical Conductivity: (mho/cm):	
Dissolved Oxygen (mg/L) _____			Color:	None Brown Green Other
Weather: Clear Cloudy Other: _____		Sheen: Yes No		
Notes:				
Employee ID		Print Name		Sign Name

APPENDIX E – SAMPLE PUBLIC NOTICE LETTER

March 1, 2016

Agency Name
Attn: Staff Name
Address Line 1
Address Line 2

Dear *Staff Name*,

Madera-Chowchilla Water & Power Authority (MCWPA) intends to apply aquatic pesticides to Madera Canal for weed control. The approximate period of application will be from (*starting month*) through (*ending month*). The aquatic pesticides being applied are as follows:

- Copper Sulfate

All persons should avoid contact with shoreline weeds and irrigation water during this period to avoid potentially harmful effects. Please contact the District with any additional questions.

Sincerely,

Douglas Welch
Madera-Chowchilla Water & Power Authority General Manager