

# Fulton-El Camino Recreation & Park District

2201 Cottage Way, Sacramento CA 95825

## Aquatics Pesticide Application Plan (APAP)



# TABLE OF CONTENTS

1	Background information	pg. 3
2	Description of water system	pg. 3
3	Description of aquatic herbicide treatment area	pg. 4
4	Description of type of weeds to be controlled	pg. 4
5	Aquatic herbicide and surfactant products & application	pg. 5
6	Examination of alternatives	pg. 6
7	Monitoring and sampling	pg. 7
8	Best management practices	pg. 8
9	Limitations	pg. 8

## **1 Background Information**

The Fulton-El Camino Recreation & Park District is preparing this document in compliance with Section VIII. Aquatic Pesticides Use Requirements, C. Aquatic Pesticides Application Plan (APAP), of Water Quality Order 2013-0002-DWQ (General Order) and its amendments, requiring preparation of and adherence to an APAP for application of aquatic herbicides.

The APAP describes the site, the treatment areas, the aquatic weeds needing control, an evaluation of practical methods of weed control leading to aquatic pesticide (herbicide) use, types of herbicides expected to be used, the application monitoring program, and best management practices to be implemented during herbicide application.

## **2 Description of the water system**

The Howe Pond is located in Howe Park within the county of Sacramento and is operated by the Fulton-El Camino Recreation & Park District. The pond was drained and reconstructed in 1994. It was excavated to a depth of 4'3" at the center. The north end of the pond was excavated to the depth of 4'. The depth at the south end was excavated to be 4'6" maximum. The edges of the pond were tapered at a 2:1 slope for the base of the wall to the bottom of the new pond. The contractor added a 12 inch class C-900 drain pipe at the south end of the pond. Overland flow into the pond is limited but with the high transmittance rate of natural soils, it's probable that true control of the ponds water balance is limited to the dry months.

The pond has one outflow location on the east side of the pond (Figure 1). There is a 6' drainage culvert at the east end of the pond that acts as the overflow for the pond.

### **3 Description of the Aquatic herbicide treatment area**

The weed growth occurs over approximately 90% of the pond, the application area includes 1.2 acres of the pond.

### **4 Description of types of weeds to be controlled**

There are three main pond vegetation species that have grown to dominate the pond and were identified by staff and with the assistance of Stan Adam from Wilbur-Ellis of Agribusiness. The three species are:

1. American pondweed
2. Eurasian Watermilfoil
3. Filamentous algae

The American Pondweed is a perennial plant that competes for sunlight and grows to the surface of water bodies. This weed provides food for aquatic species and waterfowl but will destroy recreation if patches are too large. Currently, the pond has several large patches and are most abundant near the northeast area of the pond.

The Eurasian Watermilfoil is the most productive species in the pond. It's a perennial submerged plant that begins to grow horizontally once it grows to the water's surface. It's known to be most abundant in waterbodies that have a high amount of nutrients or high productivity. The weed dies down in the winter but begins to grow from the roots once the ponds temperature rises above 60 degrees Fahrenheit in the spring. The plant isn't a valuable food source for waterfowl and is currently dominating most of the pond in the shallow areas.

Filamentous alga that grows near the bottom of the pond. This algae can be a problem in the shallow waters for treatment but it's overall a beneficial plant because it produces oxygen. Much of the algae has most likely been pushed out to the deeper portions of the pond due to the large watermilfoil blooms in the shallower areas.

Large patches of Pondweed and Eurasian Watermilfoil block the majority of the sunlight which can kill the oxygen producing algae's. Once these algae's die, the decomposition will consume oxygen. Most of the treatments listed below will harm the more beneficial algae, but if the monoculture of Milfoil is reduced, the overall productivity of the pond will decrease.

## **5. Aquatic herbicide and surfactant products and application**

### **Sonar**

Application of Sonar One should be in the early spring while targeted plants are in the small early growth stages. Application should be 20 pounds per surface acre. This is an application rate if 45 ppb. The plant controlled will be the pondweed, milfoil as well as other submerged species. Sonar is a systematic herbicide and will translocate throughout the plant. Milfoil and pondweed control should be a season long and may extend into 2022 and possibly longer. The time extension depends on the amount of water allowed to move through the pond during the wet season and the source of the infestation.

Sonar will not control Filamentous and other algae. Retention of these algae should provide adequate oxygenation for the pond. If the filamentous algae becomes overly abundant, the pond may be treated with up to 0.6 gallon per acre foot of Cutrine Plus or Captain. This application will control the filamentous algae.

### **Water Management**

Sonar One is a slow-release herbicide. Water should not be added and allowed to overflow out of the pond after the Sonar application. Any seepage through the soil is not believed to be a problem. If the pond water level becomes low due to evaporation, it's alright to raise the water level but not overflow the pond.

## **6. Examination of alternatives**

Consideration was given to dredging the pond to make it deeper thus reducing the aquatic plant problems by directly removing the plants and associated nutrients. After further review it was determined that the pond was too small to justify using a hydraulic dredging system unless all else fails.

## **7. Monitoring and Sampling**

Monitoring and sampling will be conducted in accordance with the requirements contained in the General Order's Attachment C – Monitoring and reporting Program (MRP), with the objective of addressing two key questions.

1. Does the residual algaecides and aquatic herbicides discharge cause an exceedance of receiving water limitations.
2. Does the discharge of residual algaecides and 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?

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 the general permit;
3. Measure and improve the effectiveness of the APAP;
4. Support the development, implementation, and effectiveness and BMPs;
5. Assess the overall 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 herbicides and application methods used by the Discharger.

### **Application**

Aquatic herbicide treatments will occur in the entire pond area

### **Compliance with permit requirements**

The following monitoring is required by the general permit for each sampling:

1. Background monitoring – Background monitoring samples shall be conducted at the north and southeast areas of the pond 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 – Background monitoring samples shall be conducted immediately at the southeast end of the pond 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 conducted 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 EPS'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.

## **8 Best management practices**

The Fulton-EL Camino Recreation & Park District 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.

## **9 Limitations**

This APAP was prepared in general accordance with accepted standards of care that the district will follow moving forward. It should be recognized that definition and evaluation of environmental conditions are difficult and somewhat inexact science. More extensive studies may be performed down the road if needed to address any issues in the pond.