

# CLEAR LAKE SKAGIT COUNTY, 2010



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Clear Lake – 2010 Aquatic Plant  
Management Report

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## CLEAR LAKE - 2010 AQUATIC PLANT MANAGEMENT REPORT

### Introduction

Clear and Beaver lakes are both located near Mt. Vernon, Washington in Skagit County. Noxious weeds have been a problem in these lakes for quite a while and their presence has impacted the beneficial uses of the lakes. Both lakes have public accesses, and as such represent an important recreational outlet for the residents. In addition to the public boat access ramp Clear Lake has a county swim beach that is managed for summer swimmers and the possible presence of a noxious weed represents a potential safety hazard.

There are two dominant noxious weeds in both Clear and Beaver Lakes. Eurasian water milfoil (*Myriophyllum spicatum*) and Fragrant Water Lily (*Nymphaea odorata*) are both noxious weeds present in the lakes. Fragrant Water Lily (FWL) is a floating leaf plant which has a tendency to dominate the shoreline habitat if left alone. Eurasian water milfoil (EWM) is a submerged species which grows beneath the water surface. This plant grows in depths up to 20 feet and once it reaches the surface will form a surface mat of plant matter. This plant has been known to be a serious navigation and safety hazard in lakes as an entanglement issue for both boats and swimmers. The Lake Management district formed to manage these plants has the following strategy:

1. Monitor and identify any new introductions of noxious weeds.
2. Continue current control and eradication efforts on remaining and new infestations of YFI, EWM, and FWL.

The lakes have a history of managing these species in Beaver and Clear Lakes. In 2007, the lakes were treated with Sonar (fluridone) for EWM in an effort to bring the plant community down to a more manageable level. Clear Lake remained milfoil free until 2009 when a few locations were identified and treated, and Beaver Lake has a few isolated plants. FWL has been treated annually with a systemic herbicide which utilizes Glyphosate to kill the plants. Treating FWL in these two lakes has been a steady effort to reduce the populations each year while reducing the possibility of killing too much at once and having chunks of the lake bottom peel off the bottom and float up to the surface – buoyed by the gases trapped inside the rotting lily root systems.

Yellow-Flag Iris (*Iris pseudacorus*) is a shoreline emergent plant that also occupies the shoreline at Clear Lake. Yellow-Flag (YFI) is fairly common on shorelines in Washington State. Often planted as an ornamental in the landscaping business, YFI has become an increasing problem. Though often seen as pleasant looking and providing habitat, this noxious species has the ability to easily crowd out native plants such as cattails along the lake shore. Growing quickly, it can also extend its range into the reducing the surface area over time. Though known to be in the lakes, measures to control this plant were not taken until the 2010 season.

AquaTechnex has been contracted by Skagit County and the Lake Management District to provide services which include the aquatic plant survey as well as control efforts. This report summarizes these efforts in 2010.

## Survey Methods

The primary objective of the June survey at Clear and Beaver Lakes is to determine the extent and locations of the noxious weeds in the lakes. This survey is focused on the littoral edge of the lake to map the floating leaf plants, emergent such as YFI, and the submerged milfoil.

Prior to beginning the survey on the lakes, maps from previous years were reviewed. Aquatic biologists then went to both lakes to complete the surveys. To do this a 16-foot Lund was used to navigate the lakes. A complete visual survey of the lakes, along with rake-toss samples was completed. The boat was outfitted with a Panasonic Toughbook

running Trimble GIS mapping software paired with a Trimble ProXT GPS receiver. The extent of the FWL community was mapped by “drawing” a line along the outside edge of the plant. Rake-toss samples were taken at regular intervals around the lake and the survey points were marked, and data was collected and entered into our database.

This field data was brought back to our offices where they were transferred into ArcGIS and further corrected to increase their accuracy when charted on a map. The following observations were made based on the June survey:

1. Milfoil: a few locations were identified for treatment in Clear Lake; no plants were found in Beaver Lake during the June survey though it is known to have milfoil in the lake.
2. A few isolated locations in Beaver Lake still have FWL growing.
3. FWL is still abundant in Clear Lake but treatments in 2009 cut back the population significantly. Additional clearing around docks is still needed in some locations.
4. YFI was located and marked in Clear Lake in order to create a baseline map to track its decline in the future.

Maps displaying the results of the survey can be found at the end of this report.

## 2010 Treatments

Treatments on both Beaver and Clear Lakes began on August 4<sup>th</sup>. In Beaver Lake, the June survey did not turn up any milfoil so the treatments focused on the Fragrant Water Lily. A boat was launched into the lake and a technician traveled the lake to apply the herbicide to the lily pads. The shallow water in Beaver Lake as well as the excessive growth of several species of pondweeds and coontail made getting to some of the FWL very difficult.

Clear Lake was treated on August 4<sup>th</sup>. First the water lilies were treated with a mix of AquaPro (glyphosate) and a penetrant. After this application, the zones that had been identified as having milfoil growing in them were treated with Renovate OTF. Both of

these herbicides are systemic in nature and take about 2 weeks before the plants show signs of damage.

Two weeks later, AquaTechnex technicians returned to the lake to treat the FWL again. Care is taken each summer not to eliminate too much of the FWL at one time to avoid the formation of “mud islands”.

### Fall Survey

Clear and Beaver Lakes were surveyed again in October 2010. As was done in the June survey, a biologist toured both lakes noting the FWL population, YFI, as well as searching for milfoil. The current extent of the lilies after this seasons treatments were determined first. This season the other access channel from the boat launch was cleared and shorelines were cleared more completely for homeowners. Where treated, the YFI seemed to be experiencing significant damage from the treatments this season. Milfoil was dying in about 90% of treated areas; however a significant patch of milfoil was spotted in the Northeast portion of the lake. In fact, this area of the lake has the majority of the milfoil for the lake.

### Conclusions and Future Considerations

With the persisting presence of EWM in both Clear and Beaver Lakes, and aggressive early-season treatment program may be required. Using the maps we made this fall we are able to perform treatments in the areas we already know to have milfoil in an effort to contain the spread of the plants throughout the summer.

This summer we used a granular product called Renovate OTF (active ingredient – Triclopyr). This product is systemic in nature and is designed to increase the contact time with the plants by releasing the herbicide over a 24-hour period. This is a great method in areas where the plants entire expanse is known, but one thing we noticed from the fall survey is that new plants seem to be appearing nearby known plants but escape the treatment. This may be because the product is not moving far from the designated treatment area (which is generally desired for many reasons) and that the plants are

starters and are not reaching heights that are identifiable during the early surveys. Another noteworthy observation from the fall survey is that most of the newly discovered plants appear to have been growing under the existing lilies, only to become exposed when the lilies are treated and die back.

Based on the overall observations from the 2010 season we would like to make the following early recommendations to the Lake Management District for the 2011 management season:

1. An early season treatment should take place in June to treat known milfoil zones identified in the fall 2010 survey. This will give us a jump on the season and reduce the likelihood of these plants fragmenting and spreading milfoil in the lake.
2. A combination of herbicides (liquid and granular) should be considered. Liquid applications in areas close to existing lilies may allow for contact with plants lurking just on the edge of any treatment area we might draw. Additionally new combination herbicides have been developed which have proven to be extremely effective in treating milfoil in hard to treat areas.
3. Although progress is steady in relation to treating FWL, opening of larger areas would start in 2011. An airboat will be used to open up lanes deeper into the existing stands of FWL to allow for more to be treated each visit. This will also be used to finish off the FWL populations in Beaver Lake.

A few of the shoreline residents made mention of the fact that they did not wish to have herbicide applications made to the lilies along their shore. Though they did agree that any milfoil applications would be ok, they felt the chance of a mud island off their property was too high and did not want to continue with applications. The area infested off their properties is quite small, and possibly with some outreach they would allow for careful applications to clear their zone. If not their area could possibly be a source for future issues but generally the spread of FWL is not so rapid as to lose control of the lake altogether.

AquaTechnex would like to thank the Lake Management District for the continuing opportunity to work with them in the management of their resource. If there are any

questions related to this document please contact Adam Kleven at  
[Adam@aquatechnex.com](mailto:Adam@aquatechnex.com) or 360-508-1276.

# Clear Lake, Skagit County 2010





# Clear Lake, Skagit County 2010



# Clear Lake June 2010



# Beaver Lake - Skagit County 2010



# Aquatic Herbicide Treatment Business and Residential Notice

Distribution Date: July 19th, 2010

Clear Lake will be treated with Aquatic Herbicide. Treatments will take place the week of August 2<sup>nd</sup>, 2010. Spot treatment (if necessary) will take place about two weeks later.

The Products that may be applied is Renovate OTF\* Granular (Active ingredient Triclopyr): Do not use treated water for irrigation until levels reach below 1 ppb which is generally 3-5 days post treatment. The Department of Ecology has established a 24-hour swimming advisory for this product; and AquaPro (active ingredient: Glyphosate) No restrictions on the use of water for irrigation, recreation or domestic purposes.

The location of the treatments will be the littoral zone of Clear Lake.

**Treated and potentially affected areas will be posted *the day of application*. The signs will describe any water use restrictions.**

If you are withdrawing water for potable or domestic use, livestock watering or irrigation and have no alternative water source. Please contact the applicator Aquatechnex, LLC at 360-508-1276 to arrange an alternative water supply.

If you would like to request additional notification prior to treatment, or have further questions, please contact AquaTechnex using the information above. You may also visit our web site at [www.aquatechnex.com](http://www.aquatechnex.com), the customer service section, knowledge base for additional day of treatment information.

This herbicide treatment is regulated under a permit from the Washington Department of Ecology.

# Aquatic Herbicide Treatment Business and Residential Notice

Distribution Date: July 19th, 2010

Beaver Lake will be treated with Aquatic Herbicide. Treatments will take place the week of August 2<sup>nd</sup>, 2010. Spot treatment (if necessary) will take place about two weeks later.

The Products that may be applied is Renovate OTF\* Granular (Active ingredient Triclopyr): Do not use treated water for irrigation until levels reach below 1 ppb which is generally 3-5 days post treatment. The Department of Ecology has established a 24-hour swimming advisory for this product; and AquaPro (active ingredient: Glyphosate) No restrictions on the use of water for irrigation, recreation or domestic purposes.

The location of the treatments will be the littoral zone of Beaver Lake.

**Treated and potentially affected areas will be posted *the day of application*. The signs will describe any water use restrictions.**

If you are withdrawing water for potable or domestic use, livestock watering or irrigation and have no alternative water source. Please contact the applicator Aquatechnex, LLC at 360-508-1276 to arrange an alternative water supply.

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