

**WESTERN AQUATIC PLANT MANAGEMENT SOCIETY
SPRING/SUMMER NEWSLETTER**

*Robert Leavitt, WAPMS Newsletter Editor
July 26, 2005*

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As WAPMS Newsletter Editor, I would like to thank all those who have contributed articles to this edition of the Newsletter. If you would like to contribute to the next Newsletter, please email me at rleavitt@cdfa.ca.gov

2006 WAPMS MEETING WILL BE IN SAN DIEGO, CALIFORNIA

Ross O'Connell and Lars Anderson, WAPMS Vice-President and Program Chair, and WAPMS Local Arrangements Chair

The 2006 Western Aquatic Plant Management Society meeting is scheduled for San Diego, California at the Hanalei Hotel and Resort in beautiful Mission Valley. The format is being expanded from the traditional 1-½ day meeting to a 2-½ day meeting, March 27-29, 2006. The Program is being expanded to include an Applicator Session; a special Session on Weeds of International Importance, such as Hydrilla and Egeria; and a special Regulatory Session, with focus on regulation of Threatened and Endangered Species. A 'Call for Papers' and hotel registration information will be circulated in early September.

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2005 WAPMS DENVER MEETING A SUCCESS

Jenifer Parsons, WAPMS President

Thanks to all the participants, the excellent speakers, and the generosity of our corporate sponsors the 24th annual WAPMS conference held in Denver March 10-11th was a success! I certainly enjoyed myself, learned a lot, and made some good connections with fellow aquatic weed managers, and I hope all who participated did as well.

At our board meeting and subsequent business meeting during the conference several items were discussed and new officers were elected. These are summarized below:

The WAPMS will continue to support the \$60,000 graduate student fellowship being offered by the Aquatic Plant Management Society and partners. We will contribute \$1,000 per year for the next two years. We will also continue to offer our own WAPMS scholarship of \$1,000. Please see additional information in this newsletter on these scholarships.

New officers to welcome are Ross O'Connell of the California Department of Food and Agriculture as Vice President and Scott Shuler of SePRO as a director. This means our current list of officers is as follows:

Past President: George Forni, will be working with corporate sponsors for the 2006 meeting

President: Jenifer Parsons

Vice President: Ross O'Connell, will be organizing the 2006 meeting

Editor and Western Regional Panel representative: Robert Leavitt

Treasurer: Nate Dechoretz has agreed to serve one more year

Website coordinator: Kathy Hamel

Scholarship chair: Lars Anderson

Director: Kim Patten, Scott Shuler, and Dave Burch

We are already preparing for the 2006 meeting, which will be held in San Diego! Lars Anderson has agreed to assist Ross O'Connell with local arrangements. Please see Ross or Lars with any suggestions you may have to make that conference a great success!

Thank you again for your continued membership and support of our Society. I will look forward to seeing all of you in San Diego next year. In the mean time I can be contacted at jenp461@ecy.wa.gov if you have a need to get a hold of me!

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WAPMS BOARD MEETING NOTES

George Forni, WAPMS Past President

March 9, 2005

Budget: We didn't have a copy of the treasurer's report with us, but it was noted that funds are down and it would be nice to build back up to a healthier level. It was suggested to change Corporate Sponsorships to a graduated level. This is being explored by George and Scott.

Will continue to provide at least one \$1,000 WAPMS scholarship next year. Toni suggested naming the scholarship for Barb Mullen. Toni is checking into this and will get back to us.

Voted to donate \$1,000 per year for the next two years to the APMS for their \$60,000 graduate student stipend.

It was agreed to get WAPMS listed as a beneficiary on Syngenta's GreenPartners program. This would allow purchasers of Syngenta's products to donate earned points to WAPMS that can then be exchanged for awards. Jenifer has initiated this process.

Mark Sytsma announced that there was one applicant for the WAPMS \$1,000 scholarship (Jon Kenning a PhD student from U of MN). The board thought he should get the money. Mark asked to be relieved of his duties as scholarship chair. Lars Anderson volunteered, and will take over duties of advertising and coordinating applicant review.

Kathy Hamel requested to be replaced as the WAPMS representative to the WRP. Robert Leavitt was named to be our representative.

Meeting locations for the next two years: Last year Hawaii was proposed, however several state and local government employees would have difficulty traveling there, so we discussed other options. It was decided to go to San Diego, CA in 2006 and Coeur d'Alene, Idaho in 2007.

Officers:

Ross O'Connell was nominated for vice president.

Scott Shuler, Tom Moorhouse and Jill Winfield were nominated to replace outgoing director Toni Pennington. Scott Shuler won the vote at the general membership meeting.

Treasurer Nate Dechoretz will serve one more year, so we will need to find a replacement in 2006.

All were brought before the business meeting for a vote.

Jenifer Parsons suggested checking if WAPMS could be changed to accept credit cards for membership and registration payments in the future. Nate is checking into it.

Discussed a change in duties of the officers. It was decided that the Past President would take over finding corporate sponsors and covering meals and breaks with additional sponsorship (working with the VP to estimate costs). That means this duty falls to George Forni for 2006.

Subsequent discussion brought up creating a local arrangements chair who would be responsible for securing a meeting venue two years in advance. This position is as yet unfilled.

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CYGNET PLUS CA REGISTRATION

Barbara McCollum and Andrea Austel, Cygnet Enterprises West

In 2004, Cygnet Enterprises West, Inc., announced the approval of the CYGNET PLUS surfactant by the California Department of Pesticide Regulation, upon completion of its toxicity analysis. CYGNET PLUS is a non-ionic aquatic wetting agent, activator, and penetrant, all in one. Its main ingredient is a biodegradable limonene base, made from citrus peel oil. Formulated for use in water and riparian areas, its purpose is to increase the efficacy of aquatic herbicides and algaecides.

In 2004, Pacific EcoRisk in Martinez, California, conducted an acute toxicity analysis of CYGNET PLUS, on selected freshwater organisms, including *Ceriodaphnia dubia* (water fleas), *Oncorhynchus mykiss* (rainbow trout), and *Pimephales promelas* (fathead minnows). Because there was no prior data as to the effects of CYGNET PLUS on these freshwater species, preliminary range-finding tests were conducted. Samples were then tested at different concentration levels to determine the toxicity of CYGNET PLUS on the various organisms.

Later, in 2005, the acute toxicity analysis for CYGNET PLUS was completed by conducting the same tests on the *Oncorhynchus tshawytscha* (chinook salmon). The findings were then compared to the survival results of the previous tests on the fathead minnow and trout, and determined to be equal.

In a time where there are more and more restrictions imposed upon the use of pesticides in water, the approval of CYGNET PLUS in California has given us a more safe and effective tool to help combat the ongoing fight against invasive aquatic plant species. It is important to have a product that increases the effectiveness of the limited amount of plant management resources presently available.

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RENOVATE* AQUATIC HERBICIDE - For Selective Long-Lasting Results

Mark Mongin, SePRO Corporation

Product Introduction and Overview

Renovate, the triethylamine salt formulation of triclopyr, was registered in December 2002 for use in aquatic sites for selective control of invasive aquatic and wetland weed species. Use of this product was approved in Washington and California in the spring of 2004. Renovate is a valuable tool for restoring and managing aquatic ecosystems because of its favorable environmental fate profile and selective weed control chemistry. Renovate is a systemic herbicide which rapidly enters the target weed through leaf and stem uptake, moving throughout plant tissues and downward into the roots, disrupting the weed's growth metabolism. Renovate works by stimulating uncontrolled growth in susceptible weed species. Symptoms include bending and twisting of stems and leaves, commonly termed epinasty. Uptake of sufficient amounts of Renovate ultimately results in the collapse and death of the plant producing long lasting results.

Target Plants Under Evaluation

SePRO is developing use information for Renovate and further define the herbicide's rate effectiveness range and optimal use patterns. In 2003, and 2004 protocols were set to complete this field evaluation effort. To summarize this field research, evaluations were conducted at 83 sites in 16 states, where protocols were completed on 23 different target nuisance aquatic and wetland plant species to measure the differences in efficacy of application timing, stage of plant growth and whole vs. partial area treatments. Specific plants under evaluation include the following: *Hygrophilla*, *Limophila*, *Bacopa* species, *Salvinia*, *Micranthemum*, *Trappa natans*, *Cabomba*, *Arundo donax*, *Scirpus*, and *Colocasia esculenta*. Trials are continuing in 2005 and we will further develop our database of species and site-specific recommendations for Renovate Aquatic Herbicide.

Submerged Plant Control

Susceptible submersed species control may be achieved between 0.75 and 2.5 ppm of Renovate. It is recommended that trailing hoses and an aquatic labeled sinking agent be utilized when applying Renovate to target plants growing in depths of 8 feet or more. Submersed applications may be applied to partial water bodies using a rate of 1.5 to 2.5 ppm. The higher end of the rate range is also recommended when treating dense and/or mature infestations or to achieve multiple years of control.

Floating and Emerged Plant Control

Floating and emerged plants on the Renovate label may be controlled using 2 to 8 quarts per acre. Water primrose and parrotfeather are two examples of target plants effectively controlled using 2 quarts of Renovate per acre. Purple Loosestrife can be controlled with foliar applications of Renovate applied at 4 to 6 quarts per acre. As a general rule, and for best results, Renovate should be sprayed to wet the vegetation, using high water volumes of 50 to 100 gallons per acre of spray solution.

Product Uses and Future Development

Renovate's selective, systemic chemistry is an outstanding partner in rotation with other control agents and is a strong choice for use in Integrated Pest Management (IPM) programs, such as the Purple Loosestrife beetle. Renovates formulation has also proven to be effective and compatible with other aquatic herbicides, adjuvants and surfactants providing greater application flexibility to aquatic plant managers. Renovate is available in one quart, 2.5 gallon and 350-gallon returnable mini-bulk package sizes.

Continued work is underway to generate more data on the plant efficacy, movement and fate of Renovate in field use conditions. Both emergent plant treatments and submersed applications are being further evaluated to document the range and effectiveness of this new tool for aquatic plant management.

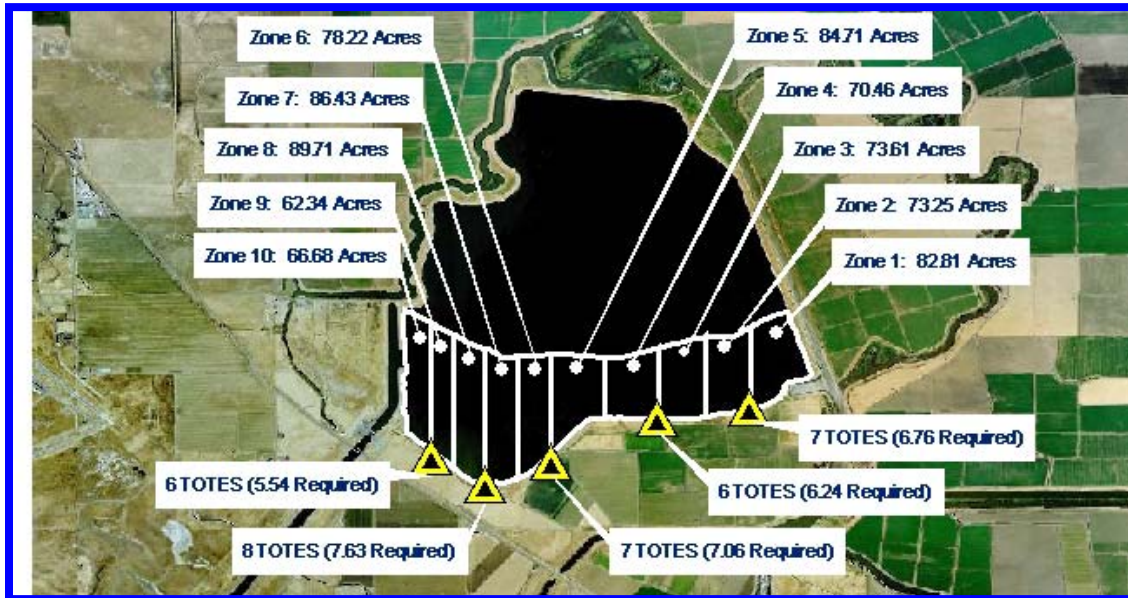
For more information on Renovate please contact Scott Shuler, Western Aquatic Specialist, at 916-718-2596 or scotts@sepro.com

* Renovate is a trademark of Dow AgroSciences and exclusively licensed to SePRO Corporation.

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HERBICIDE TREATMENT FOR CONTROL OF *EGERIA DENSA* FOR THE DEPARTMENT OF WATER RESOURCES AT CLIFTON COURT FOREBAY.

Tom McNabb, Clean Lakes, Inc.



Background: Clifton Court Forebay in Byron, CA is the first stage of the CA Department of Water Resource's (DWR) aqueduct system, which supplies water to parts of the central valley and southern California. In recent years, the non-native, invasive aquatic plant known as *Egeria densa* has grown to nuisance proportions within the Forebay. As the plants fragment due to wind and currents caused by pumping, the plants accumulate on the fish screens at the J.E. Skinner Delta Protective Facility, as well as fouling DWR's pumps, which push the water south. This has caused problems with water delivery and with the efforts to protect endangered fish species, such as Delta Smelt and Salmon.

In the past, DWR had treated the Forebay using US EPA approved copper based, aquatic herbicides via helicopter application. The herbicide efficacy was not quite up to expectations, and it was determined that the herbicide was not penetrating deeply enough into the water column to provide the contact necessary to provide the efficacy required when applied by air. DWR decided that treating the Forebay using boats to inject the herbicide would help increase penetration, contact, and thus efficacy. DWR contracted with Clean Lakes, Inc. (CLI) to conduct the boat applications.

Pre-treatment preparations: On April 23, 2005, CLI staff met with DWR personnel to formalize treatment plans. At this time, an aquatic vegetation survey was performed via boat, and the treatment areas were recorded via the use of a Trimble DGPS Pathfinder Pro XRS beacon receiver supported by ArcView 8 mapping software for the production of an aquatic vegetation treatment map. Treatment areas were downloaded through Arc View 8 and overlaid onto an existing aerial photo of the Forebay system to produce a treatment map. From this map, CLI personnel were able to determine the optimal staging areas around the Forebay for the herbicide loading areas. The treatment called for 10,000 gallons of Komeen to be applied in one day. Using the map, CLI personnel determined that five sites along the southern shore of the Forebay would provide optimal loading areas. CLI staff, using GPS, pre-marked these sites for DWR personnel to place the 300-gallon tote containers in the proper staging areas.

Treatment: On May 3, 2005, Clean Lakes, Inc. and SePRO Corporation personnel assembled at Clifton Court Forebay to begin the boat application. Four boats were used, guided by on-board GPS to do the application. The herbicide was transferred into the boats at the predetermined sites to minimize travel time to the treatment areas. Approximately 770 acres were treated with 10,000 gallons of Komeen Aquatic Herbicide in a 12-hour span.



Results: The presence of the target plant, *Egeria densa*, was greatly reduced, as verified in subsequent surveys. Subsurface injection provided better overall control than the aerial application due to better contact between the herbicide and the targeted plants.

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THE INVASION OF LAKE MERRIT BY WIREWEED

*Dr. Richard Bailey, Executive Director
The Lake Merritt Institute*

January 2005

THE INVASION OF LAKE MERRITT: It wasn't there before, but now seems to be popping up everywhere along the shoreline. Finding a rooted plant in the shallow waters of the Lake during November and December is highly unusual, but there it is. Although not yet positively identified, it appears to be wireweed (*Sargassum muticum*) a brown algae from Japan. According to the book *North Pacific Seaweeds* by O'Clair and Lindstrom, it is thought to have been introduced in the 1930's in Puget Sound, Washington. By 1988 it had spread to the Baja Peninsula in Mexico and by 1994 to Alaska. In 1973 it was found in the North Atlantic Ocean, and it has also been found in San Francisco Bay and southern England.

This non-native, highly invasive species can tolerate salinity as low as 8.5 parts per thousand (sea water is 35 parts per thousand) and at least one week of exposure to water 83° F in temperature. Wiry and tough, branched and bushy, it forms dense stands in quiet water and is anchored to the bottom by a holdfast, which may make it difficult for the harvester boat to dislodge. It grows as a perennial or annual, and some plants may be fertile all year especially from March through June at Santa Catalina Island.

Lake Merritt appears to provide an ideal habitat for this invader, which is increasingly showing up in our nets as we remove trash from the shoreline. Since it is capable of growing as deep as 16 feet and can grow to 6.5 feet tall, this plant may now be growing across the entire Lake bottom, or may do so as the year progresses. If it does, will the harvester boat be needed year round? Will it out-compete the widgeon grass that typically grows from May – July? Is it invading because Lake water temperatures are becoming warmer? Will it permanently change the appearance of the shoreline? These are questions we cannot answer. Lake Merritt may be about to change.

February 2005

WIREWEED FOUND IN DEEP WATER: A quick search in deeper areas of the Lake revealed that wireweed (see last month's newsletter for details) is growing in at least two locations in water 8 – 9 feet deep. Although January's runoff dropped Lake salinity as low as four parts per thousand for several days and most of the wireweed in shallow water looked dead, there were also several healthy plants remaining in the shallows.

We have been assisted in our investigation of this alien invader by Lynda Goff, a Professor of Marine Biology at UC Santa Cruz, but now living near the Lake. As past president of both the US and International Algal Scientific Societies, she has done a considerable amount of research on introduced weedy species. Lynda informs us that there have been many reports of it in San Francisco Bay, including Alameda. She writes it “is a terrible nuisance weed throughout the Scandinavian countries and in the British Isles – where local committees of volunteers from fishing villages throughout Ireland, Scotland, Wales and England, scour the inter-tidal regions and physically remove these pests...” “It is considered a nuisance because it grows so quickly that it effectively out-competes many good native species including other brown algal – kelps and sea-grasses. Both of these are very important forming habitats for fish fingerlings, mature fish and invertebrates. It out competes other desirable plants by shading them and by taking up nutrients other species require.”

As day length and temperature increase, we may expect to see more (perhaps a lot more) of this plant. Finding it at the bottom of offshore areas indicates that it has the potential to grow over most of the Lake, but this remains to be seen. It is also possible that it may use nutrients typically taken up by plankton, resulting in clearer water. This usually occurs in May and June when widgeon grass takes over the Lake bottom. Casual observations indicate less murky water this winter, but no definitive observations are being evaluated.

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