

WAPMS 2010 Conference: Seattle Sophisticates

President's Message
Robert Leavitt, WAPMS President

Welcome to Seattle, the Emerald City! I hope this Newsletter finds everyone in good health and spirits as we prepare for our upcoming annual meeting. Though many of our members face economic budget issues, we are looking forward to a great meeting. The venue is the Sheraton Seattle Hotel in downtown Seattle, not far from favorite sites such as Pike's Place Market. Watch them throw the fish! Please join me at the President's reception at the hotel on Sunday evening.

Tom Moorhouse, WAPMS Vice-President and Program Chair, has put together a full program, with a diverse topic base related to activities within our Western region. Tom also has a great keynote speaker. We also have a full slate of exhibitors with new technology in aquatic weed management. The draft Program is at the end of the newsletter and on the WAPMS web site.

For those of you who can make it, the WAPMS Board of Directors will meet at 4:00 on Sunday afternoon March 28th. Members are invited. The Board of Directors looks forward to your participation. In addition, there will be the annual business meeting on Tuesday, March 30 at 4:00, followed by the Annual Banquet at 6:00. I look forward to seeing you there. Feel free to send me an email (rleavitt@cdfa.ca.gov) if you have any questions related to meeting activities, events, or other related issues.

Along with the newsletter you will find maps of the area and information on

transportation to and from the airport, as well as registration and hotel information.

Notes on the 2010 Program
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From the islands to the mainland! We had a great meeting in Hawaii last year, and I know everybody is looking forward to meeting in beautiful Seattle! In preparing the Notes on the Program, I was curious how Seattle got its name. Seattle is named after Chief Seattle, (c. 1780 - 1866), who was a Duwamish chief also known as Sealth, Seathle, Seathl, or See-ahth, and a leader of the Suquamish and Duwamish Native American tribes. Over the years, Seattle has been shaped by a number of major industries and events that include shipping, timber, gold rushes, World Wars, the Great Depression, and, more recently, aircraft and software.

The 29th annual conference of the Western Aquatic Plant Management Society will be held March 28 through 31, 2010, at the Seattle Sheraton Hotel. The Board of Directors would like to invite you to join us for this educational event. We are putting the final touches on next month's program and I know many members, speakers, and exhibitors are finalizing plans to attend.

A President's Reception will be hosted by WAPMS President Robert Leavitt on Sunday evening, followed by 2-1/2

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days of meetings with 41 great presentations lined up.

Monday morning, March 29, we will start off with State Updates, after which we will have a session covering NPDES, Regulatory, and Legislative issues. Washington State Senator Ken Jacobsen will be joining us at that session. He currently serves as the chair of the Senate Natural Resources, Oceans and Recreation Committee, and serves on other related committees. Leading the afternoon session, Julia Parrish, from the University of Washington, will be our keynote speaker, followed by sessions covering flowering rush, spartina, and other emerging nuisance plants.

On Tuesday, we'll fill the morning with sessions on challenges faced by irrigation systems and croplands, in addition to covering control efforts for hydrilla and egeria. We'll end the sessions Tuesday with a session on control technologies and detection and monitoring methods. Tuesday will end with the annual Business Meeting. The evening boasts our annual Banquet, which will be at the hotel. The ever popular reverse raffle will be among the events.

We'll continue Wednesday with a variety of interesting speakers covering diverse topics in lake aeration, revegetation, biological control, and pesticide effects on salmon reproduction.

The draft Program is as the end of this newsletter as well as information about the hotel, travel, and our venue.

Arrive early and stay late to explore; I look forward to seeing you all in Seattle!

Information on the Hotel, Travel, and Local Attractions

Patrick Akers, Newsletter Editor

Along with arranging a great program, our VP Tom Moorhouse produced an excellent information guide on all the local arrangements and sights, which comes along with this newsletter. Its nine pages give you all the information you may need on hotel reservations, accommodations, and parking in Seattle, plus tips on getting around town, the local weather, shopping, maps, and many of the best attractions and places to visit. Run through the guide and you'll have 'most all the information you could possibly need for a smooth and fun trip. Thanks, Tom.

Meeting registration and exhibitor setup will begin at 2:00 PM on Sunday, March 28th.

Hotel Reservations:

StarGroups

Individual Call-In: 888-627-7056
Call with the following information:
Guest's first and last name, arrival date and time, departure date, and bed type preference (king or two double beds)

All rooms are non-smoking

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New Scholarship Chair Patrick Akers, Newsletter Editor

Many of our members will recall that Toni Pennington has run our Scholarship Program, more or less by default but with great good will, for the last several years. Now Toni is moving on and turns her mantle over to Scott Nissen of Colorado State University. Scott is a professor and extension specialist in Weed Science in the College of Agricultural Sciences, where he currently focuses on open and natural areas, invasive species, and environmental fate of herbicides.

We at WAPMS warmly thank Toni for all her help these past few years and wish her all success in managing her projects, which have been keeping her hopping. And, a big welcome to Scott and thanks for undertaking this important part of the Society's efforts.

Notes for Students Scott Nissen, Scholarship Chair

Scholarship Due Date Extended

Know a student in need of research or travel funding?

If so, encourage them to apply for the 2010 Barbra H. Mullin Scholarship. The top candidate receives \$1000 and a year membership to WAPMS. Last year's competition resulted in a tie so the Board decided to award two \$1000 scholarships.

Application materials include: a short resume/curriculum vitae, academic transcripts, a statement about how the funds would be used, and two letters of support. Preference is given to students from western states and all students must be engaged in

course work or research related to the biology, ecology, management of aquatic plants or related educational programming.

The application deadline has been extended until March 5th, 2010. Further details may be found at: http://www.wapms.org/wapms_scholarships.htm or by contacting Dr. Scott Nissen at snissen@lamar.colostate.edu. Previous applicants are encouraged to apply.

Student Registration Waiver

Students attending the WAPMS conference have their registration fees waived. Students are not required to make oral or poster presentation; however, their participation is highly encouraged. Participation fosters increased interaction between students and other researchers, industry representatives and managers. For more information check the WAPMS website (www.wapms.org) for conference updates.

Members' Contributions
Short Notes of Interest to the Society*

**A New Microorganism-based Molluscide
for Quagga and Zebra Mussels**

by Scott Shuler and Tyler Koshnick, SePRO
Corporation

Marrone Bio Innovations will join with SePRO Corporation to develop MBI's naturally occurring microbial-based product, Zequanox™, for use in controlling zebra and quagga mussels in open water situations.

Non-native invasive mussel populations have spread throughout the Great Lakes and Midwest for two decades now. More recently, quagga mussels established themselves in the Colorado River and are rapidly spreading in the western states. These invasive mussels are the size of a person's fingernail, yet wreak havoc in freshwater lakes and rivers. The mussels clog pipes that draw water from infested lakes and rivers. They coat the bottom of lake and reservoirs, disrupting the aquatic food chain and spoiling swimming areas with their sharp shells. And they attach to anything with a hard surface, like boat motors, intakes, and hulls, leading to overheating and drive-train wear. Invasive mussels grow to maturity within a year, and reproduce prolifically. A single female can produce 30,000 – 100,000 eggs each year, and researchers have found up to 700,000 adult mussels per square yard in some locations.

Marrone Bio Innovations' proprietary microbial-based product, Zequanox, is highly effective in selectively controlling both of these invasive mussel species in flowing and static water, and has been effectively applied at power facilities in

North America. Under this new agreement, SePRO will work with MBI to validate the product's efficacy in open water environments, and optimize product formulation and delivery. SePRO will retain exclusive North American rights to license this technology for products sold for open water environments. Zequanox will be the first natural and environmentally safe method for mussel control.

Marrone Bio Innovations (MBI) develops effective, environmentally safe products for weed, disease, and invasive pest management, derived from naturally occurring plants and microorganisms. MBI currently markets GreenMatch® herbicide for organic crop production, and Regalia® fungicide-bactericide for conventional and organic crop production. Visit www.marronebioinnovations.com.

SePRO's key business segments include the aquatics pest, greenhouse and nursery, and turf/landscape industries. Call Sam Barrick at 1-800-419-7779 or visit SePRO at www.sepro.com.

AquaTechnex teams with Blue Water Satellite to detect toxic algae blooms

by Terry McNabb, Aquatechnex



Cyanobacteria (bluegreen algae, some toxic) create blooms that can be a significant threat to human health. Blue Water Satellite technology can help detect and manage these problems.

AquaTechnex has partnered with Blue Water Satellite to offer their detection and monitoring services throughout the areas we serve. Blue Water Satellite has patented satellite imagery and processing technology to detect and map cyanobacteria in surface waters, down to parts per billion. Lakes can be mapped every 8 to 15 days. The system processes five samples per surface acre, providing a clear picture of alga levels and the bloom's spatial patterns. Maps and data are rapidly available to clients through a secure server, so managers can make early decisions regarding health alerts or control measures. The program is cost effective and provides a wealth of data not available from conventional water sampling programs. It can be a key component of a successful management plan.

The low cost is one extremely attractive aspect. Conventional algal sampling can run

as high as \$100.00 per sample for analysis, plus travel time to acquire it. By contrast, a 2,500 acre reservoir can be analyzed twice a month using the Blue Water System for as little as \$1,550. Because the system measures five points or pixels per surface acre, each analysis represents 12,500 samples. This sampling density allows the manager to build clear maps of cyanobacteria concentrations, track bloom conditions, and plan response programs.

Cyanobacteria pose a health threat. These single-celled organisms thrive in nutrient-rich lakes and reservoirs. During blooms they can produce toxins that have killed pets and livestock. There are numerous cases of them causing sickness in humans, and recently deaths have been attributed to ingesting tainted water.

Blue Water can also perform detection and mapping of phosphorus, both in the lake and the watershed to detect sources of this key input. Blue Water can also provide review and detection over the past 27 years from historical satellite data.

A System for Precision Littoral Zone Application of Aquatic Herbicides

by Tom McNabb, Clean Lakes, Inc. and Bruce Sabol, ERDC-EL

On October 28, 2009, the US Army Engineers Research and Development Center, Environmental Laboratory (ERDC-EL), and Clean Lakes, Inc. entered into a cooperative research and development agreement (CRADA) for the "Research and testing of a system for precision littoral zone application of aquatic herbicides". The CRADA program provides for joint research and development to couple Clean Lakes' LittLine[®] System (Littoral Zone Treatment

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Technology) with ERDC-EL's Hydroacoustic Submersed Plant Mapping capabilities (SAVEWS™ and related developments).

The Project objective is to combine a LittLine® System and SAVEWS™ or its variants into an optimized system that provides automated, precision application of herbicide to submerged, nuisance aquatic vegetation. It development will yield a new real-time herbicide application system capable of delivering excellent plant control while reducing herbicide use compared to conventional application methods.

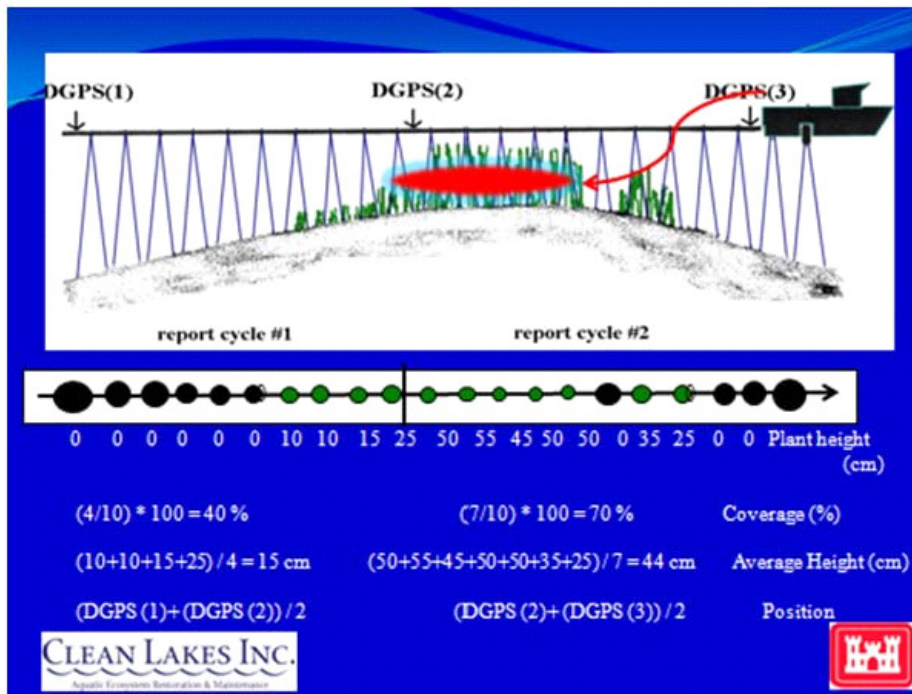
The research team began the CRADA investigations on some hydrilla infestations in Lake Toho, Florida, during January 5th through 12th, 2010. We are looking for sites in the Western US where the submerged aquatic vegetation growth is about 50% of the water column, and within one or two feet

of the surface. For the initial investigations, treatments can be mock applications using water rather than aquatic herbicides, or they can be actual treatment sites if available.

In the event your agency or group has an interest in participating in the CRADA program, please contact one of the Project Managers listed below to discuss further details. We look forward to working with as many agency/groups as possible in developing this advance in aquatic herbicide application technology.

Project Managers Contact Information:

Clean Lakes, Inc.: Thomas J. McNabb, Telephone: 208-929-2748, Email: tmcnabb@cleanlake.com or **ERDC-EL:** Bruce Sabol, ERDC-EL- Environmental Laboratory, Telephone: 601-634-2297, Email: Bruce.M.Sabol@usace.army.mil



The SAVEWS™ system records the aquatic vegetation height in the water column (0-50 cm (black and green dots)), and the calculated percent cover based on the vegetation spacing. The red line illustrates the LittLine® system discharging herbicides to the vegetation approximately 80 feet behind the vessel.

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*** Editorial Guidelines for Members' Submissions:** Articles may be on any subject of general interest to the Society, such as news on members, updates on projects, or announcements of new products. They must include a byline with the authors' names. Responsibility for the article lies with the authors. All articles of 300 words or less will be printed, as long as they pertain to the business of the Society. The Newsletter editor will edit them only for spelling, grammar, or readability. Articles longer than 300 words will be submitted to the editorial board for approval. They may be edited for length or content, in consultation with the author. Articles may be submitted as a Word document, a text file, or text in an email message.