



# Aquatic Plant News

A Newsletter of The Aquatic Plant Management Society, Inc.  
P.O. Box 821265, Vicksburg, MS 39182-1265  
LeeAnn Glomski, Editor

Issue 103

June 2013

## San Antonio, Texas—Site of our 53<sup>rd</sup> Annual Meeting



The 53<sup>rd</sup> Annual Meeting of the Aquatic Plant Management Society will be held July 14 -17, 2013 at the Westin Riverwalk in San Antonio, Texas. This year's meeting will be held in conjunction with the annual meeting of the Texas Aquatic Plant Management Society. Our host hotel is adjacent to the world famous San Antonio River Walk. The eight mile River Walk is a long linear park, beautifully landscaped, with great sidewalks. The less congested places are perfect for serious exercising or romantic strolls. As I understand it, here are the top five things you must do on the River Walk: 1) **Eat, Drink & Be Merry**, over fifty restaurants, bistros, cafes, clubs, bars - most with quaint [outdoor patios](#) line the River Walk, 2) **Land & Art Scapes**, explore the Museum Reach north of downtown, and watch for the [twelve art installations](#) on the river banks, 3) **Sunset Cruise**, lots of folks take a tour of the River Walk aboard a [river cruiser](#), but few know that you can take a [sunset taxi ride](#) from downtown along the Museum Reach to the Pearl Brewery, 4) **Secret Places To Shop**, over 60 stores hug the banks of the River Walk lagoon, and 5) **Run, Walk, Hike**, enjoy the masterpiece that weaves the city's past and future together.

Hotel reservations can be made online at:

<https://www.starwoodmeeting.com/StarGroupsWeb/res?id=1211301551&key=11A7E>  
or by calling the Westin Riverwalk directly at (210) 224-6500. When making your reservations by phone, be sure to mention that you are part of the Aquatic Plant Management Society. The cutoff date for reservations at the special group rate is **June 20, 2013**. Our special APMS guest room rate is \$159.00 for single and double occupancy per night plus applicable tax. These group rates are available three days prior to the conference and three days post conference.

## San Antonio, Texas—Site of our 53<sup>rd</sup> Annual Meeting

The Westin Riverwalk requires that all reservations be guaranteed with a major credit card or a deposit. Cancellations must be made 72 hours prior to arrival or you will be charged one night's room and tax. Check in time is 3:00 p.m. and checkout time is 12:00 p.m. If you choose to depart earlier than your reserved departure date, the hotel will charge one night room and tax.

This year, our spouses and guests will be treated to a tour of Alamo City. You will be picked up at the Hotel at 10:00 a.m. and will return by 3:00 p.m. Your tour will begin with a **narrative city driving tour** in route to the “Shrine of Texas Liberty”—**the Alamo**. The next stop will be a cool ride along the historical and famous **San Antonio River**. Sit back and enjoy listening to fun and historical information from your tour captain. Your final designation will be Market Square, known as **El Mercado** by the locals. Two blocks of shopping filled with everything from piñata's and poetry to colorful clothing and metal work, all the while being serenaded by a local Mariachi group. Lunch will be served at one the local favorite restaurants, the **Mi Tierra Café**.

The meeting registration fees are \$275.00 for a delegate and \$130.00 for a guest (spouse, partner, child over 12 years of age) if received by June 22, 2012. After this date, registration fees at the door will be \$330.00 for a delegate and \$155.00 for a guest. The meeting registration fee for a student competing in the student paper contest (oral or poster) is waived and the registration fee for a student not competing is \$75.00. Delegate and student registration includes all technical sessions, President's Reception, refreshment breaks, Poster Reception, and Awards Banquet. Guest registration includes President's Reception, refreshment breaks, Guest Tour, Poster Reception, and Awards Banquet. Non-registered guests may purchase individual tickets for these events.

The Westin Riverwalk, San Antonio, is located approximately eight miles south of the airport and is easily accessible by taxi, limousine, rental car or commercial shuttle service. Getting around the city is very convenient. Taxis, whether traditional or people-powered “pedicabs,” are readily available. Here is a link to the list of taxi companies:

<http://www.sanantonio.gov/Aviation/taxicabs.asp>

Up to six people can ride for the price of one. The downtown Trolley is a public transit system that offers transportation throughout the downtown area. Trolley tours that take you to the essential local sites are also available.

This is guaranteed to be an extraordinary meeting, so plan to attend and bring the family! Please help us in planning for the 53<sup>rd</sup> Annual Meeting by submitting the **Meeting Registration Form** enclosed in this newsletter by **June 14, 2013**.

Tommy Bowen, Meeting Planning Committee



# Pre-final Agenda – 53<sup>rd</sup> Annual Meeting - APMS

**Sunday, July 14**

## Sunday's Agenda-at-a-Glance

7:30 am - 5:00 pm APMS Board of Directors Meeting (*Camino Real*)  
12:00 pm - 5:00 pm Exhibits Setup (*Navarro Ballroom - Section A*)  
12:00 pm - 5:00 pm Posters Setup (*Navarro Ballroom - Section A*)  
1:00 pm - 5:00 pm Registration (*Navarro Pre-function*)  
7:00 pm - 9:00 pm President's Reception (*Navarro Pre-function and Navarro Ballroom*)

**Monday, July 15**

## Monday's Agenda-at-a-Glance

7:00 am - 8:00 am Continental Breakfast (*Navarro Ballroom - Section A*)  
7:00 am - 5:00 pm Exhibits Open (*Navarro Ballroom - Section A*)  
7:00 am - 5:00 pm Posters Open (*Navarro Ballroom - Section A*)  
7:30 am - 5:00 pm Registration (*Navarro Pre-function*)  
8:00 am - 12:00 pm Session I (*Navarro Ballroom - Section B*)  
10:00 am - 3:00 pm Guest Tour  
10:10 am - 10:40 am Refreshment Break (*Navarro Ballroom - Section A*)  
12:00 pm - 1:30 pm Lunch on your own  
12:00 pm - 1:30 pm APMS Student Affairs Luncheon (*El Rincon de Maria - Lobby Level*)  
12:00 pm - 1:30 pm Aquatic Ecosystem Restoration Foundation Meeting (*Lantana - Lobby Level*)  
1:30 pm - 4:20 pm Session II (*Navarro Ballroom - Section B*)  
2:50 pm - 3:20 pm Refreshment Break (*Navarro Ballroom - Section A*)  
4:20 pm - 5:00 pm APMS Annual Business Meeting (*Navarro Ballroom - Section B*)  
6:00 pm - 7:30 pm Poster Session and Reception (*Navarro Ballroom - Section A*)

### Session I – Special Session and General Presentations

8:00 am - 12:00 pm

*Navarro Ballroom - Section B*

**Moderator: Dr. Michael D. Netherland** - APMS President Elect, Program Committee Chair,  
*U.S. Army Corps of Engineers, Engineer Research and Development Center, Gainesville, FL*

8:00 am **Welcome, Opening Remarks and Announcements**

8:05 am **Presidential Address**  
**Terry Goldsby**  
*Aqua Services, Incorporated, Guntersville, AL*

### **Opening Session I: Perspectives on Research and Management Progress in Three Disciplines Closely Related to Aquatic Plant Management: Toxic Algae Mitigation, Terrestrial Weed Science, and Mosquito Control**

8:15 am **Research and Management Progress in Mitigating and Controlling Toxic Algae Blooms**  
**Dan Roelke**  
*Texas A&M University, College Station, TX*

8:40 am **Successes and Challenges in Terrestrial Weed Research and Control over the Past Five Years**  
**Scott Senseman**  
*University of Tennessee, Knoxville, TN*

9:05 am **The Science of Mosquito Control: Successes and Challenges in Management and Research over the Past Five Years**  
**Clark Wood**  
*Clarke Mosquito Control, Batavia, IL*

## General Session I

- 9:30 am **Eradicating Hydrilla from New Zealand**  
**Deborah E. Hofstra** and John S. Clayton  
*National Institute of Water and Atmospheric Research, Hamilton, New Zealand*
- 9:50 am **Monoecious Hydrilla - The Aquatic Weed for the New Century?**  
**John D. Madsen**  
*Mississippi State University, Mississippi State, MS*
- 10:10 am **Refreshment Break** (*Navarro Ballroom - Section A*)
- 10:40 am **Citizen Science: A New Role for APMS Chapters?**  
**Lars W. Anderson**  
*Waterweed Solutions, Davis, CA*
- 11:00 am **Innovations in Citizen-Based Aquatic Plant Monitoring and Collaborations**  
**Matthew B. Johnson** and Ray D. Valley  
*Contour Innovations, LLC, Minneapolis, MN*
- 11:20 am **Private / Public Partnership in Aquatic Plant Management: The Complex and Dynamic Process of Industry, Government, and Citizen Participation in Collaboration for Improved Management and Stewardship of Our Aquatic Resources**  
**Mark A. Heilman**  
*SePRO Corporation, Carmel, IN*
- 11:40 am **NPDES and Operational Reporting Requirements and Results for Aquatic Plant Management in FL Public Waters**  
**Jeffrey D. Schardt**  
*Florida Fish and Wildlife Conservation Commission, Tallahassee, FL*
- 12:00 am **Lunch on your own**

## Session II – General Session and Student Presentations

1:30 pm - 4:20 pm

*Navarro Ballroom - Section B*

**Moderator: Dr. Rob Richardson** - APMS Editor

*North Carolina State University, Raleigh, NC*

- 1:30 pm **A Novel Method for SAV Restoration**  
**Lyn A. Gettys**  
*University of Florida, Institute of Food and Agricultural Sciences, Ft. Lauderdale Research and Education Center, Davie, FL*
- 1:50 pm **Efficacy of Three Algaecides on the Epiphytic Cyanobacterium (Order Stigonematales) Associated with Avian Vacuolar Myelinopathy (Student Presentation)**  
**Jamie Morgan**<sup>1</sup>, Rebecca S. Haynie<sup>1</sup>, West M. Bishop<sup>2</sup>, Susan Wilde<sup>1</sup>  
<sup>1</sup>*University of Georgia, Athens, GA*  
<sup>2</sup>*SePRO Corporation, Whitakers, NC*
- 2:10 pm **Refining Chemical Control of Floating Heart (Student Presentation)**  
**Justin J. Nawrocki**, Steve T. Hoyle, and Rob J. Richardson  
*North Carolina State University, Raleigh, NC*
- 2:30 pm **Flumioxazin Alone and in Combination with Endothall, Glyphosate, Imazamox and Bispyribac-sodium for the Control of Giant Salvinia**  
**Dearl E. Sanders**  
*Louisiana State University AgCenter, Clinton, LA*

- 2:50 pm     **Refreshment Break** (*Navarro Ballroom - Section A*)
- 3:20 pm     **An Initial Test into the Selectivity of Eight Herbicides for Management of Hydrilla in the Presence of Eight Co-occurring Native Plant Species** (*Student Presentation*)  
**Bradley T. Sartain** and John D. Madsen  
*Mississippi State University, Mississippi State, MS*
- 3:40 pm     **Metabolic Profiles of Monoecious Hydrilla Treated with Penoxsulam and Endothall** (*Student Presentation*)  
**Sarah T. Meadows**, Rob J. Richardson, and Jim Burton  
*North Carolina State University, Raleigh, NC*
- 4:00 pm     **Response of Non-target Emergent Plants to Low Doses of Imazamox and Penoxsulam Plus Contact Herbicides**  
**Christopher R. Mudge**<sup>1</sup> and Michael D. Netherland<sup>2</sup>  
<sup>1</sup>*U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS*  
<sup>2</sup>*U.S. Army Corps of Engineers, Engineer Research and Development Center, Gainesville, FL*
- 4:20 pm     **APMS Annual Business Meeting**
- 5:00 pm     **Adjourn**

**Poster Session**

6:00 pm - 7:30 pm

*Navarro Ballroom - Section B*

**Grass Carp Feeding Preference and Control of *Egeria densa***

**Claudinei Cruz**<sup>1</sup>, Adilson F. Silva<sup>2</sup>, Silvio C. Santos<sup>3</sup>, and Robinson A. Pitelli<sup>4</sup>

<sup>1</sup>*FEB Barretos, Barretos, Brazil*

<sup>2</sup>*Unesp Jaboticabal, Jaboticabal, Brazil*

<sup>3</sup>*AES Tiete, Promissao, Brazil*

<sup>4</sup>*Ecosafe Ltda, Jaboticabal, Brazil*

**Imazamox Toxicity to Non-target Organisms and Its Efficacy on the Control of Submerged Aquatic Weeds**

**Claudinei Cruz**<sup>1</sup>, Adilson F. Silva<sup>2</sup>, and Robinson A. Pitelli<sup>3</sup>

<sup>1</sup>*FEB Barretos, Barretos, Brazil*

<sup>2</sup>*Unesp Jaboticabal, Jaboticabal, Brazil*

<sup>3</sup>*Ecosafe Ltda, Jaboticabal, Brazil*

**Developing a Risk Assessment Tool for Identifying Potential Aquatic Invasive Plants in Texas** (*Student Presentation*)

**Elizabeth A. Edgerton**<sup>1</sup>, Michael Masser<sup>1</sup>, Lucas Gregory<sup>2</sup>, William Grant<sup>1</sup>, and Allen Knutson<sup>3</sup>

<sup>1</sup>*Texas A&M University, College Station, TX*

<sup>2</sup>*Texas Water Resources Institute, College Station, TX*

<sup>3</sup>*Texas A&M AgriLife Extension Service, College Station, TX*

**Characterization, and Evaluation of Biotechnological Potential of Waterhyacinth (*Eichhornia crassipes*)** (*Student Presentation*)

**Hector A. Fileto-Perez**<sup>1</sup>, Mark D. Sytsma<sup>2</sup>, Jose G. Rutiaga-Quiñones<sup>3</sup>, Jesus B. Paez-Lerma<sup>1</sup>, Javier Lopez-Miranda<sup>1</sup>, and Olga M. Rutiaga-Quiñones<sup>1</sup>

<sup>1</sup>*Durango Institute of Technology, Durango, Mexico*

<sup>2</sup>*Portland State University, Portland, OR*

<sup>3</sup>*Universidad Michoacana de San Nicolas de Hidalgo, Morelia, Mexico*

**Modeling the Potential Geographic Distribution of *Hydrilla verticillata* in North America and Beyond** (*Student Presentation*)

**Brett M. Hartis** and Rob J. Richardson

*North Carolina State University, Raleigh, NC*

**Increasing the Selectivity of Contact Herbicides on Hydrilla: Sensitivity Tests with American Lotus**

**John D. Madsen**<sup>1</sup>, Gray Turnage<sup>1</sup>, and Ryan M. Wersal<sup>2</sup>

<sup>1</sup>Mississippi State University, Mississippi State, MS

<sup>2</sup>Applied Biochemists, Alpharetta, GA

**Grass Carp Feeding Preferences for Two Novel Invasive Aquatic Plants**

**Michael Masser**<sup>1</sup>, Dan Roelke<sup>1</sup>, Michael T. Neisch<sup>2</sup>

<sup>1</sup>Texas A&M University, College Station, TX

<sup>2</sup>Texas A&M AgriLife Extension Service, College Station, TX

**Effects of *Eichhornia azurea* and *Pistia stratiotes* Biomass Soil Incorporation on Chemical Properties of a Degraded Soil**

**Antonio Nader Neto**<sup>1</sup>, Monicke O. Vieira<sup>2</sup>, Alfredo F. Yamauchi<sup>1</sup>, Robinson A. Pitelli<sup>3</sup>, and Robinson L. Pitelli<sup>3</sup>

<sup>1</sup>Unesp Jaboticabal, Jaboticabal, Brazil

<sup>2</sup>Light Energia SA, Pira, RJ, Brazil

<sup>3</sup>Ecosafe Ltda, Jaboticabal, Brazil

**Herbicide Exposure from the Perspective of Submersed Aquatic Plants**

**Michael D. Netherland**<sup>1</sup> and Leif Willey<sup>2</sup>

<sup>1</sup>U.S. Army Corps of Engineers, Engineer Research and Development Center, Gainesville, FL

<sup>2</sup>University of Florida, Center for Aquatic and Invasive Plants, Gainesville, FL

**Evaluation of Aquatic Macrophyte Community with Emphasis on *Hydrilla verticillata* in Porto Primavera Reservoir, Brazil**

**Robinson L. Pitelli**<sup>1</sup>, Robinson A. Pitelli<sup>1</sup>, Carlos J. Rodrigues<sup>2</sup>, and Joao H. Dias<sup>2</sup>

<sup>1</sup>Ecosafe Ltda, Jaboticabal, Brazil

<sup>2</sup>Sao Paulo Energy Company, Ilha Solteira, Brazil

**Response of *Urochloa subquadripara* and *U. mutica* Accesses to Herbicide Doses under Greenhouse Conditions**

**Robinson L. Pitelli**<sup>1</sup> and Dagoberto Martins<sup>2</sup>

<sup>1</sup>Ecosafe Ltda, Jaboticabal, Brazil

<sup>2</sup>Unesp Botucatu, Botucatu, Brazil

**The Use of Algaecides in Adaptive Water Resource Management**

**John H. Rodgers, Jr.** and Alyssa Calomeni

Clemson University, Clemson, SC

**Floating Aquatic Weed Control Using Imazapyr**

**Adilson F. Silva**<sup>1</sup>, Claudinei Cruz<sup>2</sup>, Natalia S. Shiohiri<sup>1</sup>, Robinson A. Pitelli<sup>3</sup>, and Robinson L. Pitelli<sup>3</sup>

<sup>1</sup>Unesp Jaboticabal, Jaboticabal, Brazil

<sup>2</sup>FEB Barretos, Barretos, Brazil

<sup>3</sup>Ecosafe Ltda, Jaboticabal, Brazil

**Phenology of Curlyleaf Pondweed (*Potamogeton crispus*) in the Southeastern U.S.**

**Gray Turnage** and John D. Madsen

Mississippi State University, Mississippi State, MS

**Evaluation of Nutrients Leaching during Decomposition of Aquatic Weeds: Lysimeters Studies**

**Monicke O. Vieira**<sup>1</sup>, Robinson L. Pitelli<sup>2</sup>, Alfredo F. Yamauchi<sup>3</sup>, Antonio Nader Neto<sup>3</sup>, and Robinson A. Pitelli<sup>2</sup>

<sup>1</sup>Light Energia SA, Pira, RJ, Brazil

<sup>2</sup>Ecosafe Ltda, Jaboticabal, Brazil

<sup>3</sup>Unesp Jaboticabal, Jaboticabal, Brazil

**Comparative Phyto-uptake Across Distribution Coefficients of Pharmaceutical Compounds and Aquatic Macrophytes: Carbamazepine and Amiodarone Uptake in *Lemna* spp. (Student Presentation)**

**Kristy Woodard**

University of North Texas, Denton, TX

Tuesday, July 16

## Tuesday's Agenda-at-a-Glance

6:30 am	-	8:00 am	APMS Regional Chapters Presidents' Breakfast ( <i>El Rincon de Maria - Lobby Level</i> )
7:00 am	-	8:00 am	Continental Breakfast ( <i>Navarro Ballroom - Section A</i> )
7:00 am	-	5:00 pm	Exhibits Open ( <i>Navarro Ballroom - Section A</i> )
7:00 am	-	5:00 pm	Posters Open ( <i>Navarro Ballroom - Section A</i> )
7:30 am	-	5:00 pm	Registration ( <i>Navarro Pre-function</i> )
8:00 am	-	12:10 pm	Session III ( <i>Navarro Ballroom - Section B</i> )
10:00 am	-	10:30 am	Refreshment Break ( <i>Navarro Ballroom - Section A</i> )
10:15 am	-	11:00 am	TAPMS Annual Business Meeting ( <i>La Babia</i> )
12:10 pm	-	1:40 pm	Lunch on your own
12:10 pm	-	1:40 pm	APMS Past Presidents' Luncheon ( <i>El Rincon de Maria - Lobby Level</i> )
1:40 pm	-	5:10 pm	Session IV ( <i>Navarro Ballroom - Section A</i> )
2:50 pm	-	3:20 pm	Refreshment Break ( <i>Navarro Ballroom - Section A</i> )
6:00 pm	-	6:30 pm	Reception ( <i>Hidalgo</i> )
6:30 pm	-	11:00 pm	Awards Banquet ( <i>Hidalgo</i> )

### Session III – General Session and Student Presentations

8:00 am - 12:10 pm

*Navarro Ballroom - Section B*

**Moderator: Dr. John Madsen** - APMS Board of Directors

*Mississippi State University, Mississippi State, MS*

- 8:00 am      **Investigation of Darwin's Naturalization Hypothesis in Invaded Macrophyte Communities**  
**Jonathan P. Fleming**<sup>1</sup>, Eric D. Dibble<sup>2</sup>, John D. Madsen<sup>2</sup>, and Ryan M. Wersal<sup>3</sup>  
<sup>1</sup>*University of North Alabama, Florence, AL*  
<sup>2</sup>*Mississippi State University, Mississippi State, MS*  
<sup>3</sup>*Applied Biochemists, Alpharetta, GA*
- 8:20 am      **Detection and Assessment of Harmful Algae in Georgia Waterbodies Using GIS and Proximal Remote Sensing Techniques** (*Student Presentation*)  
**Bradley Bartelme**, Susan Wilde, Deepak Mishra, Rebecca S. Haynie, and Jamie Morgan  
*University of Georgia, Athens, GA*
- 8:40 am      **The Full Monty: How Simultaneously Assessing Both Plant Species Occurrence and Abundance using Standard Methodology is Critical for Good Lake Ecosystem Management**  
**Ray D. Valley**  
*Contour Innovations, LLC, Minneapolis, MN*
- 9:00 am      **Incorporating Hydroacoustic Data Collection with Traditional Assessment Technologies to Evaluate Long-term Response of Submersed Vegetation to Management**  
**Dean Jones**<sup>1</sup>, Ray D. Valley<sup>2</sup>, and Michael D. Netherland<sup>3</sup>  
<sup>1</sup>*University of Florida, Lake Alfred, FL*  
<sup>2</sup>*Contour Innovations, LLC, Minneapolis, MN*  
<sup>3</sup>*U.S. Army Corps of Engineers, Engineer Research and Development Center, Gainesville, FL*
- 9:20 am      **Using Research Driven Criteria for Development of a Long Term Aquatic Plant Management Plan: Revitalization after 15 Years of Management on Lake Gaston** (*Student Presentation*)  
**Brett M. Hartis**, Rob J. Richardson, Steve T. Hoyle, and Justin J. Nawrocki  
*North Carolina State University, Raleigh, NC*
- 9:40 am      **A Novel Flow-through Exposure System for Testing the Efficacy of Aquatic Herbicides in Irrigation Canals and Laterals**  
**Lauren Courter**<sup>1</sup> and Craig Gyselinck<sup>2</sup>  
<sup>1</sup>*Mount Hood Environmental, Portland, OR*  
<sup>2</sup>*Quincy-Columbia Irrigation District, Quincy, WA*



- 10:00 am     **Refreshment Break** (*Navarro Ballroom - Section A*)
- 10:15 am     **TAPMS Annual Business Meeting – Concurrent with General Session III** (*La Babia*)
- 10:30 am     **Pre-emergent Control of *Equisetum hyemale* (Scouringrush) in De-watered Irrigation Canals with Galleon™ (a.i. penoxsulam)**  
**Andrew Z. Skibo**<sup>1</sup>, Jill Schroeder<sup>2</sup>, and Mark A. Heilman<sup>3</sup>  
<sup>1</sup>*SePRO Corporation, Fort Collins, CO*  
<sup>2</sup>*New Mexico State University, Las Cruces, NM*  
<sup>3</sup>*SePRO Corporation, Carmel, IN*
- 10:50 am     **Selectivity and Efficacy of Tradewind Aquatic Herbicide**  
**Joe Chamberlin**  
*Valent USA Corporation, Snellville, GA*
- 11:10 am     **Management Options for *Prymnesium parvum***  
**John H. Rodgers, Jr.**  
*Clemson University, Clemson, SC*
- 11:30 am     **Rolling Down the River: Public Perceptions and Attitudes towards Invasive Species and Invasive Species Management in the San Marcos River**  
**Florence M. Oxley**  
*Texas State University, San Marcos, TX*
- 11:50 am     **Confessions of an Applicator: How Our Industry Was Helped by NPDES and How We Continue to Grow**  
**Brett W. Bultemeier**  
*Clarke Aquatic Services, Alachua, FL*
- 12:10 pm     **Lunch on your own**

**Session IV – Texas Aquatic Plant Management Society Session**

1:40 pm - 5:10 pm

*Navarro Ballroom - Section B*

**Moderator: Mr. Matt Ward** – TAPMS President Elect

*Total Lake Management, Bryan, TX*

- 1:40 pm     **Snake Recognition, Preservation, and Safety for the Aquatic Specialist**  
**Clint Pustejovsky**  
*Texas Snakes, Houston, TX*
- 2:30 pm     **Interplay between Ambient Surface Water Mixing and Manipulated Hydraulic Flushing: Implications for Harmful Algal Bloom Mitigation**  
Veronica M. Lundgren<sup>1</sup>, **Daniel L. Roelke**<sup>1</sup>, James P. Grover<sup>2</sup>, Bryan W. Brooks<sup>3</sup>, Krista N. Prosser<sup>3</sup>, W. Casan Scott<sup>3</sup>, Coridon A. Laws<sup>2</sup>, George D. Umphres<sup>1</sup>  
<sup>1</sup>*Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX*  
<sup>2</sup>*Department of Biology and Program in Earth and Environmental Sciences, University of Texas at Arlington, Arlington, TX*  
<sup>3</sup>*Department of Environmental Science, Center for Reservoir and Aquatic Systems Research, Baylor University, Waco, TX*
- 2:50 pm     **Refreshment Break** (*Navarro Ballroom - Section A*)
- 3:20 pm     **Aquatic Vegetation Management in Texas: An Update**  
**Earl W. Chilton**  
*Texas Parks and Wildlife Department, Austin, TX*

- 3:40 pm     **Assessment of *Arundo donax* control on Lady Bird Lake in Austin, TX**  
**Aaron Richter** and Mary P. Gilroy  
*City of Austin, Austin, TX*
- 4:00 pm     **Aquatic Plant Identification and Management: Importance and Perceptions of Educational Outreach through the Texas A&M Agrilife Extension Service**  
**Todd D. Sink**  
*Texas A&M Agrilife Extension Service, College Station, TX*
- 4:20 pm     **AERF Update – “You are going to like this one.”**  
**Carlton Layne**  
*Aquatic Ecosystem Restoration Foundation, Marietta, GA*
- 4:45 pm     **Laws and Regulations “I am so happy I could…”**  
**Carlton Layne**  
*Aquatic Ecosystem Restoration Foundation, Marietta, GA*
- 5:10 pm     **Adjourn**

**Wednesday, July 17**

**Wednesday’s Agenda-at-a-Glance**

- 7:00 am - 8:00 am   Continental Breakfast (*Navarro Ballroom - Section A*)  
7:00 am - 10:30 am   Exhibits Open (*Navarro Ballroom - Section A*)  
7:00 am - 10:30 am   Posters Open (*Navarro Ballroom - Section A*)  
7:30 am - 12:00 pm   Registration (*Navarro Pre-function*)  
8:00 am - 12:00 pm   Session V (*Navarro Ballroom - Section B*)  
10:00 am - 10:30 am   Refreshment Break (*Navarro Ballroom - Section A*)  
10:30 am - 12:00 pm   Poster and Exhibit Breakdown (*Navarro Ballroom - Section A*)  
12:30 pm - 5:00 pm   APMS Board of Directors Meeting (*Camino Real*)

**Session V – General Presentations and Special Session on Herbicide Resistance Management in Aquatics**

8:00 am - 12:00 pm  
*Navarro Ballroom - Section B*

**Moderator: Dr. Cody Gray**, APMS Vice President  
*United Phosphorous, Incorporated, Colorado Springs, CO*

- 8:00 am     **Lake Restoration Using Aeration and Alum: A Florida Case Study**  
**Josette M. La Hee**  
*Vertex Water Features, Pompano Beach, FL*
- 8:20 am     **Interactivity of Phosphorus and Copper in Algae Management**  
**West M. Bishop** and Ben E. Willis  
*SePRO Corporation, Whitakers, NC*
- 8:40 am     **Herbicide Applications to Dried Ponds: Will it Prevent the Growth of Submersed Vegetation in Arkansas Baitfish Culture Ponds?**  
**George Selden**  
*University of Arkansas at Pine Bluff, Jonesboro, AR*

**Special Session on Herbicide Resistance Management in Aquatics**

- 9:00 am     **Session Introduction**  
**Michael D. Netherland**  
*U.S. Army Corps of Engineers, Engineer Research and Development Center, Gainesville, FL*

- 9:05 am **Perspectives from Industry and the Working Relationship with WSSA**  
**Cody J. Gray**  
*United Phosphorous, Incorporated, Colorado Springs, CO*
- 9:15 am **Perspectives from a Public Management Agency**  
**Jeffrey D. Schardt**  
*FL Fish and Wildlife Conservation Commission, Tallahassee, FL*
- 9:25 am **Perspectives from Academia**  
**Rob J. Richardson**  
*North Carolina State University, Raleigh, NC*
- 9:35 am **Perspectives from a Private Applicator**  
**David Isaacs**  
*Aquatic Control, Seymour, IN*
- 9:45 am **Open Discussion on Herbicide Resistance Management**
- 10:05 am **Refreshment Break** (*Navarro Ballroom - Section A*)
- 10:35 am **Fate of Copper from Herbicide and Algaecide Applications: Myths and Data**  
**John H. Rodgers, Jr.**  
*Clemson University, Clemson, SC*
- 10:55 am **Optimizing the Use of Clipper Aquatic Herbicide**  
**Bo J. Burns<sup>1</sup>, Joe Chamberlin<sup>2</sup>, and Jason Fausey<sup>3</sup>**  
<sup>1</sup>*Valent USA Corporation, Raleigh, NC*  
<sup>2</sup>*Valent USA Corporation, Snellville, GA*  
<sup>3</sup>*Valent USA Corporation, Fremont, OH*
- 11:15 am **APMS Regional Chapters: An Update on Key Initiatives within Each Region**  
**Dr. Cody Gray, Moderator**  
*United Phosphorous, Incorporated, Colorado Springs, CO*
- Western  
Texas  
South Carolina  
Northeast  
Midwest  
MidSouth  
Florida
- 11:45 am **Highlights from the 53<sup>rd</sup> Annual Meeting and Thoughts on the Direct and Indirect Impacts of a Wave of Imminent Retirements**  
**Michael D. Netherland**  
*U.S. Army Corps of Engineers, Engineer Research and Development Center, Gainesville, FL*
- 12:00 pm **Adjourn 53<sup>rd</sup> Annual Meeting**

## 2013 APMS Officer and Director Nominees

The following nominees have been selected by the Nominating Committee to serve on the APMS Board of Directors. Active members of the Society will vote for new Officers and Directors during the Annual Business Meeting to be held on Monday, July 15, 2013, 4:30 p.m. in San Antonio, TX.

### **Vice President – Rob Richardson**

Dr. Rob Richardson is an Associate Professor in the Department of Crop Science at North Carolina State University with primary responsibility in aquatic plant management. Rob's research strives to develop integrated and sustainable weed management programs for reservoirs, lakes, ponds, other bodies of water, and non-cropland in North Carolina and the surrounding region. He has previously served as the President of the South Carolina Aquatic Plant Management Society and the North Carolina Vegetation Management Association. Rob is an active member of numerous professional societies including several regional APMS chapters and currently serves as the editor of the *Journal of Aquatic Plant Management*. He received his Ph.D. in Weed Science from Virginia Tech in 2002 and started at NCSU in 2005.

### **Editor – Jay Ferrell**

Jason Ferrell is an Associate Professor in the Agronomy Department at the University of Florida. Dr. Ferrell's program consists of developing weed management programs for agronomic crops, pastures and industrial sites. Since joining the university in 2004 with a 65% extension and 35% research appointment, Dr. Ferrell has conducted over 200 county extension meetings, written over 200 articles for extension newsletters, EDIS, and trade magazines, published 60 refereed scientific articles, and mentored 11 graduate students. He currently serves as associate editor for *Weed Technology Journal* (2009-present) and *Journal of Aquatic Plant Management* (2010-present). Dr. Ferrell has also been honored with the Dallas Townsend Extension Enhancement Award, Outstanding Specialist Award, Researcher of the Year by the Florida Cattleman's Association, and Outstanding Weed Scientist by the Florida Weed Science Society.

### **Secretary – Jeff Schardt**

Jeffrey Schardt graduated with a BS degree in Biology from Penn State University in 1976 and has since worked for the Invasive Plant Management Sections of the Florida Department of Environmental Protection and Fish and Wildlife Conservation Commission. During his 37-year tenure, he conducted five years of grass carp research, initiated Florida's aquatic plant control permitting program and annual plant inventories in public waters covering 1.25 million acres. Mr. Schardt developed funding and control priority systems as well as monitoring, compliance, and reporting programs as administrator of the invasive aquatic plant management program conducted in Florida's 460 public lakes and rivers. Mr. Schardt works in collaboration with the University of Florida and Florida science teachers to develop and produce outreach materials and classroom curricula related to invasive aquatic plants and their management. He served as a Director (1995-1997) and as President (2000) of FAPMS, and on the APMS Board from 2000-2013, as Director, President (2006), and APMS Secretary from 2009-2013. Schardt was also nominated by APMS and served six years on the Invasive Species Advisory Committee that provides input to federal agencies at the Cabinet level.

## 2013 APMS Officer and Director Nominees continued...

### **Director – Rebecca Haynie**

Rebecca “Becca” Haynie is an ecotoxicologist whose work has centered around assessing ecological effects of harmful algal blooms and nuisance aquatic species on fish and wildlife. She received a BS in Fisheries and Wildlife Biology with a minor in Environmental Policy from Clemson University in 2004 and a PhD in Environmental Toxicology in 2008. Since 2008, Becca has served as a post-doctoral associate and assisted Dr. Susan Wilde in establishing the Nuisance Aquatic Species and Algae Laboratory at the University of Georgia. During this time, she designed and conducted several fish and wildlife field and laboratory toxicity trials aimed at optimizing management plans for systems affected by invasive aquatic vegetation and/or harmful algae. Becca has been active in both the South Carolina Aquatic Plant Management Society and the national Aquatic Plant Management Society since she began graduate school in 2004. She has served as Student Affairs Chair since 2010 and has worked hard to actively engage students by encouraging participation in society events such as the post meeting student tour. Becca currently resides in Carlton, Georgia with her husband, Rhett, her son, Wilder, and way too many animals.

### **Director – Vernon Vandiver**

Vernon V. Vandiver, Jr. is a native of South Florida; his home town is Ochopee, Florida, which was a tomato-farming community on the Tamiami Trail in the Everglades in southern Collier County. He was born in Miami, Florida on 11 February 1944. Vernon grew up in Ochopee and graduated from Everglades High School, Everglades, Florida. He graduated from the University of Florida, Gainesville, Florida in 1965 with a B.S. in Education and from North Carolina State University, Raleigh, North Carolina with a Ph.D. in Botany in 1975.

In November 1975 Vernon was employed by the University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS) as the first full-time Extension Aquatic Weeds Specialist in the U.S. He was stationed at the UF/IFAS Fort Lauderdale Agricultural Research Center, Fort Lauderdale, Florida. His responsibilities included: Extension and research programs on chemical and integrated control methods for aquatic and selected terrestrial weeds; dissemination of research and other information on aquatic weeds and on recommended control methods; maintaining liaison with agencies and organizations having responsibility for managing water and aquatic sites to keep abreast of their needs for information on aquatic weeds and to provide such information when feasible. His teaching activities included teaching the Weed Science and Pesticide Application courses at the Fort Lauderdale Research and Education Center in the Environmental Horticulture and Urban Entomology curricula which were required courses in those respective programs which led to Bachelor of Science degrees from the University of Florida. Vernon retired from the University of Florida in May 2002 and currently serves as Professor Emeritus, Agronomy Department, University of Florida, Institute of Food and Agricultural Sciences. Vernon is also a Colonel, United States Air Force, Retired, with over 31 years of service, retiring 1 May 1997. Vernon also continues private weed science work in such areas as herbicide product development, herbicide research, and weed management assessment. During his career Vernon has been a member of the Aquatic Plant Management Society (APMS). The Florida Aquatic Plant Management Society (FAPMS), the South Florida Aquatic Plant Management Society (SFAPMS), the Florida Weed Science Society, the Weed Science Society of America, and the Southern Weed Science Society. Vernon is an Honorary Lifetime member of the FAPMS, an Honorary Lifetime member of the SFAPMS, and received the Max C. McCowen Friendship Honor from the APMS. He has served as President both of the FAPMS and the SFAPMS.

## WSSA Scientists Stress the Importance of Early Response to Invasive Weeds

Over the past decade, dozens of “early detection, rapid response” initiatives have been launched by states to keep invasive species from devastating natural habitats and damaging our economy. Many of these programs use mobile apps and online databases to revolutionize how we collect data on harmful invaders – making it easier to map infestations and to share information broadly.

But scientists with the Weed Science Society of America (WSSA) say one part of the equation is missing: We often fail to take prompt, effective action based on what we learn, [despite the advantages of early intervention](#). Studies show that small, newly established invasive weed populations can expand at rates of up to 60 percent per year. As the size of the infestation increases, the cost of control soars while the probability of successful management plummets.

“Early detection creates opportunities for us to make smart decisions and eradicate new invasive weeds before they spread widely and become entrenched,” says John Jachetta, Ph.D., chair of the Indiana Invasive Species Council and a member of the WSSA Science Policy Committee. “In those early stages, control efforts are typically easier, more successful and far more cost effective.”

Unfortunately there are many examples of a known infestation unfolding without early intervention. One of those involves common crupina (*Crupina vulgaris*), a noxious weed in the sunflower family that can ruin valuable pastures and prairies.

A native of Europe, common crupina was first discovered in the U.S. in Idaho in 1969. But there were no concerted efforts to destroy that small initial infestation. A decade later, the weed covered many thousands of acres and had earned a Federal Noxious Weed designation. Only then did research get underway to explore the possibility of eradicating the plant.

It took years, though, to complete a study, and years more to convene a task force to review the study results. By then common crupina had spread well beyond Idaho into other neighboring states – making true eradication a very costly, time consuming and unlikely proposition.

There are also examples, though, of a more effective approach. Some states and municipalities have launched action-oriented “early detection, rapid response” programs that are producing impressive results.

In California, early detection and early response prevented a potential environmental disaster triggered by “killer algae” (*Caulerpa taxifolia*). A native of Europe, killer algae is a prolific producer of a chemical that is toxic to fish and other organisms. It also is easily spread since small pieces of the plant can break free and grow into new colonies. Once the algae is well established, eradication is almost impossible.

In 2000, a small infestation of killer algae was discovered in a lagoon in San Diego County. Soon after, a second infestation was discovered in a nearby harbor in Orange County. Knowing the potential damage killer algae represented to fishing and recreation, multiple agencies at the local, state and federal level sprang into action and coordinated a response.

Black plastic tarps and chlorine were used to kill the algae at both sites. In addition, recreational divers were trained to spot the weed and to sound an early alarm if there were new outbreaks. As a result, what could have become a very costly problem appears to have been quickly and successfully resolved.

“We’ve long understood the value of an early response to diseases impacting human health,” Jachetta said. “It’s time to bring that same sense of urgency to our natural environment and to take prompt, effective action to stop harmful invasive weeds.”

## WSSA Scientists Stress the Importance of Early Response to Invasive Weeds— continued

### Early Detection, Ready Response: Seven Critical Steps

An effective program for “early detection, rapid response” will incorporate these seven important steps.

1. **Identify.** Both scientists and lay people are taught to identify problem plants.
2. **Report.** Online tools make it easy to submit information on a sighting.
3. **Verify.** Scientists validate reports of suspected invasive species.
4. **Review.** Data is used to keep tabs on the geography of an infestation – where the invasive weed has been spotted and how quickly it is spreading.
5. **Assess.** Experts evaluate the risk of the infestation to natural ecosystems, crops and the economy.
6. **Establish a plan.** An integrated plan is developed for managing the infestation.
7. **Rapidly respond.** The plan is quickly implemented and there is ongoing monitoring to gauge the effectiveness of control efforts.

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## Washington Report - April 2013

### Congress Approves Final FY 2013 Spending Bill

The federal government ran on a continuing resolution for the first six months of FY 2013 as Congress punted any spending decisions into the new year well after last year’s elections. On March 21, the House of Representatives voted to adopt the Senate amended spending plan, [H.R. 933](#), to fund the federal government through the remainder of the fiscal year to Sept. 30, 2013.

Depending on how you look at the numbers, most USDA research, education and extension programs took a 7.8 percent cut compared to their FY 2012 appropriations. This includes Hatch Act, Smith Lever Act, the IR-4 program, the Sustainable Ag Research and Education program and the Regional IPM Centers. The Senate did pick a few programs to get more money than they did in FY 2012 which included the Agriculture and Food Research Initiative (AFRI) that will get \$275 million in FY 2013, compared to \$264 million it received in FY 2012. There were also some programs like the Specialty Crop Research Initiative (SCRI) and the Organic Agriculture and Extension Initiative (OREI) that did not get any funding for FY 2013 because Congress did not pass a new Farm Bill, nor did they extend funding for those programs in the FY 2013 final spending bill.

One provision in the FY 2013 Consolidated and Further Continuing Appropriations Act, 2013, ([H.R. 933](#)), that has generated some controversy is the “Farmer Assurance Provision” under Sec. 735, which stems from past litigation over procedural issues unrelated to sound science or the safety of biotech crops such as RR sugar beets. Basically, the provision says that if a farmer plants a crop that was legal to plant at planting, the Secretary of Agriculture will ensure that the farmer gets to harvest it, even if some lawsuit is upheld in a court. This provision has been supported by many different trade associations over the past couple of years, including the Biotech Industry Organization and the American Seed Trade Association. The trade groups contend that environmental activists and judges have “inappropriately” interfered with already-approved products that are being planted, and that the provision “provides certainty” to farmers, even if a court ruled against the USDA’s approval of the product. This provision will expire on Sept. 30, 2013. In the meantime, Secretary Vilsack has asked USDA’s Office of General Counsel to review the farmer assurance provision “as it appears to pre-empt judicial review of a deregulatory action which may make the provision unenforceable.”

## Washington Report - Continued

### **New Ag Appropriations Committee Chairman**

With the new Congress, comes new chairman of both the House and Senate Agriculture Appropriations Subcommittees. On the House side, Rep. Bob Aderholt from Alabama's 4<sup>th</sup> Congressional District will take over as chair from Jack Kingston of Georgia. Rep. Aderholt will be serving in his 9<sup>th</sup> term from northern Alabama and served as chair of Homeland Security Approps in the 112<sup>th</sup> Congress. Prior to his election to Congress, Aderholt served as an aide to Governor Fob James and as a Municipal Judge in Haleyville, Alabama. Educated through Alabama's public school system, Aderholt went on to graduate from Birmingham Southern College and from the Cumberland School of Law at Samford University.

On the Senate side, Sen. Herb Kohl from Wisconsin has retired from Congress after 24 years in office. Senator Mark Pryor from Arkansas will take over as the new chair of the Senate Ag Approps Subcommittee, with Sen. Roy Blunt from Missouri serving as the ranking member. Pryor grew up in both Arkansas and the Washington D.C. area. He received a B.A. in History and his law degree from the University of Arkansas and worked in private legal practice for over ten years. Pryor was first elected to public office in 1990 as a member of the Arkansas State House of Representatives. In 1998 he was elected Arkansas' Attorney General. He was first elected to the U.S. Senate in 2002 and was re-elected in 2008, where he received more votes than any statewide elected official in Arkansas history.

### **Vilsack Stays, but EPA and Interior Will Get New Leaders**

USDA Secretary of Agriculture Tom Vilsack will remain Secretary of Agriculture during the second term of the Obama Administration. There was speculation that the former Iowa governor would run for the U.S. Senate seat in Iowa being vacated by the Sen. Tom Harkin in 2014.

At EPA, Administrator Lisa P. Jackson announced she was leaving about a month after it was revealed she was using an alias email account to conduct official business. Jackson used a private email under the alias "Richard Windsor" to correspond with EPA colleagues, a decision her staff defended by saying that her official email account received too many messages for her to use it efficiently. Jackson spearheaded efforts to begin regulating greenhouse gas emissions, including setting new standards to clean up mercury and other toxic emissions from coal power plants, and established new fuel economy standards for motor vehicles. Many of those initiatives occurred under Gina McCarthy, the agency's assistant administrator for air and radiation, who was nominated in February to take over the EPA reign's from Jackson.

McCarthy has worked for Democrats and Republicans alike in state governments. However, her role as the point person in developing rules limiting emissions from industrial sources like power plants and boilers is likely to make her a proxy during the confirmation process for the administration's broader efforts to address climate change.

Secretary of the Interior, Ken Salazar also announced he will be leaving the administration this spring. In his place, President Obama nominated Sally Jewell, head of the outdoor recreation equipment cooperative REI. The nomination of Jewell, a high-profile business executive with strong support among conservation groups, marks a departure from the recent tradition of naming Western political figures to lead the Department of Interior, which manages millions of acres of public land. Jewell is president and CEO of Recreational Equipment Inc., a retailer with \$2 billion in annual sales based in Kent, Washington. She spent 19 years in the commercial banking industry before joining REI, the nation's largest consumer cooperative, with more than 100 stores.



## Washington Report - Continued

### **EPA Excludes *Arundo donax* and *Pennisetum purpureum* From Biofuel Rule**

For the past year, EPA had been working to finalize a federal rule which would allow fuel made from two known noxious weeds, *Arundo donax* (giant reed) and *Pennisetum purpureum* (napier grass or elephant grass), to count toward federally-mandated renewable fuels targets. The National and Regional Weed Science Societies are opposed the rule and have been working with other stakeholder groups to prevent parts of the rule from becoming law.

Much to our relief, EPA announced on February 22 that it EXCLUDED *Arundo donax* and *Pennisetum purpureum* from its final rule. Other parts of the rule were approved, which included the use of camelina and energy cane as eligible biofuel feedstocks under the Renewable Fuel Program.

EPA said they would continue to consider determinations on biofuels produced from *Arundo donax* and *Pennisetum purpureum* and make a final decision at a later time. The final rule is at: <http://www.epa.gov/otaq/fuels/renewablefuels/documents/new-fuel-pathways-under-rfs-fr.pdf>

EPA definitely made the right decision at this time, but I have no doubt that they will continue to look at *Arundo* and *Pennisetum* going forward. In our meetings with EPA, we have stressed that if EPA approves *Arundo donax* and similarly high risk feedstocks, we believe that the a federal rule must include – at the very minimum— guidelines or a permit process that requires stringent best management practices to reduce the risk of escape. These guidelines should be written with the guidance of the National Invasive Species Council and relevant federal agencies.

### **Barney Briefs Congress on Invasive Weeds and Biofuel Crops**

On March 7 during National Invasive Species Awareness Week (NISAW), Dr. Jacob Barney from Virginia Tech presented his latest research to congressional and agency staff on Capitol Hill in a briefing titled “Invasive Weeds and Bioenergy Crops: Economic Boon or Environmental Disaster?” Barney discussed the economic benefits and environmental risks associated with using fast-growing, low-input invasive perennial grasses as biofuel feedstocks. The briefing was very well attended and sponsored by the WSSA and the National Coalition for Food and Agricultural Research (NC-FAR).

### **NPDES Bill Reintroduced in 113th Congress**

The National and Regional Weed Science Societies were among the 90 plus public and private stakeholder groups that supported the introduction of the “Reducing Regulatory Burdens Act of 2013”, [H.R. 935](#), in the 113<sup>th</sup> Congress. The legislation clarifies Congressional intent that Clean Water Act permits are NOT required for the lawful application of FIFRA-approved pesticides. In 2009, the 6<sup>th</sup> Circuit Court of Appeals screwed up and double regulated pesticide applications in, over, or near water. This legislation has had over 2/3’s majority support by the House and Senate in the last session of Congress, but unfortunately the Senate leadership would not allow to it come to floor for a vote.

### **Federal Court Says NOAA Must Use “Sound Science” for Endangered Species Rules**

The U.S. 4th District Court of Appeals out of Richmond, Virginia threw the book at NOAA’s National Marine Fisheries Service (NMFS) for not using sound science in their decisions on endangered species protections. Quite frankly, NMFS has had a terrible activist driven track record. Basically, the court ruled that NMFS lied in its 2008 biological opinion claiming twenty-seven species of salmon were jeopardized by agricultural practices, when they were not. And that significant data and standards used in the biological opinions were not logical or even rational.

## Washington Report - Continued

The Chair and Ranking Member of the House Ag Committee have a great summary of the court case, as well as background information, that you find here:

<http://agriculture.house.gov/press-release/hastings-lucas-peterson-praise-federal-court-ruling-noaa%E2%80%99s-salmon-opinion>

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## 2013 Sustaining Members

Alligare, LLC  
Applied Aquatic Management  
Applied Biochemists  
Aquatic Control, Inc.  
Aquatic Systems, Inc.  
Brewer International  
Clarke Aquatic Services, Inc.  
Crop Production Services  
Cygnet Enterprises  
SePRO Corporation  
Syngenta Professional Products  
United Phosphorus, Inc.  
Valent Professional Products

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## The APMS Blog has moved to the newly redesigned APMS website.

The APMS Blog aggregates aquatic plant management news items from around the country to help better inform the membership on current APM issues at a regional and nationwide scale.

The e-mail address for contributing news to the APMS blog is [apmsblog@gmail.com](mailto:apmsblog@gmail.com)

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## The Aquatic Plant Management Society on LinkedIn

The APMS group has a discussion board, jobs board, and membership list and is open to all individuals interested in aquatic plant management issues. So long as the discussions remain polite, all membership and postings will be open. Search for the Aquatic Plant Management Society group under the Groups Directory in LinkedIn. <http://www.linkedin.com>

## Scholastic Endowment - Silent Auction Fund Raiser

Please consider donating an item to this year's Scholastic Endowment Silent Auction which will take place at our annual meeting in San Antonio. The Silent Auction has successfully raised funds providing much needed financial support for student scholarships, presentations and poster awards. All donors confirming with John will be recognized on both meeting sponsorship signs at the Silent Auction tables and in a program listing.

Thank you for your support.  
John Gardner, Scholastic Endowment Chair  
Phone: (800) 432-4302  
E-mail: [john@vertexwaterfeatures.com](mailto:john@vertexwaterfeatures.com)

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## WSSA Pesticide Stewardship Series

WSSA has released the Pesticide Stewardship Series. Click on the topic of interest for more information.

1. [Safety begins at the point of sale](#)
  2. [The pesticide buyer has important responsibilities](#)
  3. [Hiring a pest management professional](#)
  4. [The importance of reading the pesticide label](#)
  5. [Restricted use pesticides require an extra level of care](#)
  6. [Certification program fulfills an essential need for competent pesticide applicators](#)
  7. [Always be diligent concerning personal protective equipment](#) **NEW!**
  8. [Employers Play a Central Role in Protecting Agricultural Workers and Pesticide Handlers](#) **NEW!**
  9. [Preparation and Oversight are Vital When Storing a Pesticide](#) **NEW!**
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## APMS Promotional Information Available

The APMS has two tabletop displays and posters, suitable for presentation at conferences and stakeholder meetings. Also available are tri-fold membership brochures and an eight-page color booklet with additional information about the APMS programs and initiatives. You may borrow the display for your next conference and obtain copies of the brochure and booklet by contacting one of the following:

Jeff Schardt: (850) 617-9420 or [jeff.schardt@myfwc.com](mailto:jeff.schardt@myfwc.com)

Terry Goldsby: (256) 582-9101 or [terryg@aquaservicesinc.com](mailto:terryg@aquaservicesinc.com)

## San Antonio Meeting Basket Raffle Grand Prize Announcement

Custom Rifle on a Winchester Model 70 Classic Action  
Built for APMS by Weaver Rifles of Peyton, Colorado



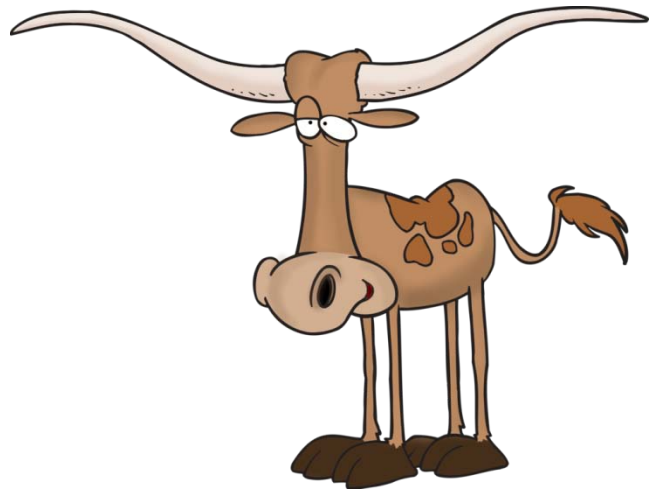
Grand Prize Sponsored by United Phosphorus, Aqua Services and Valent USA

- 300 Winchester Short Magnum
- McMillan Edge Stock
- Benchmark #3 6 groove fluted barrel finished at 23"
- Custom rings and bases
- Nikon Monarch 3 3-12x42 BDC scope
- Two 2" brass APMS Logo Medallions
- Length of Pull = 13.5"
- Custom PTG bottom metal
- Custom ceramic coating highlights

Have a great chance of winning this magnificent rifle for just a \$5.00 ticket! But you have to be there to win there so come on down to San Antonio this July and attend the annual meeting and maybe walk away a winner!

All Basket Raffle proceeds go toward the APMS Scholastic Endowment Fund supporting graduate student scholarships and research. For further information contact:

John Gardner, Scholastic Endowment Chair  
Phone: (800) 432-4302  
E-mail: [john@vertexwaterfeatures.com](mailto:john@vertexwaterfeatures.com)



## **Schumer Launches Plan for First-Ever Rapid Response Grant Program to Combat Aquatic Invasive Species Before They Spread—Unwelcome Plants & Animals are Wreaking Havoc on Upstate Waterways, Recreation, Boating & Tourism**

***No Rapid Response Framework Exists to Eradicate Invasive Species in Upstate Waterways, Allowing Them to Take Root And Cause Millions In Damage – Schumer Plan Would Allow Locals To Apply for Grants from the Dept. of the Interior Upon Discovery Of Threat***

***Hydrilla, Eurasian Milfoil, Asian Clam & Dozens of Others Have Stranglehold on Many Upstate NY Waterways, Putting Countless Other Rivers and Lakes at Risk***

***Schumer: Over 1,940 Businesses & 15,200 Jobs In Upstate Tourism, Shipping, Fishing and Related Industries Could Be Impacted***

Today, on a conference call with reporters, U.S. Senator Charles E. Schumer launched a plan to create the first-ever early detection and rapid response (EDRR) grant program to quickly combat aquatic invasive species once they reach new waterways. Such plants and animals as Eurasian milfoil, Asian clam and Hydrilla have already caused serious damage in Upstate New York waterways, and continue to threaten the shipping, fishing and recreation industries in the region if they spread. Specifically, Schumer revealed his new legislation would create a national response framework to allow states and local authorities to petition the Department of the Interior (DOI) for grants as soon as they identify a threat from invasive species, which would mobilize federal, local and state resources to help detect new invasive species early and to respond to and contain them rapidly, through efforts like spreading pesticides in localized areas.

“Currently, there are only rapid response resources for agricultural invasive species, not those that attack waterways, and we need to change that ASAP,” said Schumer. “For countless Upstate communities, rivers, lakes and waterways are the very lifeblood of the regional economy and central to their way of life: more must be done to respond to the myriad invasive species threats they now face.”

There are already extremely destructive invasive species in the Great Lakes, Finger Lakes, the Adirondacks and our rivers, but Schumer noted that many waterways are thus far uninhabited. For example, in the Adirondacks two-thirds of our waterways are still free of invasives. However, Schumer warned how quickly that can change, with the recent discovery of Hydrilla in the Erie Canal and in the Cayuga Lake inlet that can also threaten the Great Lakes. According to the Anderson Economic Group’s 2012 study called “The Costs of Aquatic Invasive Species to Great Lake States,” New York has 11,770 tourist sites along the Great Lakes Watershed, with an annual economic impact of over \$2.8 billion. In addition, Schumer noted that communities on the Great Lakes are home to over 15,200 jobs and over 1,900 businesses in tourism, shipping and commercial fishing industries. Schumer noted that early detection and rapid response (EDRR) efforts increase the likelihood that invasions will be halted and eradicated. Once a species becomes widely established, full eradication is more difficult and costly.

Schumer continued, “Tourism, recreation, commercial fishing and boating are integral to our Upstate New York businesses and keep tens of thousands of locals on the job, but invasive species are a growing threat that could choke off that resource. When it comes to protecting our industries that depend on clear waterways from these invasive species, the watchword is preparedness. That’s why I’m pushing legislation that would create a first-ever rapid response framework that would get federal resources to states as soon as these unwelcome plants and animals are identified, and before they get out of control. We should attack

## Rapid Response Grant Program - Continued

these species when they are easily and cheaply eradicated, and well before they have a significant impact on the economy.”

Under Schumer’s plan, states could petition the Department of Interior which is a co-chair of the National Invasive Species Council for a grant and technical assistance as soon as they identify a threat from invasive species. Currently, there are no federal resources for rapid response to aquatic invasive species. Schumer’s bill would create a national response framework to mobilize resources from multiple agencies who would work with local counterparts to quickly combat the threat of aquatic invasive species. Because these species are not constrained by state lines and can spread rapidly, the need for a cooperative, multi-agency approach at the national level is clear. If a waterway is found eligible, resources could be made available within months rather than years.

*Early Detection* can be achieved by "active detection networks" comprised of individuals that have a specific job responsibility to find invasive species. They typically focus on species of concern, high-risk pathways, and locations. *Rapid Response* efforts contain, and where possible, eradicate invasive populations. Because response efforts are localized, they are often led by state and local governments. Federal funding is made available to respond to invasive species that harm agriculture or agricultural lands, and Schumer’s plan would create this federal rapid response resource for waterways.

On the call, Schumer provided a county by county report of the number of businesses and jobs in the shipping, boating and water-related tourism industry that could be damaged if more focus isn’t given to aquatic invasive species. Schumer also broke down the counties in which the most damaging aquatic invasive species already exist. For example, in Erie County in Western New York—where Hydrilla, the Asian Clam, and the Zebra Mussel threaten local ecosystems—485 businesses employ over 5,000 people in jobs tied to fishing, shipping, and tourism. In Monroe County in the Rochester-Finger Lakes, where the Zebra and Quagga Mussel are intruding, 377 businesses employ over 2,600 people in the same industries. Overall, close to 7,000 jobs in Western New York, over 3,100 jobs in the Finger Lakes, over 1,400 jobs in the North County and over 1,100 jobs in Central New York depend on water-related industries threatened by these invasive species.

According to the Anderson Economic Groups study, there are already serious costs to sport and commercial fishing, tourism and recreation industries as a result of existing aquatic invasive species, which would only grow if these aren’t contained. For example, commercial fishers must purchase insurance and herbicide, must hire new workers to perform control and maintenance operations and have increased energy costs. Fishers also see decreases in productivity and demand, because of marina closures due to unnavigable waters, sport fishing draws a smaller crowd, and there is decreased fish stock. The tourism and recreation industry has already been negatively impacted due to costs for removing algae from beaches, purchasing herbicide and removing plants and other species from boats and docks, and a reduced demand and decreased productivity because fewer visitors come to scenery and water ruined by aquatic invasives. Land and property value is also decreased when invasive species are present.

Schumer’s legislation is focused only on early detection and containment, and is one piece of his larger effort to combat invasive species in Upstate New York. For those water bodies that are already fighting invasive species, like Chautauqua Lake with Eurasian milfoil, Schumer will continue to fight to help eradicate existing inhabitations. In that particular instance, Schumer supported Chautauqua County officials in their pursuit of over \$120,000 and urged the U.S. Army Corps of Engineers (USACE) to collaborate closely with



## Rapid Response Grant Program - Continued

Chautauqua County officials as they map out the most productive and effective use of project funding in their continued effort to fight against the Eurasian milfoil that has infested Chautauqua Lake.

Schumer highlighted Lake George in Warren County, as an example of a water body that would benefit greatly from this early detection rapid response grant program, even given that it is currently inhabited by invasive species and has eradicated others. According to the *Lake George Aquatic Invasive Species Prevention Plan*, put out for public review in May 2013, the following are some examples of invasives that remain a threat for introduction or reintroduction to Lake George:

- Quagga mussel, current location Mohawk River and Great Lakes, could be transported through hull fouling, ballast, bait buckets
- Hydrilla, current location in Cayuga Inlet & Erie Canal, could be transported through trailered boats
- European Frog-bit, current location Lake Champlain and Champlain Canal, could be transported through trailered boats or dumped.

Both animal and plant aquatic invasive species can cause serious damage to upstate watersheds. Hydrilla, for example, is a fast-growing aquatic weed that can reach up to the water surface. It seriously disrupts both recreational and commercial boating, as well as swimming and fishing. In 2011, Hydrilla was discovered in the Cayuga Lake inlet, where local authorities including the City of Ithaca spent over \$100,000 trying to eradicate the infestation before it could spread to the entire lake or to other parts of the Finger Lakes. Thus far, Hydrilla has not spread beyond the Cayuga Inlet, but the efforts are ongoing and will require significant funding for years and years to come. While locals are doing an excellent job combatting Hydrilla, it took an extended period of time for the City of Ithaca to access that funding, and an EDRR grant program could have mobilized resources more quickly. The Zebra Mussel, which can now be found prominently in the Finger Lakes and throughout New York, can damage harbors, waterways, ships, boats, water treatment plants and power facilities. By clinging to underwater pipes, the Zebra Mussel clogs intake pipes and forces water treatment plants and power plants to pay a steep cost for maintenance and repair.

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## Protecting the Great Lakes

The future of the Great Lakes, their management, and their usage were among key topics in a forum held recently at MSU's Institute for Public Policy and Social Research. The forum focused on the key question of how we should manage these huge bodies of fresh water in order to guarantee their availability for future generations. This is happening while the Obama Administration is asking for \$300 million for the Great Lakes Restoration Initiative. Jennifer Read is Deputy Director of the University of Michigan Water Center and Jon Allan is Director of the Michigan Office of the Great Lakes. Both were in attendance at the forum, and they give us an overview of what was discussed. You can listen to the full interview [here](#).



## Calendar of Events

- Jul 13-17 [Aquatic Plant Management Society](#); San Antonio, TX
- Aug 4-9 [Ecological Society of America](#); Minneapolis, MN
- Sept 10-12 [Great Lakes Restoration Conference](#); Milwaukee, WI
- Sept 16-18 [MidSouth Aquatic Plant Management Society](#); Tunica, MS
- Oct 2-5 [California Invasive Plant Council Symposium](#); Lake Arrowhead, CA
- Oct 14-17 [Florida Aquatic Plant Management Society](#); St. Augustine, FL
- Oct 16-18 [South Carolina Aquatic Plant Management Society](#); Myrtle Beach, SC
- Oct 28-31 [North American Invasive Species Management Association](#); Jackson Hole, WY
- Oct 30-Nov 1 [North American Lake Management Society](#); San Diego, CA

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## Proposed By-Laws Change to be Voted on at the 2013 Annual Meeting

At the February 19, 2013 Winter Board Meeting, the APMS Board of Directors unanimously approved a motion to amend Article XI, Section C of the APMS Bylaws as follows:

Section C. ~~With the exception of the Student Director, no member shall be eligible for office who has not been a voting member of the Society for the immediate past three (3) consecutive years.~~ No member shall be eligible for office who is not a current member in good standing, including Student Directors. Preference for Officers will be given to those members who have been voting members of the Society and/or members who have served the Society for the immediate past three (3) consecutive years.

In accordance with the Bylaws, this serves as advance notification to the general membership that the amendment as stated above (deletions designated by strike-through / additions underlined) will be voted upon at the annual business meeting to be held during the Conference in San Antonio, TX July 14 – 17, 2013 (See final meeting agenda for date and time).

Respectfully submitted,

Jim Schmidt

Chair, APMS Bylaws & Resolutions Committee



## In Memory of John Gallagher

John Gallagher passed away on April 2, 2013 at the age of 95. John was a native of New York City and joined the U.S. Navy in 1939. He reached the rank of Chief Petty Officer, Chief Fire Controlman prior to completing his service in 1945. After his time in the military, John attended college where he received a BS in Agronomy in 1954 from Pennsylvania State University.

Following college, John took his first job in the herbicide industry as a weed control specialist with Amchem Products. While he worked on various projects in turf, horticultural, and agronomic crops, John was an expert in aquatics. During his time with Amchem, John worked on large scale milfoil control programs with the TVA. In 1977, when Amchem was purchased by Union Carbide, John continued to work in aquatics, including a program to register fenac for hydrilla control.

During his career in weed science, John served as President of the Northeast Weed Science Society in 1968 and President of the Southern Weed Science Society in 1982. In addition to these roles, he served on the Aquatic Plant Management Society Board of Directors from 1965-1966, and served on several committees. For his participation in these societies, John was awarded the Southern Weed Science Society Distinguished Service Award, was named a fellow of the Weed Science Society of America, Honorary Membership for the APMS, and was awarded the APMS Max McCowen Friendship Award.

Upon his retirement, he enjoyed traveling with his wife, gardening, and even became a Wake County Master Gardener with the North Carolina Cooperative Extension Service. John had many close friends in the aquatics industry, and will be missed by all who knew him.

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## ***Mission***

**The Aquatic Plant Management Society (APMS) strives to promote environmental stewardship through scientific innovation and development of technology related to integrated plant management in aquatic and riparian systems.**

**We're on the Web!**

<http://apms.org/>