Midsouth Aquatic Plant Management Society Newsletter

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Message From The President

Thank goodness football season is here! The beginning of football games typically signifies the end of the growing season and hopefully we can all take a deep breath and utter the same cliché that we always do, "This year sure did fly by". My hope is that everyone had a safe and successful year and I was glad to see so many familiar faces at the joint meeting of the MSAPMS and APMS in July. The 33rd annual meetings was held in Savannah, GA, and if you have never been there I certainly encourage you to make plans to visit. Special thanks go out to everyone within the MSAPMS and APMS that put forth time and effort to make the annual meeting a successful and memorable one.

It's hard to imagine that after next year's meeting when we look at the list of Board of Directors for the MSAPMS, we will not see the names Sherry Whitaker and Ryan Wersal on that list. For as long as I can remember, Sherry has always been a leader for our Society. It seems she always has an answer to every question and a solution to every problem and always with a smile upon her face. And where would we be without Ryan? His particular expertise with websites and editorial skills has been invaluable to the Society. At the past meeting, President-Elect Alex Perret and I attended the President's luncheon. During the luncheon there was a group discussion on problems each Society had encountered over the years with their websites. When it came time for the MidSouth to put our two-cents in, we had no examples to give. Then one of the regional presidents quickly said, "Oh yeah, you've got Ryan Wersal handling your website". Ryan and Sherry's abilities are known nationwide and we will not know how much we will truly miss them until they are off the board. But don't worry, they aren't going very far!

If you haven't already, please take time to read the new CAST commentary paper titled "Benefits of Controlling Nuisance Aquatic Plants and Algae in the United States". This was developed by some of the top minds in our industry and explains the detrimental effects that nuisance aquatic plants and algae can have on our waterways. In this ever changing world of aquatic plant management, we must never make the mistake of letting our guard down or miss an opportunity to educate all stakeholders.

For those that weren't able to attend the past meeting, I strongly encourage you to make plans to attend to 34th annual meeting. Between battling giant salvinia and water hyacinth, Alex Perret is preparing what is sure to be a great conference, which should be back to our usual time slot of September. Thank you for allowing me the honor of serving as your President and I hope everyone stays safe.

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MidSouth Aquatic Plant Management Society 2014 Awards and Recognitions



Tom Broadwell recognized as an Honorary Member



Sherry Whitaker recognized for her service as President of MSAPMS



Gerald Adrian recognized for his service on the Board of Directors



Craig Aguillard received the President's Award



Gray Turnage recognized for his service on the Board of Directors



Alex Perret recognized for his service on the Board of Directors

Farewell from the Editor



I remember (barely) sometime ago when I was a graduate student working my Ph.D. at Mississippi State. I was two years into my program while working full time for John Madsen when John approached me and asked if I wanted to be the editor for the MidSouth Aquatic Plant Management Society. My first question was "well what does it entail" after which he responded casually "you just have to compile and send out the newsletter for the Society" So I gave it some thought, not that I needed anything more on plate at the moment, but agreed to take on the role of editor. That was in 2007.

It was a little intimidating at first being newly elected to the Board of Directors, but soon I found that there is some truth behind the phrase "Southern Hospitality". The other members welcomed me in and I soon was tasked to be the chair of the new Website Committee; I will learn to keep my mouth closed from now on.

Over the last eight years the newsletter has evolved from just a simple means to convey Society information, to a revenue generating e-publication. The Board of Directors has put into place an advertising policy and I encourage all who want to advertise in "your" newsletter to do so. I say "your" newsletter as it belongs to the members of the Society and I challenge all to make it the best regional chapter newsletter out there by sending articles, updates, new weed finds, weed facts, etc. The newsletter will only be as good as the support it receives from the membership.

The membership of the MidSouth is unique among the other chapters, as I see it more as a family than distinct groups of competing parts. We all recognize that there are issues plaguing our industry and more and more arise each year, but this Society roles up its' sleeves and digs in to get the work done regardless of our affiliation. So in looking back over my tenure as Editor I have a sense of pride in what we have accomplished and recognize that there will be more to do. With that I thank the MidSouth Aquatic Plant Management Society for allowing me to serve as its Editor since 2007.

As I pass on the duties of Editor to Dr. Jonathan Fleming I look forward to the new ideas and energy he will bring to the position and to the Board of Directors. So from here forward please send inquiries, articles, advertisements, etc. to Jonathan at jpfleming@una.edu.



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Benefits of Controlling Nuisance Aquatic Plants and Algae in the United States

Invasive plants and algae have become major threats to rivers, lakes, wetlands, and riparian ecosystems.

- Once established in their new environment, they easily spread within and between water bodies, infest nearby watersheds, and disrupt the ecological status quo.
- Thousands of acres across the country are being degraded at an annual cost of tens of millions of dollars.
- Every watershed in the United States is at some level of risk.

Aquatic plants can harbor disease-causing organisms that adversely affect human health.

- Aquatic plants have entangled swimmers and caused or contributed to drowning.
- Toxin-producing cyanobacteria are a serious and emerging issue for freshwater resource managers.
- Approximately 50 species of cyanobacteria produce freshwater toxins that are harmful to vertebrates, including humans.

In the United States, invading alien species (plants and animals) cause major ecological damages and economic losses estimated at almost \$120 billion per year.

- A major portion of commercial freight moves by water. and nuisance aquatic plants can interfere with movement of those goods.
- Direct impacts of nuisance aquatic plants to hydropower production include clogging turbines and penstocks, which increases costs of electricity to consumers.
- Lakes and reservoirs support a myriad of waterassociated recreation.



Nuisance plants and algae have the ability to negatively impact aquatic communities and habitat in primarily four ways:

- Structurally changing habitat through fast growth rates, greatly increasing populations and biomass.
- Dominating the capture of energy from sunlight [outcompeting valuable native plants].
- Stabilizing and limiting water exchange processes [impairing water quality].
- Producing large amounts of dead plant material [which can degrade dissolved oxygen levels].

The detrimental effects of weeds on human water uses can be ameliorated and in some instances eliminated through [proactive and prudent] management.

- Drinking water supplies, water-based recreational activities, agricultural irrigation systems, and industrial water intakes depend on consistent and effective aquatic plant management programs.
- The most widespread management technique involves the use of environmentally compatible chemical herbicides [but other nonchemical techniques can help suppress plant growth].
- It should be noted that rapid-response approaches to eliminate pioneer infestations are becoming more accepted and that there are a few instances of active "eradication" programs.
- People must make the protection and conservation of [freshwater resources] a top priority for the future.

Experts to Contact for More Information:

Kurt Getsinger (Kurt.D.Getsinger@usace.army.mil); Eric Dibble (edibble@cfr.msstate.edu); John Rodgers (irodger@clemson.edu); David Spencer (dfspencer@ucdavis.edu)

To view the complete text of this CAST Commentary, click here or visit the CAST website (www.cast-science.org) and click on Publications. For more information about CAST, visit the website or contact Linda Chimenti, Executive Vice President, at 515-292-2125 ext 231.

Herbicide Resistance Stewardship in Aquatic Plant Management

The Aquatic Plant Management Society (APMS) working in cooperation with the Weed Science Society of America (WSSA) has developed the following module addressing herbicide resistance in aquatic plant management venues. The clarification document compares and contrasts aquatic plant control with crop management and addresses how the types of aquatic plants, settings in which they are controlled, and the relatively few available control options, influence herbicide resistance management strategies. Resistance management measures that applicators routinely implement into aquatic plant control programs are reviewed along with conditions in aquatic venues that challenge incorporating stewardship actions that are successful in production crop settings. PowerPoint Lessons summarize key points in the document and case examples further illustrate the complexities in managing aquatic plants with herbicides.

http://apms.org/resources/resistance-management/



The Use of Flumioxazin for Urban Pond Vegetation Control

Alex Perret

Louisiana Department of Wildlife and Fisheries

Waters available and accessible to the public for recreation and fishing are often unavailable in big cities and urban areas. For this reason, those ponds and lakes that are available can experience increased use during the summer months. At Joe Brown Park in New Orleans, LA, summer camps rely on the lagoon system in the park for fishing and canoeing. In June 2014, park personnel reached out to the Louisiana Department of Wildlife and Fisheries (LDWF) for help with the excessive vegetation growing in the lagoons. Upon investigation, LDWF biologists discovered that the pond was almost 100% covered with coontail (*Ceratophyllum demersum*) and duckweed (*Lemna spp.*). Since the lagoons were utilized on a daily basis, it was necessary to choose control methods that would work quickly and have few water use restrictions. After much discussion, it was decided that this would be a good opportunity to use the contact herbicide flumioxazin as a subsurface treatment.

The Joe Brown Park lagoons are comprised of approximately 6.5 acres of surface water. There are two main lagoons that are connected by a narrow canal that passes under a bridge. In order to prevent fish kills, it was

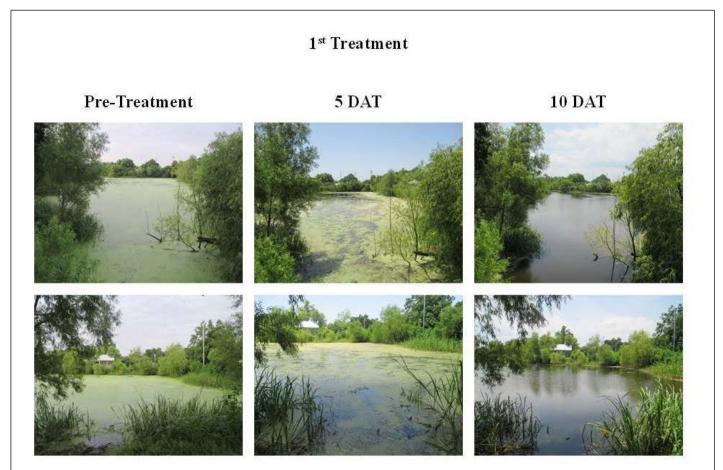


Figure 1. Pre-treatment, 5 days after treatment (DAT), and 10 DAT results of a 250 ppb subsurface Clipper application in the first area treated at Joe Brown Park in New Orleans, LA.

decided to treat each area separately, with a three week delay between applications. A floating plant control boom was placed in the canal to prevent duckweed from moving between treated and untreated areas. The target concentration for each application was 250 ppb, and both herbicide applications were performed early in the morning when the pH was at or below 7 to maximize contact time and increase efficacy. Flumioxazin was tank mixed at 5 pounds per 100 gallons of water and injected throughout the lagoon via a high pressure spray system.

Both applications were highly efficacious in the first few days post treatment. Most duckweed was necrotic within a couple of days after treatment (DAT), and coontail lost buoyancy and became necrotic within 5 DAT. At 10 DAT, the majority of the plant material was eliminated and only a small quantity of decaying duckweed was visible on the water surface (Figure 1). At 14 DAT, very little plant material was observed and it was estimated that the efforts resulted in at least a 95% reduction of the duckweed and coontail (Figure 2). The subsurface Clipper application was ideal for this situation. The applications required less than 3 hours to complete and were concluded by mid-morning each day. With no recreational use restrictions following the application, the ponds were never off limits to the summer camps, and positive results were visible within 5 days. At 14 DAT, each section was almost completely cleared of the nuisance vegetation, and canoeing and other aquatic recreation resumed unabated. Based on these data, flumioxazin was a useful tool to obtain quick control of nuisance aquatic weeds in small lakes or ponds while having little impact on recreational activity.

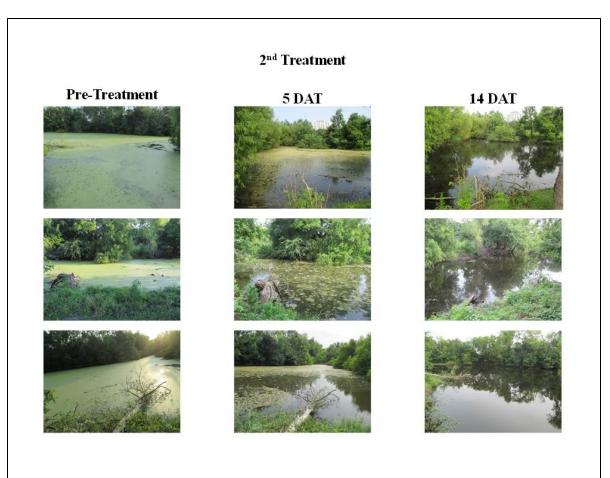


Figure 2. Pre-treatment, 5 days after treatment (DAT), and 14 DAT results of a 250 ppb subsurface Clipper application in the second area treated at Joe Brown Park in New Orleans, LA.

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Too Many Weeds Spoil the Fishing

Exotic invasive aquatic plants such as Hydrilla, Eurasian Watermilfoil, Curlyleaf Pondweed, Water Chestnut and Water Hyacinth can be detrimental to a healthy fishery in lakes across the country. These invasive plants when left unmanaged can alter the ecosystem of lakes and reservoirs, causing a decline in the fishery, as well as interfering with other valued uses of waterbodies.

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Calendar of Events

Texas Aquatic Plant Management Society Meeting Oct 12-14 Hamilton, TX

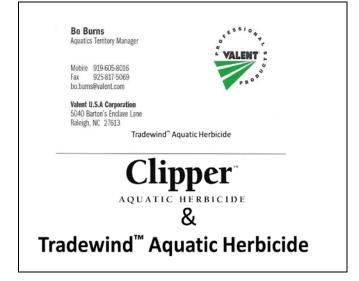
Florida Aquatic Plant Management Society Meeting Oct 13-16 Daytona Beach, FL

South Carolina Aquatic Plant Management Society Meeting Oct 23-25 Myrtle Beach, SC



Northeast Aquatic Plant Management Society Meeting Jan 20-22 Saratoga Springs, NY

Weed Science Society of America Meeting Feb 9 – 12 Lexington, KY



January newsletter deadline, December 15, 2014. Send information to jpfleming@una.edu