



## **A Message from your AERF President Jim Schmidt**

2016 marks the Aquatic Ecosystem Restoration Foundation's 20<sup>th</sup> anniversary. Thanks to the consistent support from all of our sponsors and the leadership from our Board of Directors, we are proud of all that has been accomplished. While our primary focus remains on research, we continue to support worthwhile projects and events relating to education and outreach relating to aquatic plant management.

Since our last Newsletter, your Board of Directors have met following the Mar. MAPMS meeting in Grand Rapids, MI; the May FL Aquatic Short Course in Coral Springs, FL; and following the APMS meeting last month. This included a Strategic Planning session at the March meeting. In reviewing our current and future directions, several key current and future concerns, objectives and activities were identified, as follows:

- ◆ The Endangered Species Act as it pertains to aquatic pesticide use remains a challenge to pesticide use in general including aquatic plant management activities. We have already initiated research efforts to change the restrictive perspective on this from pesticides being a "threat" to endangered species (ES) to thinking in terms of our management efforts improving ES habitat by controlling invasive species. As a first step, the AERF has funded Dr. Lauren Pintor, OH State Univ. and a graduate student to conduct a literature search and analysis of existing papers relating to this subject. Furthermore, we have engaged the guidance of Dr. Bernalyn McGaughey, a toxicologist with Compliance Services and Chair of the FIFRA Endangered Species Task Force to further assist in these efforts. Both will be attending our AERF Board meeting following the July APMS annual conference in Grand Rapids.
- ◆ The Waters of the U.S. (WIOTUS) ruling extending Federal control over waterways, watersheds, wetlands, etc. with the intent of placing them under the Clean Water Act jurisdiction continues as a challenged and litigated issue by States, organizations and private entities. While the AERF as a non-profit 401(3)(c) organization cannot be involved from a lobbying or legal standpoint, we will continue to monitor and inform our constituents on pertinent related actions. Carlton Layne continues to keep us abreast of latest developments, now in the hands of the Federal courts.

The AERF Board identified the need for the AERF to fund research quantifying the economic impact of aquatic invasive species, nuisance vegetation and toxic algae on water use as justification for increasing private, State and Federal funding targeted for initiating viable management options. While some regional published studies and local data have been collected on this subject, additional evaluations are needed in order to consolidate this information into useful articles, talking points and published literature for our constituents to take to decision-makers.

- ◆ Maintaining current sponsorships and increasing our number of donors in all Sponsor Categories continues to be an on-going initiative for the AERF. We have tabled some proposed research plus we have identified the need to set limits and conditions on on-going support activities due to a relatively flat income budget. Several actions were agreed to by the Board to further our fund-raising efforts. AERF is establishing a PayPal account to allow for online payment as well as collecting donations electronically onsite at our sponsored symposia and meetings Carlton attends as a participant. We will also be updating a "Benefits of Sponsorship" (by Category Level) brochure and webpage to encourage donors. Our 2017 Donation request letters ("invoices") will be sent out in late Sept. vs.



waiting until year-end or thereafter. This will allow donors to utilize their tax deduction within the current year, plus assist AERF in its budgeting process for the up-coming year. We have also improved our process for updating the Sponsor listing on the website by showing the year donations were made and purging those who are no longer current if not paid before the end of Sept.

This is just a short list of some of our more pertinent actions and activities. We have spent considerable time on internal organizational items (budgeting format, bylaws changes, ops manual, etc.) in order to focus on our goals and objectives. I want to thank all of our current sponsors for their support and encourage others to consider donating for 2017.

### **A Report from the Michigan Inland Lakes Convention Dr. John Rodgers, Clemson University**

AERF had an active role in the Michigan Inland Lakes Convention: Science and Leadership: A Formula for Successful Lake Protection and Management. Boyne Mountain Resort held at Boyne Falls, MI on April 28-30, 2016. AERF sponsored an invited session on Copper as Algaecides and Herbicides for lake managers, lakeshore homeowners, regulatory personnel, and other professionals and practitioners.

Invited by AERF, Dr. Bernalyn McGaughey from Compliance Services International and Dr. John Rodgers from Clemson University presented an afternoon seminar to a packed room of very interested attendees. Hosted by Carlton Layne, Executive Director of AERF, the session was divided into a discussion of the science supporting copper algaecide and herbicide labeling related to human health and the environment followed by a presentation on copper fate and effects post-treatment.

Dr. McGaughey presented information regarding human health and margins of safety afforded by copper-based algaecides and herbicides. She engaged the audience in responding to frequently asked questions regarding these materials.

Dr. Rodgers presentation was "Copper fate and effects: Use of copper formulations as algaecides and herbicides in aquatic systems." He explored the science basis for some of the priority concerns regarding use of copper-based algaecides and herbicides and their fate in lakes and effects on target and non-target species. Attendees shared some of their experiences and concerns to extend the discussion.

Feedback from the Michigan Inland Lakes Partnership as well as meeting attendees and post-conference email traffic indicated that this effort by AERF was well received and appreciated.

### **Support AERF by Shopping the Amazon Smile Program**

AmazonSmile is a website operated by Amazon that lets customers enjoy the same wide selection of products, low prices, and convenient shopping features as on Amazon.com. The difference is that when customers shop on AmazonSmile ([smile.amazon.com](https://smile.amazon.com)), the AmazonSmile Foundation will donate 0.5% of the price of eligible purchases to the charitable organizations selected by customers.

When you first visit the website, login to your usual amazon account, and select Aquatic Ecosystem Restoration Foundation from the list of registered charities. Then shop as normal. Your account, wish lists and shipping information are all there—it's a mirror of the regular Amazon site, with the same products and prices. The only difference is when you shop on smile.amazon.com, you are also supporting the AERF.

## **Legal Challenges to Waters of US Rule to Continue Into 2017**

**Jesse Harding**

The waters of the United States, or WOTUS, rule legal battle will be allowed to play out in the U.S. Court of Appeals for the Sixth Circuit in Cincinnati. This is after the U.S. Court of Appeals for the 11th Circuit in Atlanta ordered a stay of a legal challenge in that court Monday.

The Sixth Circuit previously ruled it had jurisdiction to hear numerous legal challenges to the rule. More than 30 states as well as many industries, including agriculture, believe the rule represents an unconstitutional expansion of U.S. Environmental Protection Agency jurisdiction.

The WOTUS rule was touted by the EPA as a means to clarify which areas around waterways the federal government has authority to either require a federal permit or stop any activity that would disturb the waterway. Opponents claim the rule would give the regulatory agencies broad authority over basic farming practices simply because water may pool somewhere after a rain or fill a ditch.

The court in Atlanta held oral arguments in July in an 11-state lawsuit challenging the rule. Georgia, Kentucky, Kansas, West Virginia, South Carolina, Alabama, Wisconsin, Utah, Indiana, North Carolina and Florida asked the court to overturn the Sixth Circuit on the question of jurisdiction.

The Sixth Circuit in Cincinnati stayed the WOTUS rule nationally in October 2015, pending its review. The Sixth Circuit already is moving forward with consolidating numerous cases into a single case, likely to play out in 2017.

In its ruling issued Monday, the 11th Circuit in Atlanta said it had no reason to continue to hear the 11-state lawsuit.

"If there were an exhibition hall for prudential restraint on the exercise of judicial authority, this case could be an exemplar in the duplicative litigation wing," the court said in its order.

"The case before us and the case before the Sixth Circuit involve the same parties on each side, the same jurisdictional and merits issues, and the same requested relief ... It would be a colossal waste of judicial resources for both this court and the Sixth Circuit to undertake to decide the same issues about the same rule presented by the same parties. And the Sixth Circuit is the obvious court to proceed to decision because it is significantly farther along the decisional path than we are."

Agricultural and other industry groups were unconvinced legal challenges to the rule should be heard by the Sixth Circuit. Judges in that court have indicated in previous rulings they may be sympathetic to those groups that claim the rule is a flawed federal overreach.

A February 2016 ruling by the court indicated a split among three justices about whether it was correct to use a pesticide sprayer case, *National Cotton Council v. EPA*, as a precedent for determining questions of jurisdiction. In the 2009 *National Cotton Council* case, the Sixth Circuit threw out an EPA rule that would have exempted pesticides sprayed on water from the Clean Water Act rules.

Instead, the decision led to states requiring farmers across the country to get permits to spray pesticides. There are 22 petitions for review involving more than 150 petitioners, according to court documents from the Sixth Circuit.

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## **Make your Donations and Sponsorship Payments Using PayPal**

We have established a PayPal account for donations and annual sponsorship payments, for those who prefer to pay by credit card. Carlton will also travel with a card reader, making him even more dangerous during those late night bar sessions.

Watch our website for the details which are coming soon.

## **At the Front of a Storm: What Emerging Federal Processes for Endangered Species Risk Assessment will mean to the Registration of Aquatic Herbicides**

**Bernalyn McGaughey, Compliance Services International**

Under the Endangered Species Act (ESA), every federal agency must determine the impact of its potential actions on species listed by that act. If a potential effect on a single individual within a listed species is deemed possible, either through direct or indirect effects, then the agency taking that action must consult with the Services to determine whether or not its action will have an adverse impact on, or present jeopardy to, the affected listed species at the population level. Under FIFRA, the EPA Office of Pesticide Programs (OPP) is taking the action to register or reregister a pesticide, and they therefore must consult with either the USDI Fish and Wildlife Services (FWS) or the USDC National Marine Fisheries Services (NMFS, or Services collectively) if their proposed action “may affect” an ESA-listed species. However, a fully operational consultation process under FIFRA/ESA has never been achieved, partly because the laws describe endpoints differently and because FIFRA, as a law, preceded ESA and is much more descriptive and somewhat more regimental about effects testing and consequential environmental risk assessment techniques than are methods used under ESA. And of course, there is also the complication of dealing with three different federal agencies and their internal processes and cultures. FIFRA was developed to address a national level registration; ESA was developed to address a site-specific event within an area where a listed species may occur. Thus, under FIFRA, the headquarters office is considered to hold the expertise to make registration decisions, but under ESA, the local office is considered the authority to recommend protective actions for species.

The intersection of FIFRA and ESA has long been the subject of procedural litigation based on EPA's failure to consult the Services, and OPP has gone through several iterations of attempted FIFRA/ESA compliance. This does not mean that programmatically species have gone unprotected; it means that the failures to procedurally meet the required process are subject to litigation, which in the early 2000's brought OPP's existing methods of species assessment and protection into question. Currently, OPP and the Services are operating under an “Interim Process” for dealing with FIFRA/ESA endangered species assessment, which grew out of recommendations put forth by the National Academy of Sciences in 2013. In the three years since that report's publication, OPP and the Services have worked together on three pilot Registration Review chemicals (chlorpyrifos, diazinon and malathion, all organophosphate insecticides) to apply a trial-and-error, develop-as-you-go “Interim Process” for endangered species assessment – a process that is intended to meet both FIFRA and ESA needs.

In April of this year, the first three draft biological evaluations of the pilot chemicals were docketed for public review, accompanied by over 12,000 pages of background records. This is an overwhelming amount of material to review within a 60-day comment period. However, upon general examination, it is clear that the logistics of dealing with about 1500 listed species and thousands of potential use sites have driven the agencies to attempt shortcuts in managing the process, largely by automation and modeling. In these shortcuts, broad assumptions, frequent absence of method validation, and some virtually impossible “worst case” settings drove the assessment outcome to the point that, in some cases, we see a 0.0000002% probability of a possible effect as a “may affect” for a given species.

While the Interim Process used for the three pilot chemicals is by the agencies admittedly flawed and subject to change, when aquatic herbicides come into view, we are likely to see a greatly impacted risk conclusion from OPP in the ESA biological evaluation process because:

- ◆ It is likely that an aquatic herbicide treatment will be considered a “wide ranging” use with no spatial definition in exposure modeling
- ◆ Exposure will be calculated from maximum label rates and minimum dilution and degradation estimates
- ◆ Toxicity endpoints will be from most sensitive species and lowest published values with little consideration of data relevance and reliability
- ◆ Best management and state or local permitting practices and the protection they bring will not be considered in the species assessment process
- ◆ Assumed use rates and frequencies, and area of a waterbody treated, will be assumed to be unrealistically high

With this awareness of potential methods and adverse outcome, it will be important to be proactive in dealing with the FIFRA/ESA conundrum. A proactive strategy will curtail lost uses and delayed new registrations and will be important to the regulatory success and sustainability of aquatic herbicide weed and algae management tools.

## **Properly Rinse Pesticide Containers**

**R.G. Bellinger, Extension Pesticide Safety Education Coordinator  
Clemson University**

Proper rinsing of empty pesticide containers is a requirement of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Properly rinsed pesticide containers are considered nonhazardous solid waste by the federal Resource Conservation and Recovery Act (RCRA), and by the South Carolina Department of Health and Environmental Control.

Properly rinsed pesticide containers save money and protect people and the environment, especially groundwater. Proper rinsing is required to recycle containers. Rinsing pesticide containers is important to accomplish the end goal of making containers a nonhazardous solid waste, and insuring that all of the pesticide, including that in the rinsate, is used on the target. Rinsate from containers should be added to the sprayer tank so it does not become hazardous waste.

The proper rinse procedure requires that you plan ahead!

- ◆ Read and follow label directions.
- ◆ Wear the required protective clothing and equipment.
- ◆ Rinse containers immediately after emptying because pesticides will dry or solidify quickly and become difficult to remove.
- ◆ Consider the volume of the rinsate when filling the sprayer tank. Leave enough room in the sprayer tank to accommodate the rinsate before filling the tank.
- ◆ Have back flow protection when filling the sprayer tank and rinsing the container.

You have two (2) acceptable ways to rinse empty pesticide containers:

1. Triple rinsing
2. Pressure rinsing (jet rinsing) using a device specifically manufactured to wash pesticide container interiors.

How to triple-rinse containers:

- ◆ Allow empty pesticide container to drain into the sprayer tank for 10 seconds after the flow begins to drip.
- ◆ Fill container  $\frac{1}{4}$  full of clean water or appropriate spray rinse diluent, usually water. Replace cap securely and roll, swirl and shake the contents vigorously for 10 seconds to rinse all surfaces!
- ◆ Remove container cap and empty rinsate into the spray tank. Allow the container to drain for 10 seconds after the flow begins to drip.
- ◆ Repeat the fill, shake and drain procedure two (2) more times, using clean water each time.
- ◆ Properly dispose of the rinsed containers as soon as possible. Dispose of caps with the containers unless recycling.
- ◆ Plastic and plastic lined bags can be triple rinsed. For paper and fiber bags and similar containers, completely empty the contents into the tank. Open both ends of the container to remove any remaining pesticide and to prevent reuse.

How to pressure-rinse containers:

- ◆ Drain the empty pesticide container into the sprayer tank for 10 seconds after the flow begins to drip.
- ◆ Hold the container upside down over the sprayer tank opening so that rinsate will run into the sprayer tank. For ease and safety, puncture through the bottom of metal containers and through the side of plastic containers with appropriate tool or pressure rinsing nozzle follow specific manufacturer directions.
- ◆ Thoroughly rinse the empty container for the time interval recommended by the pressure rinse nozzle for at least 30 seconds, using at least 40 psi water pressure, and drain for 10 seconds after the flow begins to drip
- ◆ Properly dispose of the rinsed containers as soon as possible. Dispose of caps with containers, unless recycling.



## Your AERF Sponsorship is key to:

- ▶ maintaining critical efforts in education and outreach
- ▶ expanding partnerships with regulatory agencies
- ▶ building partnerships
- ▶ supporting high quality research
- ▶ attracting graduate students
- ▶ expanding an already diverse membership
- ▶ being a source for resource management agencies

**To donate, join or renew your Sponsorship in the AERF please send the completed application form and payment to Treasurer, AERF, 1860 Bagwell Street, Flint, MI 48503-4406.**

Date: \_\_\_\_\_ Name: \_\_\_\_\_ Company: \_\_\_\_\_

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Check here if you are an applicator company, so we can include you on our applicator pages.

Check here if you would like to receive a free copy of the BMP with your membership.

**Please use the following as a guide in the selection of the desired level of Sponsorship:**

*Of course, you are welcome to join AERF at any level and additional donations are appreciated.*

- Gold** is recommended for manufacturers and registrants \$15,000
- Silver** and above is recommended for formulators \$5,000
- Bronze** and above is recommended for distributors \$2,500
- Affiliate** and above is recommended for consultant and application companies, equipment manufacturers/resellers and biological producers/resellers \$1,000
- Associate** and above is recommended for societies, federal and state agencies, aquatic resource management associations, applicators and consultants \$250
- Individual** and above is recommended for individual members \$50
- Student** and above is recommended for students \$0

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## Biology and Control of Aquatic Plants



A Best Management Practices Handbook: Third Edition

Lyn A. Gettys, William T. Haller and David G. Petty, editors

## Sponsorship

The AERF respectfully requests that you consider sponsorship. AERF will continue to work on your behalf, and as a member, you will greatly benefit from our work on regulatory and research aspects of aquatic plant management. With changes in the regulatory environment now and in the future, it is essential to be involved and to support all the hard work of your AERF associates.

Please contact Carlton Layne for information on how you can best participate.

## The AERF Mission

The Aquatic Ecosystem Restoration Foundation is committed to sustainable water resources through the science of aquatic ecosystem management in collaboration with industry, academia, government and other stakeholders.

## Strategic Goals

- Provide the public information concerning the benefits and value of conserving aquatic ecosystems including the aquatic use of herbicides and algaecides in the aquatic environment.
- Provide information and resources to assist regulatory agencies and other entities making decisions that impact aquatic plant management.
- Fund research in applied aquatic plant management at major universities.

## Upcoming Events

- Sep 12-14 MSAPMS, Baton Rouge, LA  
Oct 5-7 SCAPMS, Myrtle Beach, SC  
Oct 10-12 TAPMS, Tapatio Springs, TX  
Oct 17-20 FAPMS, Daytona, FL  
Nov 1-4 NALMS, Banff, Alberta

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## 2016 Officers

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