



## **Message from the President Clark Boyd**

The year 2020 has certainly been a strange and challenging year for all of us. When we think back and remember earlier this year that there is a virus in Europe that affected many people in Italy and Spain, then to hear those countries were locking down to try and slow or stop the spread of this virus, it all sounded like a strange and authoritarian act. At that time, we really did not know what to expect in the US and we were busy living our lives and doing our own jobs.

One of the key goals of our industry is to control noxious and invasive species. At the time this virus started to affect the US, many of these species were greening up in most parts of the country. Then the US decide to shelter in place, shutting down our economy to slow or stop the spread of this corona virus and the disease called Covid 19, followed by the classification in the U.S. of essential work and workers. This led to production plant closures, and shortages in the transportation area of our economy. We have seen product shortages of raw material and finished goods, limited shopping choices when we went to the grocery store, and depleted store shelves of all types of products. Aluminum can shortages appeared as suppliers increased the supply of canned beer and shorted other products that are typically supplied in aluminum cans. Inventory was out the window and it was obvious there was some hoarding of certain products going on by consumers.

How did this effect our industry? From a herbicide standpoint there were some delays in raw materials and spot shortages along the way. It was great to know that agriculture was considered an essential industry, and this meant aquatic weed control was part of the essential business to keep our nation moving forward. There is still limited travel which has led to cancelled society meetings across the US and the globe. The one good thing that has occurred is the use of online meetings where a number of folks can meet online at one time and discuss the issues at hand. I know there have been many of these to occur in 2020 and it appears it will be that way into 2021. I look forward to getting back to meeting in person and enjoying the company of others.

Consolidation continues within the aquatic industry. In 2020 we have seen acquisitions of suppliers and distributors as well. The market place is always changing, and will continue to do so. From a herbicide standpoint, when a company loses a product patent, typically the price declines, which is great for the end-user, but the industry in many cases will lose the manufacturer support due to less available dollars to spend on market support. What does that mean to the industry and to you? It means things that product support provided in the past will not be provided in the future. In many cases we have to decide to support our industry individually and not depend on the manufacturers as we have in the past. Even in a small way each person will have to help support the industry and the groups that support the industry or, as we have seen, the naysayers will collectively use emotional outcries to inform their neighbors or friends on how bad an issue is in their opinion. Unfortunately, many times these are emotion based and not based upon sound science.

Legislative challenges continue to present themselves and with the internet the number of

“experts” continue to grow. Anecdotal knowledge has taken the place of long-standing peer reviewed science-based research where replicated studies document the benefits of a using a method or product to control a weed or manage an ecosystem are described. The loudest voice can win out with the decision makers who are sometimes at the mercy of their constituents. Funding for trials continue to be an issue as there are more choices to control a problem than there are actual problems. Unfortunately, without the trials from our university system to document a practice or control of a problem species the ultimate decision makers are many times forced to surrender to the popular belief of the day.

As I look at 2020 one of the good examples is the renewed cooperation between AERF and RISE to help support each other. RISE is more of an outreach organization and concentrating on lobbying, while AERF is more of a technical organization with no lobbying efforts, which has opened the door for greater interaction with the EPA. These two organizations, as well as APMS, will all need to continue to carry the message of the need for aquatic weed control and the benefits of controlling unwanted vegetation while managing our water resources.

Steve Brewer, owner of Brewer International, passed away since the last time I wrote an update. I considered Steve a friend and a supporter of the industry. Those of us who knew him could always expect Steve to be enjoying himself at any meeting he was attending. I know the industry and many of us will greatly miss Steve. He was a charter supporter of AERF.

Syngenta’s Scott Jackson, past-President of FAPMS has joined the Board of Directors of AERF and we are glad to welcome him aboard. Scott has done a tremendous job as President of APMS the past few years and AERF looks forward to Scott joining our organization in a leadership role.

As we come to the close of 2020 and embark upon 2021 I hope we all can see the opportunities that lay ahead of us. I see an end of the virus and yes, we will bridge over some of the challenges we have faced. I do see that our industry is important and the need for science-based decisions will win out. Those of us that have been here long enough have seen many of these issues before I hope we can look at these “crises” as teachable moments. These are opportunities to pass along our experiences in managing our waters and the ecosystem that encompasses it. Looking forward to a great 2021!

### **Amazon Smile Program**

We have been asking you to support the AERF by funneling your Amazon purchases through the Amazon Smile program. By selecting the AERF as your charitable entity in the Smile program, Amazon donates a percentage of the cost of your qualified purchases. The drawback – you have to remember to use the url [www.smile.amazon.com](http://www.smile.amazon.com). I admit I would often forget to use the alternate web address. Then I discovered there are add-ons for the major web browsers that will redirect you to Smile if you go to Amazon. I’ve been using the Chrome add-on since the first of the year, and it’s worked flawlessly.

You can download the add-on for your browser using the following links:

Firefox: <https://addons.mozilla.org/en-US/firefox/addon/amazon-always-smile/>

Chrome: <https://chrome.google.com/webstore/detail/smile-always/jgpmhnmjbgkxhpbgealpfplebgfjmbf?hl=en>

Safari: <https://apps.apple.com/us/app/smileallday/id1180442868?mt=12>

Opera : <https://addons.opera.com/en/extensions/details/smile-helper/>

Dave Petty

**Message from the Executive Director**

Carlton Layne

In my wildest dreams I never would have believed that the Midwest meeting would be the last live APMS meeting of 2020. Two weeks later I sat agog at the feet of Dr. John Rodgers with Clyde Smith of UPL while John waxed prophetically about cyanobacteria. The next week the Covid shutdowns began in earnest and we have yet to recover anything like the momentum we had in March. Layer on that the election campaigns and the election itself and – well, it's been a very weird year. Now we have mergers and buyouts and who knows what other changes are afoot before the end of the year. Here's hoping 2021 will be better. President Boyd covered the corona virus and its impact better than I could have.

As I write this, the networks are projecting Joe Biden as the President-elect. We likely won't know for sure until the electoral college meets and votes in December. May God bless whoever is declared the victor. The aquatic plant and algae management industry will keep on keeping on and we'll do our jobs and serve our customers the best we can regardless of the outcome. The plants and algae don't give a twit who won the election. They will keep growing and expanding their territory and we'll keep trying to keep them at manageable levels with or without the help of our regulator friends.

AERF will continue to work with the EPA and PMRA regarding new herbicide and algaecide registrations and keeping our traditional tools available. We will coordinate with applicators and water managers to assure the best laws, rules and regulations we can negotiate are promulgated. And we will continue to work with professional societies, universities, and others to provide the highest quality of training and education to our industry.

These are lofty goals indeed, albeit familiar sounding. They take on added importance as we face the likely winds of change. On June 22<sup>nd</sup> the Trump administration's rewrite of the definition of the waters of the United States (WOTUS) became final. A trickle of lawsuits has begun which will likely multiply with a change in federal administration. We can only wait with mounting anticipation to see what changes await.

The Fish and Wildlife Service and the National Marine Fisheries Service appear to be showing some movement in the pesticides/endangered species issues. See Bernalyn McGauhey's piece for more information on the Services Strategic Plan.

There have been a few pretty serious efforts to amend the Federal Pesticide Law (FIFRA) in the U.S. House of Representatives. Surprisingly, some of the push has come from republican representatives Mast and Steube – both from Florida. AERF, RISE, APMS, FAPMS and a host of pesticide interest groups have joined together to oppose the effort to radicalize FIFRA. Take a look at the piece from RISE.

Given the likelihood of the political changes we will face, which will include a shift in focus by the EPA, the Services, attacks on the definition of the WOTUS rule, changes in state policies and rules, and the myriad anticipated lawsuits the outcome of which could well change the way aquatic managers do business, we all need to stay vigilant and work together to achieve successful outcomes – or at least outcomes we can live and work with. No matter what happens, AERF will be there to help you deal with it.

Dr. Baird has written a piece on AERF's foray into funding research we felt was warranted to potentially provide a tool to water managers in the world of cyanobacteria. There is much that needs to be done in

this area and we hope AERF will be able to be in the vanguard of efforts to find solutions to this problem. Your thoughts and suggestions of future research and/or financial support would be appreciated and welcomed. Send me your suggestions.

The pandemic has hurt many of our donor companies and AERF's efforts are dependent on the resources you all send us. We don't have an annual meeting where we can raise money. We exist solely as a result of your charitable donations and our activities are limited by the funds we receive from you. AERF is a 501(3)(c) not for profit foundation so your donations are tax deductible. If you receive a solicitation from AERF in the next couple of weeks, please consider supporting AERF with a generous contribution. If you don't receive a solicitation, its because I screwed up. Don't hold that against AERF, be supportive and generous anyway.

Carlton R. Layne  
Executive Director

### **The 4th Edition of the BMP Available**

The new and improved Best Management Practices manual was completed in July 2020 and is now available on the AERF website. The BMP has a new organizational layout, with 3 main sections (problems, bad actors, and solutions) and multiple sub-sections within each main section. We've added a number of new plant species and topics and we've updates some existing topics too. New plant monographs include starry stonewort, parrotfeather and floatinghearts, and the hydrilla section has been revised to include monoecious hydrilla. Completely new topics include the Endangered Species Act and herbicide resistance. We're hoping to have hard copies of the new BMP available in the future, but for now the manual is available at <http://aquatics.org/bmp.html>, so check it out!

### **EPA Provides Information About Reducing Pesticide Impacts to Endangered Species**

EPA is providing materials to help the public and pesticide applicators protect endangered species and their critical habitats.

Information on possible risk reduction measures, such as best management practices to reduce exposures and impacts to federally threatened and endangered species, can now be found on [our website](#). These materials came out of EPA's consultation with the National Marine Fisheries Service (NMFS) on registrations of pesticide products containing the insecticides [chlorpyrifos](#), [diazinon](#) and [malathion](#). In December 2017, NMFS issued a final biological opinion on these three chemicals as part of a consultation process. [Read the biological opinion here](#). A biological opinion provides a view of whether the pesticide's registered use is likely to jeopardize a species, and if so, describes alternatives to avoid jeopardy.

EPA re-initiated consultation with NMFS to allow for consideration of additional information. The Agency remains in consultation with NMFS as they revise their biological opinion.

Additional information on the re-initiated consultation is available on [www.regulations.gov](http://www.regulations.gov) with the docket number EPA-HQ-OPP-2018-0141.

### **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. Payments may be made through our website, or directly with Carlton, who has been equipped with a card reader.

### **New Board Member**

Scott Jackson has over 20 years of experience in wetland and aquatic systems and represents Syngenta's line of aquatic invasive weed management products in the US Southeast. Prior to joining Syngenta in 2013 as the Southeast Aquatics Territory Manager, Scott worked for DB Environmental, Inc. beginning in 1998. As part of a company considered a recognized industry leader in wetland biogeochemistry while undertaking "the world's largest ecosystem restoration" in the Florida Everglades, he led a team of biologists as General Manager of South Florida Operations. Scott earned his Masters of Science Degree from the University of Florida in Soil & Water Science and before that, his Bachelors of Science Degree in Agronomy and Environmental Science from Delaware Valley College in Doylestown, PA.

Scott is Immediate Past-President of the Florida Aquatic Plant Management Society (FAPMS), and has served since 2013 as Vendor Chair. He is also past President of the Mid-South Aquatic Plant Management Society (MSAPMS) and South Florida Aquatic Plant Management Society (SFAPMS). Currently he resides in Palm Beach Gardens, Florida with his wife and two boys.

### **Harmful algal bloom study funded by AERF gets published in *Ecotoxicology and Environmental Safety***

**By: Ciera Baird**

Harmful algal blooms (HABs) have rapidly become a prominent issue of central focus in the critical water resources of the United States, and globally. As we see more and more aquatic systems experiencing these problems, not only does that increase risks for people and animals, but also reinforces the urgent need for scientifically defensible management solutions. Over the past 2 years, AERF successfully initiated and funded a study that aimed to evaluate performance of USEPA-registered algaecides for short-term control of HABs in the Okeechobee Waterway of central Florida. This region has been experiencing HABs for decades, with perhaps the most severe bloom events occurring in the past 5 years.

A team of researchers including myself, Alyssa Calomeni (EA Engineering, Science, and Technology Inc.), Dail Laughinghouse and his staff and graduate students David Berthold, Forrest Lefler, and Max Barbosa (University of Florida), and John Rodgers (Clemson University) partnered to execute and publish this study. The overall objective was to measure and compare effects of several EPA-registered algaecide formulations on microcystin-producing cyanobacteria collected from Lake Okeechobee. Specifically, we collected samples of target cyanobacteria from Lake Okeechobee, measured responses of the cyanobacteria to exposures of USEPA-registered algaecide formulations in terms of cell density, chlorophyll-a concentrations, and phycocyanin concentrations, discerned minimum effective exposure concentrations for each formulation, measured and compared the extent of microcystin release in effective exposures, and finally measured and compared total microcystin dissipation in effective exposures. The study was conducted at Dr. Laughinghouse's lab at the University of Florida in Davie, FL in August of 2019. In this study, we found that several algaecides effectively decreased cell densities and other viability metrics in target cyanobacteria, demonstrating the initial feasibility of this approach for Lake Okeechobee and nearby waters. This laboratory study was a critical first step in evaluating algaecides as a management approach for this region, but further study at larger scales will be necessary to test these exposures under more realistic conditions.

The manuscript was submitted to the journal, *Ecotoxicology and Environmental Safety*, in April of this year and was recently published as an open access article in September. For those interested, the link to this study can be found on AERF's website.

**Comments on the United States Department of the Interior's Draft Invasive Species Strategic Plan, Federal Register 85 pages 49393-49394 (August 13, 2020).**

**[Docket DOI-2020-0007 – Comments Submitted Electronically]**

**Bernalyn McGaughey**  
**Compliance Services International**

The Aquatic Ecosystem Restoration Foundation appreciates the fact that The United States Department of the Interior has taken the time and thought to develop a strategic plan for the management and prevention of invasive species proliferation. 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. AERF provides science-based solutions to restore and maintain sustainable water resources. The AERF is a not-for-profit 501(c)(3) Foundation.

We support aggressive means to defend our precious ecosystems from invasion by foreign species introductions carried here by wind, accidental or intentional transport or global movements of various types. Most of our endangered species listed by the Endangered Species Act have as their strongest stressor pressure from invasive weeds or other organisms. This pressure is reducing biodiversity in America, threatening our agriculture, and consuming valuable resources. The cost of invasive species damage or repression is monumental. It is time to take aggressive action, and we support the strategic plan presented here.

The John D. Dingell, Jr. Conservation, Management and Recreation Act (Act) ([Pub. L. 116-9](#)) was enacted on March 12, 2019. Title VII Section 7001 of the Act directs relevant Secretaries to take actions concerning invasive species; this includes direction to each Secretary concerned to develop a strategic plan for the implementation of the invasive species program to achieve, to the maximum extent practicable, a substantive annual net reduction of invasive species populations or infested acreage on land or water managed by the Secretary concerned. We understand this draft plan is in response to that directive. An annual net reduction in invasive species *populations* (not just the number of new invasive species *introductions*) will require more than intermediate and sometimes ineffective management strategies: it will require aggressive management, effective strategic intervention – and the ability to apply all management tools to invasive species abatement.

Importantly, USDI notes that IPM methods should be used, and careful selections made quickly to fight newly imported species and those that are non-native and now proliferating and causing extensive harm. We have proposed the same approach in our work as AERF over the years. But what have we seen over this time? - - Capable hands tied and tested methods of eradication blocked as an outcome of an unfortunate circumstance in regulatory burden that causes those trying to control an infestation to be unnecessarily delayed to the point of passing the threshold of an opportunity to eradicate an invasion while it is still manageable. Precious time is consumed doubting, revising, re-reviewing or outright prohibition of an otherwise legal action by trained and experienced pest control professionals who approach an invasion with a sense of urgency, an understanding of the affected natural community and an effective and legal toolkit of control measures. Currently, instead of a rapid eradication response, what happens during this extended and unnecessary period is exactly what is shown in the graphic portrayed in Figure 2 of the draft strategic plan. Early on, a pest species proliferates quickly and reaches a population size preventing eradication or even containment. Unfortunately, we have seen many circumstances where an invasive could have been eradicated, but unnecessary or duplicative regulatory intervention kept action from happening. In our experience, much of that prevention of action was based on fear of the use of EPA accepted pesticides, even when used in the hands of professionals.

Fear should not drive decisions. Science should drive decisions. We know that solid science is behind the labeling, use and development of pesticides. We also know that users are skilled and trained and conscious of making the most appropriate choices for a given pest and its setting. In the integrated pest management setting, unfortunately, the public does not understand that “IPM” does not mean to avoid the use of pesticides or use them only after everything else has failed. For invasive eradication, using pesticides only when all else fails dooms any hope of eradication. IPM is as its title notes: it is a management practice. It does not mean that in integrated pest management programs pesticides should be a last choice. Very often the only way to eradicate a species before it becomes a proliferating invasive pest is to act quickly, legally, and with a tool kit that has the strength to eradicate a non-native invader.

In response to the request, *“Are the mission, vision, goals, objectives and strategies clear as written, and if not, what clarifications should be made,”* AERF recommends that the invasive species strategic plan puts stronger emphasis on the use of EPA registered pesticides, particularly for threatening and new species that can still be eradicated before they reach levels of rapid proliferation. The United States and many states have learned this in various settings, but the public has not. Consequently, many species have gone beyond the point of eradication because an uninformed public intervenes based on fear. And it becomes an expensive war in dollars, resources, and biodiversity where only containment (and possibly not even that), but not eradication, is possible. If USDI supports a steering group within their plan, we highly recommend they include experts who understand IPM methods, noxious species, pest control and aquatic invasive species control as well as the dynamics of conditions when invasive species first take hold.

Additionally, in response to the request, *“Do the goals, objectives and strategies build in sufficient flexibility for implementation to meet the needs of ongoing and emerging efforts, and if not, how should they be adjusted,”* AERF recommends that the invasive species strategic plan also contains provisions for considering expediting eradication actions that are otherwise blocked by overly protective or duplicative environmental law - even protective laws like the Endangered Species Act. The reason for this? The very act of being able to control an invasive quickly protects a native ecosystem or ESA-listed species and its habitat rather than threatening it. There needs to be a way to direct how an action can be taken to eradicate a species when its threat is worse than that of any protective action that could be taken to eradicate it. It is usually obvious when a new species is going to be a threat to not only ESA-listed species but also our nation’s biodiversity, agriculture, forests and water resources.

AERF has worked hard over the years to educate the decision-makers and public about the importance of acting quickly to eradicate new invasive threats. Very sadly, we’ve also watched powerlessly when a new species such as crested floating heart or a pioneer infestation of hydrilla passes the eradication window and instead becomes a dangerous invasive pest. We would like the opportunity to assist in adopting the ideas suggested above and we again encourage the USDI to take a strong stand in the protection of our ecosystems by facilitating the rapid eradication of new invasive species introductions.

## Support The AERF

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For many non-native species and the ecosystems they have invaded, it is too late. That makes it even more important to have a solid strategy for rapid and complete actions against new and current invasive species that now are causing so many problems. Many of our science partners have developed metrics to track species invasions or the effectiveness of various control methods, and we suggest these experts and others be convened to address the question, “*based on the objectives, what metrics would be most useful to track progress against the objective?*” Given the goal is net reduction of invasive populations as a whole, a national monitoring and reporting program could draw from state and species-specific programs that have already been initiated and could also benefit from national aggregation and support.

Thank you for this opportunity to comment. Again, we support the Department’s efforts and commend them for dedicating time and effort to the critical need for invasive species eradication, control and management. We are hopeful that the “net reduction” goal is taken seriously. We are equally hopeful

### **RISE Joins More Than 300 Pesticide User Groups in Support of Pesticide Regulation**

Karen Reardon

[kreardon@pestfacts.org](mailto:kreardon@pestfacts.org)

RISE (Responsible Industry for a Sound Environment) joined more than 300 organizations engaged with pesticide products to urge members of Congress to support the availability of safe and effective pesticides to protect our public health, infrastructure, and green spaces and to oppose H.R. 7940 and S. 4406. Download the letters sent to the U.S. House of Representatives and to the U.S. Senate.

“Consumers must have the assurance of product safety and efficacy provided by strong federal regulation by the United States Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Rigorous federal regulation under FIFRA is essential to the dual goals of maintaining public trust and delivering the products that protect public health and safety, property, public infrastructure, and natural resources. People must be able to trust the regulatory process and regulated products used every day around their homes and communities,” said Megan Provost, RISE President.

“The essential products provided by pesticide registrants to their professional and consumer customers are only possible through the strong federal and state regulatory partnership codified in FIFRA. Abandoning our industry’s federal statute and regulatory processes for a random, unscientific, patchwork approach will have an impact on public trust and on virtually every aspect of public health, safety, and environmental protection. In a letter sent to all members of the United States House of Representatives and Senate, we are asking members for their continued support of FIFRA and its uniform and scientifically rigorous system of pesticide regulation,” added Provost.

Products regulated by U.S. EPA and state regulatory agencies through FIFRA include those used to protect against rodents, mosquitoes and other vectors, diseases and pathogens; noxious and poisonous weeds; and invasive and non-native species that harm native species and ecosystems. FIFRA-regulated products are essential for protecting homes from termite and cockroach infestations, creating firebreaks in forests, providing clear lines of sight on roadways, and keeping shipping lanes and recreational waters free of invasive plants. Products regulated under FIFRA also create safe and beautiful outdoor recreational spaces such as yards and parks.



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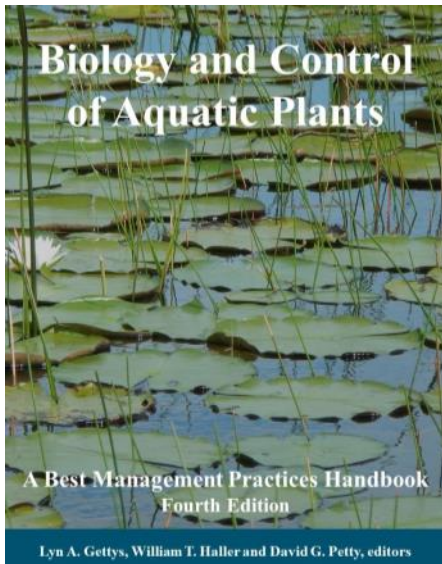
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### Sponsorship

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

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