



15th Anniversary Magazine

The AERF has produced a retrospective magazine celebrating our first 15 years. Approximately 5,500 hard copies were mailed to members of the aquatic community, members of the Weed Science Society of America (WSSA), the Society of Wetland Scientists (SWS), and various state regulators. If you did not receive your copy, you can view a PDF version on our website, request a copy from Carlton, or stop by and pick one up from our display table at any APMS meeting. If you would like additional copies to spread around your major customers, please contact Carlton.

AERF Makeover



You will be seeing a lot more of this image from now on, as we have adopted a new logo. As we integrate the new logo into our materials, we are also working on a redesigned website, a new exhibit display, and bringing a common theme to our social media pages. If you need a copy of the logo file for your website or other materials, please contact either Carlton Layne or Dave Petty.

Our Apologies

We'd like to offer our sincere apologies to our Affiliate Sponsor Aquafix of Madison, WI for misspelling their name in our anniversary magazine. Also apologies to Associate Sponsor Aquatic Nuisance Plant Control of Swartz Creek, MI who were left off the list of Sponsors through an administrative oversight.

Your Input is Needed

The AERF needs your help in compiling a list of "local" names for common aquatic plants and weeds. If the people of your area have a unique name for a plant, we'd like to hear about it. Please send either Carlton or Dave an email with the common name, local name, and the area where the local name is used - let us know if its just a specific lake, or a larger region.

Do You Have Something to Say?

The AERF provides several venues for spreading information of importance to the aquatic plant control industry. If you have a comment, idea, or short article you would like to spread around, consider submitting it for use on our Facebook page, Web Blog, or this Newsletter. Please submit your written comment or article to either Mike Riffle, Carlton Layne, or Dave Petty.



Join us on Facebook or visit our Blog by clicking the icons or find links from our website www.aquatics.org



Don't Forget the Waterbody When Attempting to Restore Water Quality

Shaun Hyde and West Bishop, SePRO Corporation

A report issued by the United States Department of Environmental Protection (EPA), Office of Water, declared nutrient pollution a leading cause of water quality impairment (EPA-821-F-08-007, 2009). In particular, increased attention has been directed at impairments caused by phosphorus accumulation in aquatic systems and consequently has spurred enhanced regulatory and management standards. One example: the Administrator of the EPA adopting a Final Rule (2009) regarding numeric criteria for nutrients – primarily nitrogen and phosphorus- in Florida waterbodies and the recent ruling by the United States District Court, Tallahassee Division, to uphold most of EPA's Final Rule (exception being stream criteria).

Phosphorus pollution is the primary component governing eutrophication in freshwater resources and is highly correlative to algae productivity (Carpenter et al. 1998) and nuisance algae types (Smith 1983; Seale et al. 1987; Ghadouani et al. 2003). Excessive phosphorus inputs have significantly increased the frequency and distribution of toxin-producing cyanobacteria (blue-green algae) harmful algal blooms (Hallegraeff 1993). High cyanobacteria biomass can negatively impact: 1) aesthetics, 2) water resource uses (drinking), 3) humans and wildlife (toxin exposure), and 4) water quality parameters through photosynthesis, respiration and senescence processes (Hession and Storm 1999; Wetzel 2001). For example, 58% of the 177 Missouri reservoirs sampled during summers of 2004-2006 contained the cyanobacteria toxin microcystin with 10% of these reservoirs containing levels exceeding 20 µg/L, the human health concern limit (Graham and Jones 2009).

The implementation of strategies to address external inputs of phosphorus (i.e. best management practices-BMP) are important for source control, though these watershed BMP's are only part of the water quality restoration solution. Even when external sources of phosphorus have been curtailed, accumulation of phosphorus and internal cycling can be a significant, ongoing source of deleterious water quality impacts in water bodies (Sondergaard et al. 2003). Ironically enough, many seem to overlook the impaired waterbody (i.e. phosphorus, cyanobacteria, toxins) and an opportunity to directly address these impairments with effective in-situ management solutions.

Phosphorus pollution and toxic algae are interconnected plagues prominent in freshwater resources, and if neglected will continue to devastate aquatic ecosystems throughout this country, as they have for decades. Successful water quality restoration programs need to begin with a "complete" integrated management plan that includes characterizing waterbody impairments and solutions to mitigate existing in-situ problems. Funding restoration strategies that not only address the watershed but include the implementation of novel technologies for the resident problem are required for proper water resource stewardship (i.e. don't forget about the waterbody).

Lake Ecosystems Depend on Balance

Education can prevent the devastating effect of invasive species introductions on our lakes and streams

Jeff Holland

Most anglers recognize a balance of aquatic plants and algae is important for maintaining a healthy lake with an abundance of fish. Some anglers prefer more or less plants, but most realize an out-of-balance system is harmful to all.

Aquatic plants provide the important ecosystem service of filtering water, giving shelter to fish and invertebrates, and offering a target for recreational anglers. "There is nothing like the anticipation of a strike when working a topwater lure or poppin-bug over submersed vegetation... Every twitch of the bait keeps an angler on edge, ready for that sudden and explosive strike that pumps adrenaline through your veins at the speed of light!"



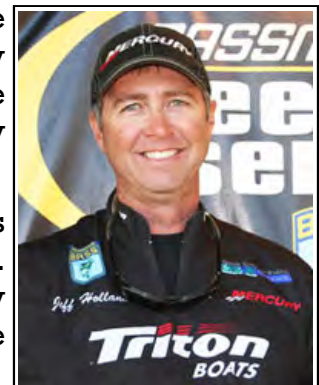
Encroaching algae smothering aquatic plants

Complex aquatic cycles exist in our lakes and streams and vary as much as ocean cycles, albeit on a smaller scale. To simplify things, anglers who fish across the U.S. categorize waterbodies based on five groups: natural lakes, highland reservoirs, lowland reservoirs, riverine, and tidal systems. Food chains in natural lakes tend to be dominated by the growth cycles of aquatic plants and algae. Reservoirs, riverine, and tidal systems all tend to be driven by sediment and algal-based food webs that ebb and flow with currents and nutrient levels.

The abundance and diversity of aquatic life in our lakes, such as crawfish, midges, fish, and fowl, are dependent on the proper balance of food chains. The Aquatic Ecosystem Restoration Foundation (AERF) facilitates the progressive understanding of nuisance and invasive species to ultimately provide us a better understanding of how to protect this delicate balance. Encroachment of a single invasive species can easily damage our lakes like a locus scourge on a Kansas wheat field.

Educating the public about the dangers of accidental introductions of plants, harmful algae, and other invasive species must continue. Without this knowledge, anglers like you and me could unknowingly cause the spread of nuisance species and the eventual demise of the natural resources we enjoy.

Please share the word about invasive species and visit the AERF website for publications and more in-depth information (www.aquatics.org).



Jeff Holland, Bassmaster Southern Open professional bass angler and Limnologist.
www.JeffHollandFishing.com

Safe Use of Pesticides

Donald Stubbs

Did you know you can use a registered pesticide labeled for aquatic use to control nuisance pests without causing unreasonable adverse effects on man or the environment as long as you follow the label directions?

The federal statute requiring pesticides to be registered prior to use also requires that a pesticide product perform its intended function without unreasonable adverse effects on the environment.

All pesticides must be registered under the Federal Insecticide, Fungicide and Rodenticide Act prior to use. EPA reviews an extensive data base dealing with acute, subchronic, chronic, oncogenicity, developmental and reproductive animal toxicity; ecotoxicity; and fate of the chemical in the environment. These data are used to select endpoints of concern and carry out risk assessments to man and the environment. The risk assessments are used to develop label mitigation as well as use limitations that are required on labeling. If the use will result in residues of the pesticide in food or feed a tolerance must be established under the Federal Food Drug and Cosmetic Act. Aquatic pesticide uses represent a unique challenge in registration because the pesticide is applied directly to drinking water, and residues of the pesticide can end up in fish and shellfish as well as irrigation waters. EPA takes these concerns into account prior to registration.

An EPA registered pesticide is a federal license for use of that pesticide in the 50 united states and its territories. Federally registered pesticides must still be licensed in the individual states and territories before use. A state registration may be more restrictive than the federal registration but cannot be less restrictive.

Pesticides must be used in accordance with their labeling.

Corp Engineer Scientist Presents Aquatic Weed Control at LSU

ERDC Environmental Laboratory Research Biologist Dr. Christopher Mudge recently presented "Aquatic Weed Control in Louisiana and the Gulf States: Research and Partnership" to the Louisiana State University (LSU) School of Plant, Environmental, and Soil Sciences (SPESS).

The seminar highlighted the Chemical Control Physiological Processes Team capabilities, as well as current aquatic weed control research.

In attendance were members of the LSU Agriculture Center and SPESS faculty, as well as staff and graduate students of the department.

In February, an Educational Partnership Agreement (EPA) was formed between ERDC and the LSU Agriculture Center. Mudge serves as the partnership program manager. Goals include promotion of academic achievement, cooperative funding and research opportunities for ERDC scientists and LSU faculty, and the development of new partnerships with other state and federal agencies in Louisiana and the Gulf Coast Region.

The 2012 Aquatic Weed Control Short Course

Lyn Gettys

The annual UF/IFAS Aquatic Weed Control Short Course was held May 7 through 10 at the Coral Springs Marriott. This extremely popular, well-attended event is one of the largest extension programs in the country, and this year we welcomed a near-record crowd of more than 430 people from Florida, Alabama, California, Colorado, Georgia, Idaho, Illinois, Indiana, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Mississippi, North Carolina, Nebraska, Pennsylvania, South Carolina, Texas, Virginia and Wisconsin .

Participants attended traditional seminars on invasive plant biology and control in aquatic, right-of-way, and natural areas and took part in interactive learning experiences as well, such as plant identification sessions and calibration and computation workshops. Up to 20 continuing education units (CEUs) were granted to licensed pesticide applicators in a number of categories, including Core, Aquatics, Natural Areas, and Right-of-Way. Special training sessions were also available to prepare new applicators to take Core and Category certification exams, which were administered on-site by FDACS and IFAS personnel at the conclusion of the Short Course.

Short Course speakers included nationally and internationally known experts in weed biology and control and represented university and extension faculty, graduate students, industry researchers, and federal and state managers. Exhibitors included industry sponsors and representatives, professional associations, and University groups such as the UF/IFAS Bookstore, the UF/IFAS Fort Lauderdale Research and Education Center and the UF/IFAS Center for Aquatic and Invasive Plants.

Networking opportunities, such as the Industry Social and Welcome Reception and catered breaks between sessions, were plentiful and many attendees took advantage of these chances to make new contacts. Eighty-eight percent of participants that completed post-course surveys indicated that their overall rating of the Short Course was excellent or very good; in addition, three-quarters said that they plan to attend next year's program.

The 2013 Aquatic Weed Control Short Course will take place May 6 through 9 and will once again be held at the Coral Springs Marriott. Make plans today to attend the 2013 Aquatic Weed Control Short Course in Coral Springs to learn the latest techniques and developments in aquatic, right-of-way, and natural areas weed control! For more information, please visit the Short Course website at www.conference.ifas.ufl.edu/aw or contact Lyn Gettys at lgettys@ufl.edu.

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BIOLOGY AND CONTROL OF AQUATIC PLANTS



A Best Management Practices Handbook

Lyn A. Gettys, William T. Haller and Marc Belland, 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 supports research and development that provides strategies and techniques for the environmentally sound management, conservation, and restoration of aquatic ecosystems. Our research provides the basis for the effective control of nuisance and invasive aquatic and wetland plants and algae.

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 Meetings

Jul 22-25	APMS Annual Meeting, Salt Lake City, UT
Sep 17-19	MSAPMS, Mobile, AL
Oct 8-11	FAPMS, St Augustine, FL
Oct 17-19	SCAPMS, Myrtle Beach, SC
Oct 22-24	TAPMS, Bandera, TX

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