

62  
Years



# Aquatic Plant News

The Newsletter of the Aquatic Plant Management Society, Inc.

September, 2023 – Issue 133



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*Hydrilla (Hydrilla verticillata) established and taking over an urban lake in Central Florida.  
Photo by Amy L. Giannotti*

**Aquatic Plant Management Society, Inc.**  
100 Winterberry Lane | Holly Springs, NC 27540

**Newsletter Editor, Amy Giannotti**

# APMS President's Update

Dear APMS members,

Thank you for making the 63<sup>rd</sup> Annual Conference such a success. This meeting was held in beautiful downtown Indianapolis, IN where the hustle and bustle of the business district blended nicely with what was happening in our conference. From my perspective, this meeting was a week packed with meetings, hallway conversations, and excellent science from the presenters. It was everything we have grown to love about APMS.



I want to take a moment to thank those that made this week so special. The conference was kicked off with a Symposium on improving communication with aquatic stakeholders. The speakers were Gene Gilliland (BASS Conservation Director), Nathan Long (Vice President, Aquatic Control), and Christine Krebs (Communication Manager, UF/IFAS Center for Aquatic and Invasive Plants). Each of these speakers emphasized the importance of transparency and engagement when discussing aquatic plant issues. As managers, we need to invite everyone to the table and listen closely so we can understand their needs. It was a timely message from three skilled communicators, and it set the stage for the remainder of the conference. Next, I want to thank our twelve sponsors and twenty-six vendors. Without them, and their dedicated support, the APMS meeting would be a very different and much smaller affair. I also want to acknowledge all that supported the scholastic endowment either as a sustaining member, donor, or raffle ticket buyer. This meeting was a banner year as over \$15,000 was raised and this money goes directly to support student research. This scholarship is a primary focus of APMS and highlights how our membership delights in giving back to this wonderful organization. Lastly, there would hardly be a meeting without Bill Torres. All week, regardless of the question, the answer was always the same: “Ask Bill.” He kept things organized, fixed problems, took pictures, and did everything in between. Bill is a linchpin to APMS that cannot be replaced.

It is a true honor to be selected as President, particularly after I have had the pleasure to serve on the APMS Board of Directors for over 10 years. In that time, I have been fortunate enough to observe the habits and skills of several Presidents: Netherland, Madsen, Richardson, Rodgers, Wersal, and others. But, working with Brett Hartis over the past year has been particularly rewarding. His leadership style and “can do” attitude was a positive influence for me and APMS alike. But more importantly, like many other presidents before him, he has left APMS in a better place than he found it. I feel very fortunate to be entrusted with the leadership of this organization, doubly so to be inheriting the reigns from a great president.

I am looking forward to a good year of progress and I hope to cross paths with each of our members at regional meetings in the coming months. But if not, I hope you can all find your way to the beautiful Bayfront Hilton in St. Petersburg, FL next summer for our 64<sup>th</sup> Annual Conference. See you there!

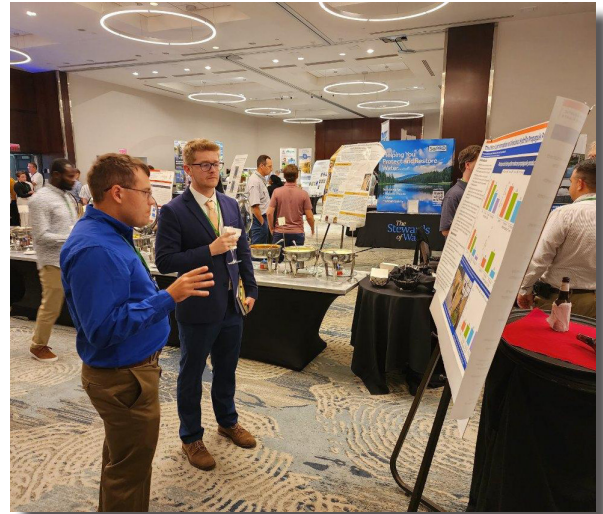
All the very best,

Jay Ferrell  
President-APMS

# 2023 APMS Annual Meeting Photos



APMS Poster Session



APMS Poster Session



Past President Luncheon



Ryan Wersal Presentation



Student Luncheon



Women of Aquatics

# 2023 APMS Annual Meeting Photos



Student Tour



Exhibitor Award - Kasco - Cory Richmond



Honorary Member - John Madsen



Incoming President - Jay Ferrell



International Contributor Award - Tobias Bickel



Max McCowen Friendship Award - Amy Kay

# 2023 APMS Annual Meeting Photos



New Student Director - Hannah Brown



Outgoing Directors - Max Gebhart and Michael Greer



Outstanding Graduate Student - Conrad Oberweger



Past President - Brett Hartis



President's Award - JJ Ferris



T Wayne Miller Service Award - Ryan Thum

## Meeting Sponsors

The Aquatic Plant Management Society appreciates the generous support of the following meeting sponsors. Through their support and contributions, we can conduct a successful and enjoyable meeting.

### Platinum Level



**ENVIRONMENTAL  
SOLUTIONS**

*UPL NA Inc.  
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*SePRO  
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### Gold Level



*Syngenta, US  
Greensboro, NC*

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### Bronze Level



Lawrenceburg, TN



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Opelika, AL



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Clean Water for the Planet®

Rogers, AR



Vero Beach, FL



Rocky Mount, VA

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### Contributor Level

*Aquatic Control  
Seymour, IN*

*Keycolour  
Phoenix, AZ*

# 2023 MidSouth Aquatic Plant Management Society Scholarship Opportunity

The MSAPMS is seeking applications for the 2023 student scholarship to be awarded at the annual meeting Oct. 24-26 in La Grange, GA (<https://msapms.org/>). We request that the successful applicant attend the meeting and give a presentation of academic progress and results as they are available. One scholarship of \$2,500 will be awarded to a qualified graduate or undergraduate student applicant enrolled and studying aquatic plant science or other relevant research.

To apply, the Scholarship Committee should receive the following information by August 15<sup>th</sup>, 2023:

1. A cover letter which includes the applicant's previous, current, and future relationship to the aquatic plant management industry, and a comment on the importance of the proposed research to aquatic plant management.
2. Copies of unofficial or official transcripts of undergraduate and any graduate work completed to date (these transcripts may be those issued directly to the student by the institution);
3. A letter from the student's major professor or advisor recommending the student for the scholarship, indicating that the student is currently enrolled and in good standing;
4. One letter of recommendation, other than the major professor;
5. A copy of the proposed research plan
  - For graduate applications, proposals approved by the graduate committee are preferred but not mandatory.

All submissions may be made with either hardcopy, addressed as below, or electronically (in PDF format) via e-mail.

To enter an application or request more information, contact: \_\_\_\_\_

Gray Turnage, PhD  
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Mississippi State, MS 39762  
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# Regional Chapter Updates

## FAPMS UPDATE

FAPMS Website: <https://www.fapms.org>

Hello from the Florida Aquatic Plant Management Society! We're eagerly anticipating our 2023 training conference, which will be held October 16-19 at the Hilton St. Petersburg Bayfront. This annual meeting is a great place to catch up with old friends, make new contacts, and learn about advancements in the field of aquatic plant management. The president's reception will be at The Tavern at Bayboro, where we'll have food, drinks, and the highly competitive cornhole tournament. Nominations for the Dr. Michael D. Netherland Exemplary Colleague Award and the Aquatic Plant Manager of the Year are open until September 30. We have a good lineup of speakers this year and pre-registration is open until September 30, so make plans to join us in St. Pete! Visit the FAPMS conference webpage at <https://fapms.org/conference/2023-conference/> for more information

Respectfully submitted by Lyn Gettys, FAPMS President



## TAPMS UPDATE

TAPMS Website: <http://www.tapms.org>

- The Texas Aquatic Plant Management Society Annual Conference will be held on November 15-17, 2023 at the Mesquite Convention Center in Mesquite, TX.
- There will be a tour of John Bunker Sands Wetland Center provided on November 15th at 1 pm.
- We are seeking deserving college students currently enrolled in relevant academic programs and who are interested in applying for the \$1,500 David Allen Bass Scholarship.
- Early bird registration, scholarship applications, and abstract submission will open July 5th
- Interested individuals should check our website with for the latest information.



**Brittany Chesser**  
**Aquatic Vegetation Management Program Specialist**  
**Texas A&M AgriLife Extension Service**  
**Lead Diagnostic Scientist, TAMU Aquatic Diagnostics Laboratory**  
**TAMU 2138, Office 308**  
**495 Horticulture Dr.**  
**College Station, TX 77843-2138**  
[Brittany.chesser@tamu.edu](mailto:Brittany.chesser@tamu.edu)



# 2023-24 Calendar of Events



**South Carolina Aquatic Plant  
Mgmt Society Annual Conference**

**October 9-11, 2023**

*Ocean Drive Beach and Golf Resort  
North Myrtle Beach, SC*

<https://scapms.org/meetings.html>



**47<sup>th</sup> Annual Florida Aquatic  
Plant Management Society  
Annual Training Conference**

**October 16-19, 2023**

*Hilton St. Petersburg Bayfront  
St. Petersburg, FL*

<https://fapms.org/conference/2023-conference/>



**42<sup>nd</sup> Annual MidSouth Aquatic  
Plant Management Society**

**October 24-26, 2023**

*Courtyard LaGrange  
LaGrange, GA*

<https://msapms.org/conference2023/>



**International Aquatic Plants  
Group**

**November 13-17, 2023**

*Antwerp, Belgium*

[www.internationalaquaticplantsgroup.com](http://www.internationalaquaticplantsgroup.com)



**Texas Aquatic Plant  
Management Society**

**November 15-17, 2023**

*Mesquite Convention Center  
Mesquite, TX*

<https://www.tapms.org/2023-annual-meeting/>



**64<sup>th</sup> Meeting of the Weed  
Science Society of America**

**January 22-25, 2024**

*Hyatt Regency San Antonio  
San Antonio, TX*

<https://wssa.net/current-annual-meeting/>



**44<sup>th</sup> Annual Midwest Aquatic Plant  
Management Society**

**February 26-29, 2024**

*Hyatt Regency  
Columbus, OH*

<https://www.mapms.org/conferences/2024-conference/>



**Western Aquatic Plant  
Management Society**

**March 18-22, 2024**

*Tropicana Hotel  
Las Vegas, NV*

<https://wapms.org/events>



**23rd International Conference  
on Aquatic Invasive Species**

**May 12-16, 2024**

*Halifax, Nova Scotia, CANADA*

<https://icaais.org>

# In Memoriam

**APMS honors and remembers a remarkable colleague and friend whose passion and dedication left an indelible mark on the aquatics industry. Joe Bondra embarked on his journey in aquatics in 1990, joining forces with Richard and Judith Hinterman of Cygnet Enterprises, Inc. Little did anyone know then that Joe's unwavering commitment would help transform Cygnet Enterprises into a pioneering force in aquatic plant management product distribution.**

In 2010, Joe took the reins as the president and owner of Cygnet, a role he fulfilled with grace and tireless enthusiasm until September 2020. Throughout his tenure, Joe tirelessly fought for the betterment of the aquatics industry, and his impact radiates through the numerous roles and positions he held.

Joe was a steadfast member of the Midwest Aquatic Plant Management Society for over three decades. His leadership shone brightly as he assumed the presidency in 1998 and again in 2008. For three consecutive terms spanning from 1994 to 2011, he served on the Board of Directors. In 2012, his dedication earned him the Distinguished Service Award, a testament to his remarkable contributions. Joe also played a pivotal role on the Past President's Committee since 1999, and in 2021, he was bestowed with Honorary Membership status at the MAPMS annual banquet, a recognition befitting his invaluable service.

Joe's devotion extended beyond the Midwest, as he first became a member of the Aquatic Plant Management Society (APMS) in 1978. At the national level, he served two terms on the Board of Directors, spanning from 2001 to 2003 and again from 2006 to 2009. His commitment to the RISE (Responsible Industry for a Sound Environment) organization was unwavering, and he actively participated in various committees and councils for 15 years,

making a profound impact on the aquatic pesticide community. Joe's expertise was also sought by the Michigan Department of Agriculture and Rural Development, where he served as a pesticide advisory committee member.

Within the Michigan Aquatic Managers Association, Joe's presence was felt throughout his entire career. His leadership as the Legislative Committee Chair was instrumental in the creation of numerous pieces of legislation designed to benefit aquatic pesticide applicators in Michigan.

In retirement, Joe cherished every moment with his beloved wife Heather. Together, they built a home in Michigan, where Joe immersed himself in the joys of nature. He relished driving his tractor, nurturing his food plots, and basking in the beauty of wildlife and the thrill of the hunt. The most precious moments of his final years were spent with his daughter Andrea, son-in-law Al, and grandsons Drew and Dylan.

On March 13, 2023, our industry lost a luminary. Joe Bondra's contributions to the aquatics industry will forever be remembered with gratitude and admiration. His dedication, leadership, and unwavering commitment to our shared cause will continue to inspire us all. As we bid farewell to a cherished colleague and friend, let us carry forward the legacy of Joe Bondra by preserving and advancing the organizations and our important work he held so dear.





# IN MEMORY OF DAVID ISAACS

David Isaacs was born on May 13, 1950, in Seymour, IN. He completed his primary and secondary education in the Seymour Community School Corporation in 1968. He received his B. S. degree in Fisheries Resources from Ball State University, Muncie, IN, in 1972. While a student at Ball State University, he conducted laboratory analysis of benthic and plankton samples on Company projects under the direction of Dr. Thomas S. McComish. Mr. Isaacs dedicated his work life to Aquatic Control being with the company from 1966 through 2017. During his time of employment, he was involved in the many phases of lake management. He conducted aquatic vegetation control, fish population surveys, rough fish eradication, restocking, and habitat improvement programs.

Mr. Isaacs was also involved in all aspects of ecological studies in the early years of Aquatic Control. He was responsible for designing baseline and impact studies for nuclear power plants and proposed surface mining projects. He was the project manager in charge of 316 such studies as water quality monitoring programs, baseline biota surveys for evaluating power plant sites, monitoring programs for a cooling reservoir, and benthic community analysis of treatment lagoons.

During the period 1973-1980, Mr. Isaacs served as Laboratory Director. As Laboratory Director, he was in charge of the processing of all plankton, benthos, fish, and water quality samples collected on company projects.

In 1977, Mr. Isaacs assumed the position of Fish Hatchery Manager. He was responsible for the overall operation, production, and sales for the 50-acre hatching and rearing facilities. The operation of this facility was primarily for the propagation of largemouth bass, smallmouth bass, bluegill, redear sunfish, hybrid sunfish, channel catfish, and fathead minnows.

Mr. Isaacs began serving as Manager of the Fountain/Aeration section in 1988. He was actively involved in the sales, installation, and maintenance of fountain and aeration equipment in Indiana, Kentucky, Ohio, Michigan, Illinois, West Virginia, and Wisconsin. In 1998 and 1999, Aquatic Control, Inc. was selected as Residential Distributor of the Year, by Barebo, Inc., manufacturer of one of the many types of aeration equipment under his direction.

In November 1997, Mr. Isaacs was elected as Vice-President of Aquatic Control. His primary responsibilities included the management of the fish hatchery operation and fountain/aeration sales and maintenance. This position involved an active role in all aspects of company management.

**CONTINUED...**

Mr. Isaacs was named President of Aquatic Control in November of 2000 where he remained until his retirement. In this role, he oversaw the operation and direction of the entire company. Under his leadership, we defined leadership roles for each section of our company so that a more focused effort could be put into growth. As a result of his leadership, the company added 5 new branch office locations during this time and tripled the size of Aquatic Control from a revenue perspective. Mr. Isaacs was key in the development and focus of our Harmful Algae Bloom focus in the early days and spent considerable time on larger projects to solve Taste & Odor issues with drinking water supply reservoirs.

Mr. Isaacs was a life member of the American Fisheries Society (AFS) and a member of the Fish Culture Section AFS. He was a charter member of the Indiana Chapter AFS and had served as Secretary-Treasurer (1976) and President (1984). Mr. Isaacs was a member of the XI Chapter of the Sigma Zeta honorary science society. He played a primary role in forming the Indiana Aquaculture Association, Inc. in 1987. He served as the Charter President of this association, served on the board of directors from 1987 to 2001, and served a second term as President in 1995. Mr. Isaacs was elected to the Board of the Midwest Aquatic Plant Management Society in 2000 where he served 16 years and served as President in 2003 and 2009. He earned the MAPMS Distinguished Service award in 2014 and was given Honorary Membership of MAPMS in 2017. He was a certified and licensed aquatic pesticide applicator in Indiana and Michigan. Mr. Isaacs was also a member of the National Aquatic Plant Management Society, where he served one, three-year term on the board of directors. He was a member of the Indiana Lake Management Society, Aquatic Ecosystem Restoration Foundation, and Responsible Industry for a Sound Environment, where he served as a member of the Aquatics Committee.

*David was not only a leader, but a friend to all that knew him or worked with him. He served in many leadership roles for his church and spending time with his family was one of his most cherished gifts. Our thoughts and prayers are with Brian, his family, and all that were fortunate enough to have known David.*

## WE WILL MISS YOU DAVE.



# Science Policy Report



August, 2023  
By, Lee Van Wychen

## APMS Leaders Meeting



Brett Hartis, APMS President; Jay Ferrell, APMS President-Elect and Rob Richardson, APMS Science Policy Rep, and I attempted to meet in Washington DC the week of March 27. However, due to a massive amount of Congressional committee hearings during that week (106!) and not being able to secure enough appointments on Capitol Hill, we decided to cancel their visit and try again in the fall. However, we did meet with **Stacey Brown, Deputy Assistant Secretary of the Army for Civil Works Management and Budget** via Zoom, even though the meeting was originally scheduled as an in-person meeting at the Pentagon. We discussed why there has not been a request in the President's budget for funding for the Army Corps Aquatic Plant Control (APC) program. Instead, Congress adds this line item to their Energy and Water appropriations every year. This is a long-standing issue with the Office of Management and Budget (OMB) over several Administrations. The House FY 2024 appropriations for the APC program is \$16.5M, only half of the \$33.5M received in FY 2023, with no money for hydrilla control in the CT river basin. The Senate FY 2024 appropriation for APC is \$27M, with \$6.3M for CT river hydrilla.

## Weed Science Society Presidents Visit Washington DC.

The presidents from the four regional weed science societies and WSSA traveled to Washington DC to advocate on behalf of weed science policy initiatives. Their primary mission was meeting with their elected members of Congress and staff. We discussed an array of weed science related topics, including:



*Pictured (L to R): **Wes Everman**, NC State, NEWSS President; **Reid Smeda**, University of Missouri, NCWSS President; **Carroll Moseley**, Syngenta, WSSA President; **Eric Castner**, FMC, SWSS President; and **Curtis Rainbolt**, BASF, WSSW President*

# Science Policy Report



[Continued]

- Support for **\$8 billion in mandatory agricultural research funding in the next Farm Bill**. U.S funding peaked in 2002 and has declined by 1/3 since then, hitting the lowest levels since 1970. While U.S. investments decline, China's funding for ag research has grown to more than \$10 billion – double of what the U.S. currently spends. Current U.S. ag research funding is just under \$5 billion and most of that is discretionary funding that relies on year-to-year appropriations from Congress.
- Support for **USDA-NIFA IR-4 Project funding at \$25 million in FY 2024**. The IR-4 Project was funded at \$15 million in FY 2023.
  - There is a phenomenal need for specialty crop protection products to help feed the world. The IR-4 Project was established in 1963 by USDA to conduct research and develop the data needed to facilitate the registration of crop protection products, including reduced risk and bio-based pesticides, for minor use crops such as fruits, vegetables, herbs, spices, ornamental plants and other horticultural crops. The IR-4 Project provides an incredible return on investment as it contributes \$8.97 billion to the annual U.S. GDP.
- Support for the **USDA-NIFA Crop Protection and Pest Management (CPPM) program at \$25 million in FY 2024**. The CPPM program was funded at \$21 million in FY 2023.
  - The CPPM program is a highly effective competitive grant program that tackles real world weed, insect, and disease problems with applied solutions through the concepts of integrated pest management (IPM). The CPPM also funds the Regional IPM Centers and Extension IPM programs.
- **Amending the definition of a “plant pest” in the Plant Protection Act so that it includes noxious weeds and invasive plants**. Currently, only “parasitic plants” are listed in the definition of “plant pest” ([7 USC 104, S.7702 – Definitions, \(14\) Plant Pest, \(C\)](#)).
  - USDA-APHIS receives almost \$400 million per year in their Plant Health account to prevent the introduction and spread of “plant pests” in the U.S., but only a fraction goes toward weed prevention and surveillance. One example is their Plant Pest and Disease Management and Disaster Prevention (PPDMDP) program, which directs \$75 million a year to state governments, universities, non-profit institutions, industry, and tribal nations – to support projects that protect specialty crops, nursery systems, forestry, and other agricultural production systems and natural resources from harmful and exotic “plant pests.” Very few of the 300+ “plant pest” projects supported by the PPDMDP involve noxious weeds or invasive plants.

The weed science society presidents also attended a number of other events and receptions while on Capitol Hill. This included a House Ag Committee hearing with EPA Administrator Michael Regan. This was the first time an EPA Administrator testified to the House Ag committee since 2016.

Off the Hill, they met with the American Soybean Association and attended the National Coalition for Food and Agricultural Research (NCFAR) board of directors meeting, which featured a lively discussion of agriculture research priorities in the next Farm Bill. They also attended part of the CropLife America (CLA) – Responsible Industry for Sound Environment (RISE) Spring Regulatory Conference where the keynote speaker was Rod Snyder, Senior Advisor for Agriculture to EPA Administrator Regan.

Another highlight of the CLA/RISE Spring Conference was the retirement reception for Ray McCallister. Ray is a lifetime weed scientist and a member of WSSA's Science Policy Committee. Ray is highly regarded here in DC for his expertise on pesticide regulatory policy. He semi-retired from CLA on April 1 after 33 plus years of service. Ray's contact info is (202-577-6657) and [rsm6consulting@gmail.com](mailto:rsm6consulting@gmail.com). Congratulations Ray!

# Science Policy Report



[Continued]

## USDA Announces New USDA NIFA Director



On April 24, USDA announced the appointment of Dr. Manjit K. Misra as the new Director of the National Institute of Food and Agriculture (NIFA). Dr. Misra started new role on Monday, May 8, 2023.

Prior to joining USDA, Dr. Misra served as a Professor of Agricultural and Biosystems Engineering at Iowa State University. For more than 30 years, he was Director of the university's Seed Science Center. The center has administered the National Seed Health System, authorized by USDA APHIS since 2001. Dr. Misra also was founding Director of Iowa State's Biosafety Institute for Genetically Modified Agricultural Products.

In 2012, Dr. Misra was appointed Chair of the USDA National Genetic Resources Advisory Council (NGRAC), a position he held until 2017. Misra has served on more than 60 local, national, and international boards and committees. These include the Steering Committee for the Food and Agriculture Organization's (FAO) International Conference on Biotechnology, the Scientific Advisory Council of the American Seed Research Foundation, the Board of Directors of the Iowa Seed Association, the Iowa Crop Improvement Association, and the First the Seed Foundation.

Dr. Misra earned a Bachelor of Science in Agricultural Engineering in India, a Master of Science and a Doctor of Philosophy in Agricultural Engineering at the University of Missouri-Columbia. He is a researcher with 137 publications and an innovator with ten patents. During his tenure as the Director of the Seed Science Center, the faculty and staff conducted seed programs in 79 countries, including 34 countries in Africa.

## Support for FY 2024 Appropriations and Farm Bill

Since January, the national and regional weed science societies have signed onto five ag research coalition letters that have been submitted to Congress regarding the Farm Bill and the FY 2024 budget. Current requests for the FY 2024 budget include:

- Provide \$2.080 billion for the USDA NIFA research, providing increased support for the ag research capacity programs such as the Hatch Act and Smith Lever Act that are fundamental to the extramural research, education, and Cooperative Extension system. This includes:
  - \$300 million in FY 2024 for the Hatch Act account, which supports 1862 land-grant university federal - state partnerships
  - \$108 million in FY2024 for the Evans-Allen account to provide capacity funding for food and agricultural research at the 1890 land-grant universities and Tuskegee University
  - \$46 million to support McIntire-Stennis Cooperative Forestry research, which investigates carbon sequestration, the development of bio-based products, and the prevention of forest fires
  - \$420 million in Smith-Lever3(b) and 3(c) funds to support the Cooperative Extension System
  - \$88 million for the Extension Services of 1890 land-grant universities
  - \$17.5 million in FY2024 for Tribal Colleges Extension

# Science Policy Report



[Continued]

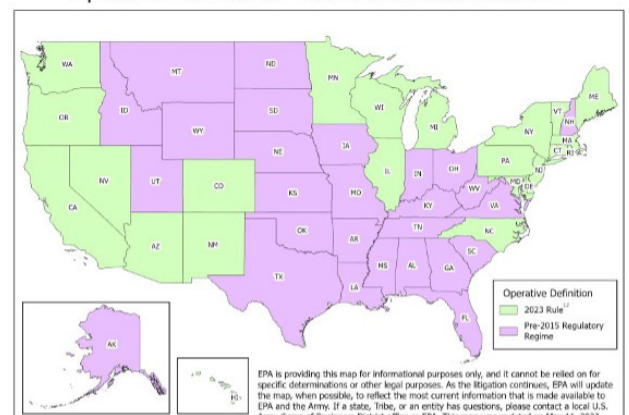
- Provide \$500 million in funding for the Agriculture and Food Research Initiative (AFRI), USDA's premier competitive research program.
- Provide \$500 million in funding for the Research Facilities Act
  - A 2021 Association of Public and Land-Grant Universities (APLU) report found that 70% of research facilities at US public agricultural colleges are at the end of their useful lives, with \$11.5 billion in deferred maintenance. The Research Facilities Act allows for the construction of modern facilities at colleges that support agricultural research, which will increase pest and disease preparedness and the use of advanced technologies nationwide.
- Provide \$1.95 billion for the Agricultural Research Service (ARS)
  - As the USDA's principal in-house research agency, ARS is one of the only funding sources available for long-term agricultural research. The ARS labs and research sites foster synergistic research collaborations across scientific disciplines and geographic locations. This funding would also help address ARS infrastructure improvements critical to carrying out its research responsibilities.
- Provide at least \$50 million in funding for the Agriculture Advanced Research and Development Authority ([AGARDA](#)).
  - Advanced research agencies have been effectively deployed in defense ([DARPA](#)), energy ([ARPA-E](#)), and health ([ARPA-H](#)) to tackle the biggest challenges facing those areas in novel and groundbreaking ways. AGARDA was established in the 2018 Farm Bill and modeled after DARPA, ARPA-E, and ARPA-H. When funded, AGARDA will foster research, development, and technology transfer, resulting in significant benefits across the US food and agriculture value chain.

## Supreme Court Rules on Waters of the United States

The US Supreme Court released its opinion on May 25 in *Sackett v. EPA* and ruled in favor of the Sacketts. **All nine members of the court rejected** the federal government's "significant nexus" test, which was crafted by former Justice Anthony Kennedy in the 2006 *Rapanos* decision. In other words, the "significant nexus test" is no longer an appropriate measure to determine a Water of the United States (WOTUS). Although there was a 5-4 split over what the test should be, not one justice attempted to defend "significant nexus" as an appropriate test.

The Court held that for a wetland to qualify as a WOTUS and be subject to federal regulation, there must be a **continuous surface connection** to a waterbody. Justice Alito's majority opinion said "adjacent" wetlands have to be close enough to other waters covered by the Clean Water Act (CWA) as to be indistinguishable. It also said the "significant nexus test" results in an unchecked definition of WOTUS which means that a staggering array of landowners are at risk of criminal prosecution or onerous civil penalties.

Operative Definition of "Waters of the United States"



Also operative in the U.S. territories and the District of Columbia.  
The pre-2015 regulatory regime is operative for the Commonwealth of Kentucky and Plaintiff-Appellants in Kentucky Chamber of Commerce, et al. v. EPA (No. 23-5345) and their members (Kentucky Chamber of Commerce, U.S. Chamber of Commerce, Associated General Contractors of Kentucky, Home Builders Association of Kentucky, Portland Cement Association, and Georgia Chamber of Commerce).



# Science Policy Report



[Continued]

Justice Brett Kavanaugh, in the minority opinion joined by Justices Sonia Sotomayor, Elena Kagan and Ketanji Brown Jackson, said the majority engaged in a rewriting of the law by interpreting “adjacent wetlands” to mean “adjoining.” Kavanaugh, however, noted that in 1977, Congress added “adjacent” wetlands to the definition of WOTUS in the law. “Adjacent wetlands” means not only wetlands adjoining covered waters but also those wetlands that are separated from covered waters by a manmade dike or barrier, natural river berm, beach dune, or the like. Thus, “adjacent wetlands” includes more WOTUS than “adjoining wetlands.”

EPA is expected to release post-Sackett guidance soon. However, as a result of on-going litigation, 27 states (in purple) should use the pre-2015 regulatory rule where WOTUS are:

1. Traditional interstate navigable waters
2. Relatively permanent bodies of water connected to traditional interstate navigable waters
3. Wetlands that have a continuous surface connection with either (1) or (2)

## LSU and Army Corps of Engineers Host Aquatic Weed Tour in Louisiana



*Touring Dr. Chris Mudge’s mesocosm research trials on giant salvinia at LSU. Pictured (L to R): **Kristy Crews**, Product Manager, EPA Office of Pesticide Programs (OPP) Registration Division (RD), Fungicide Branch; **Jessica Post**, Economist, EPA OPP Biological and Economic Analysis Division, **Francisco Llaena-Arias**, Environmental Protection Specialist, EPA OPP RD, Fungicide and Herbicide Branch; **Chris Mudge**, Research Biologist: U.S. Army Engineer Research & Development Center and Adjunct Professor: LSU School of Plant, Environmental & Soil Sciences; **Jeremy Crossland**, US Army Corps of Engineers, Land Uses and Natural Resources Program Manager; and **Lee Van Wychen**, WSSA Executive Director of Science Policy.*

During the week of June 5, I had the chance to tour Dr. Chris Mudge’s aquatic weed research trials at LSU along with staff from the EPA and Army Corps of Engineers. We also got to explore the different aquatic weed problems they face in the Atchafalaya National Wildlife Refuge (NWR) and Lake Henderson. The Atchafalaya NWR is approximately 44,000 acres and encompasses Lake Henderson, which was formed by man-made levees in

the 1930’s and serves as a relief outlet for the Mississippi River. The elevation of Lake Henderson is set at 9 feet above mean sea level (MSL), but can range from 6 feet MSL to 18 feet MSL. From August through October, the lake is lowered to 6 feet MSL. These draw-downs expose the lake bottom, which helps to control aquatic plant infestations like water hyacinth, hydrilla, giant salvinia and Cuban bulrush.

I would like to send a special thank you to Dr. Mudge and his staff for organizing the tour and sharing their knowledge and expertise on aquatic weed management. It takes a lot of work to set these tours up, especially for aquatic weeds where you have to line up airboats to tour some of the swamps and bayous. We got some unique insights into the aquatic weed management challenges faced by the Louisiana Department of Wildlife and Fisheries and Army Corps of Engineers.

# Science Policy Report



[Continued]



*Touring Belle River in the Atchafalaya National Wildlife Refuge about 30 miles west of Baton Rouge, LA. Dr. Chris Mudge attempts to drive his boat through an untreated area full of giant salvinia. Note: behind us is open water that has been treated by the Louisiana Department of Wildlife and Fisheries.*

## Weed Science Societies Support Agricultural Labeling Uniformity Act (HR 4288)

Below is a support letter for H.R. 4288, the Agricultural Labeling Uniformity Act that was sent to Congressional leaders. This is a bipartisan bill sponsored by Reps. Dusty Johnson (R-SD) and Jim Costa (D-CA) regarding FIFRA pesticide labeling uniformity. The six national and regional weed science societies endorsed the letter (below) along with 355 other signers.

*We write to express our great concern with recent misinterpretations of long-standing policy regarding the regulation and labeling of pesticide products, as some states have begun to regulate pesticides in a manner contradicting decades of scientific guidance from the Environmental Protection Agency (EPA). Lack of certainty on EPA-approved, science-based nationwide labels will erode access to current and future pesticides, threatening crops and grower incomes, conservation practices, public health, vital infrastructure, and ultimately raise food prices for families amidst record-high inflation.*

# Science Policy Report



[Continued]

*Growers and users need reaffirmation from Congress that while **states have authority to regulate the sale and use of pesticides within their jurisdiction, they cannot impose labeling or packaging requirements in addition or different from the scientific conclusions of the EPA.***

*To that end, we support and urge Congress to enact H.R. 4288, the Agricultural Labeling Uniformity Act, bipartisan legislation which would reaffirm federal pesticide labeling uniformity and prevent state and local governments from adopting inconsistent labeling or packaging which would disrupt commerce and access to these vital tools.*

## EPA Releases New Interactive Maps of Data Used in Endangered Species Act Assessments

The EPA is making the geographic data used to conduct Endangered Species Act (ESA) assessments for pesticides publicly available for the first time via interactive maps. These data are not new. Rather, EPA is making existing data broadly accessible and providing a new tool to help users access the data. The maps also show which crops are grown near these species and habitats, which can help users determine which pesticides might be used in these areas. EPA relies on the Fish and Wildlife Service and National Marine Fisheries Service (the Services) for information on the biology and location of listed species. As the Services continue to learn more about where some listed species are likely located, information will be updated and refined in the maps.

Prior to this, EPA was technologically unable to release all its ESA Geographic Information System (GIS) data because of the amount of data involved, but advances in technology have allowed EPA to overcome this problem. The maps allow anyone to access the GIS data online, and are particularly useful for federal, state, and local governments, tribal partners, environmental organizations, and pesticide registrants who want to conduct their own endangered species analysis.

Users will have access to information that may be incorporated into future ESA evaluations. EPA will update the spatial data it uses for its ESA analyses on a regular basis and will post updates as they occur. Visit [EPA's website](#) to learn more about these new maps and how to use them.

## EPA FIFRA SAP on Atrazine Conducted on August 22 – 24

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) provides independent scientific advice to the EPA on health and safety issues related to pesticides. There was a call for nominations this summer for an SAP on the **“Examination of Microcosm/Mesocosm Studies for Evaluating the Effects of Atrazine on Aquatic Plant Communities”**.

Four of the nine members selected for the panel included the following WSSA and/or APMS members: 1) **Aaron Hagar**, University of Illinois; 2) **Jay Ferrell**, University of Florida; 3) **John Madsen**, retired USDA-ARS, and 4) **Kurt Getsinger**, US Army Corps of Engineers. The SAP took place August 22-24. There was excellent dialogue and a great [white paper](#) on the 11 atrazine studies in question. The SAP is currently deliberating and writing their final recommendations for EPA. More info at: <https://www.regulations.gov/search?filter=EPA-HQ-OPP-2023-0154>

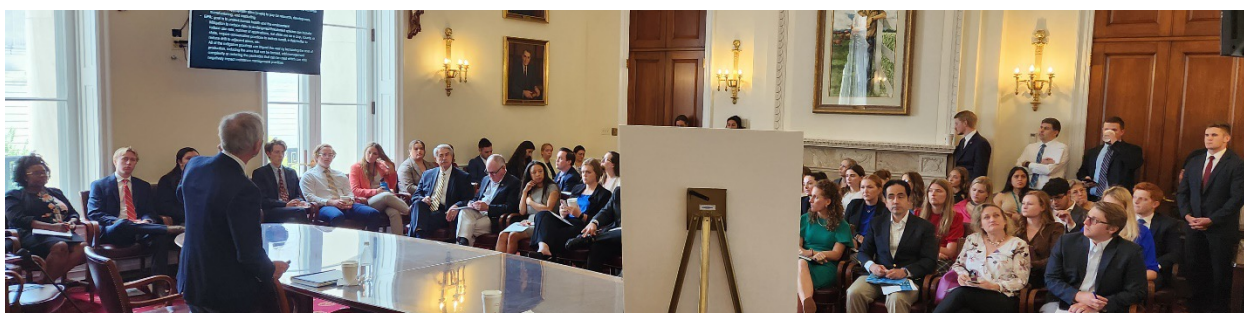
# Science Policy Report



[Continued]

## Culpepper and Chism Present Capitol Hill Seminar on Endangered Species Issues

On July 11, approximately 70 Congressional staffers and interested stakeholders attended a seminar in the House Agriculture Committee hearing room titled: **“Protecting Endangered Species While Feeding the World.”** The seminar was presented by Dr. Stanley Culpepper and Dr. Bill Chism and organized by me through WSSA’s membership in the National Coalition for Food and Agricultural Research (NCFAR).



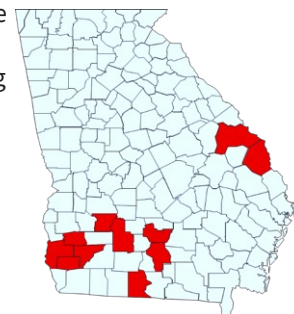
Dr. Bill Chism, chair of WSSA’s Endangered Species Committee, talks to Hill staffers about “Protecting Endangered Species While Feeding the World.” (Not pictured: Stanley Culpepper)

The event sponsors were: WSSA, the National Association of State Departments of Agriculture (NASDA), the Extension Committee on Organization and Policy (ECOP), CropLife America (CLA), and Syngenta. Additional collaborators were the National Corn Growers Association (NCGA) and the American Soybean Association (ASA).

### One-Page Leave Behind:

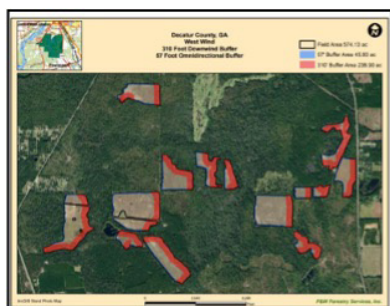
Fifty years ago, the **Endangered Species Act (ESA)** was signed into law to protect and conserve imperiled species from extinction. Few understand the complexities and challenges associated with this Act and how it potentially threatens agriculture, family farm sustainability, and having an ample supply of food, feed, and fiber needed by humankind.

In an abundance of caution to protect species listed under the ESA and help minimize the risk of litigation, the **U.S. EPA has been inserting large spatial buffers** on certain pesticide labels that restrict applications in counties where listed species **may be present**. For example, an herbicide was eliminated from use on approximately one million acres in 11 counties in Georgia.



**County-wide restrictions**

However, after further research, only 0.37 percent of the total acres in those counties represented suitable habitat. Although the effort of protection is important and supported by agriculture, current label restrictions are excessive in some situations as restrictions are not based on high-resolution data where a species likely occurs nor where and how pesticides are applied.



**In-field downwind buffers (in red)**

While entire counties have been removed from some product labels, EPA has also imposed in-field restrictions to mitigate **potential** off-target movement such as

# Science Policy Report



[Continued]

conservation practices to reduce runoff and no-spray buffers to reduce spray drift. For example, some required downwind buffers could eliminate as much as 49.6% of the field from a product application. These restrictions are preventing the use of tools needed to control threatening weedy pests in fields that are nowhere near the documented historical habitats of concerned species.

As the **number of farms decline** rapidly and the **loss of U.S. agricultural land** exceeds 200 acres every hour, there is an expectation that we will need to **produce 70% more food** by 2050 to sustain a growing population. This monumental task will only be accomplished if economically effective tools are available helping farmers prevent pests from stealing food, feed, and fiber. Methods developed from sound science can protect both concerned species and agriculture; in fact, protecting agriculture is the key to providing healthy habitats for wildlife. **Funding is needed to help educate farmers on ways to protect endangered species, create better maps of where species occur, and research additional ways to reduce the risks from pesticides.**

## EPA Did Not Find PFAS in Pesticide Products Tested

On May 30, EPA released a summary of the laboratory analysis of 10 pesticide products reported to contain per- and polyfluoroalkyl substances (PFAS) residues. **EPA did not find any PFAS in the tested pesticide products**, differing from the results of a published study in the Journal of Hazardous Materials. EPA also released its newly developed and validated analytical methodology used in the testing process alongside the summary of its findings. EPA is confident in the results of this newly released method, which is specifically targeted to detect the presence of PFAS in pesticide products formulated with surfactants.

Since learning about potential PFAS contamination in a small number of mosquitocide products in September 2020, EPA has taken a number of steps to address this issue. This includes [releasing data in March 2021](#) that preliminarily determined that PFAS in those specific products was most likely formed from a chemical reaction during the container fluorination process which then leached into the pesticide product, [releasing another study in September 2022](#) testing the leaching potential of PFAS over a specific time into test solutions packaged in different brands of HDPE fluorinated containers, and [notifying manufacturers \(including importers\), processors, distributors, users, and those that dispose of fluorinated HDPE containers and similar plastics](#) that the presence of PFAS formed as a byproduct in these containers may be a violation of the Toxic Substances Control Act.

Following that notification, the Department of Justice, on behalf of EPA, filed a complaint against Inhance, the company that manufactured the plastic mosquitocide containers in which PFAS was found, for its failure to comply with TSCA's notice, review, and determination requirements prior to manufacture.

As a continuation of these ongoing efforts, EPA has completed its verification analysis of a study published in September 2022 in the Journal of Hazardous Materials entitled "[Targeted analysis and Total Oxidizable Precursor assay of several insecticides for PFAS.](#)" This study reported the presence of PFOS in six of 10 pesticide products tested. EPA evaluated the 10 pesticide products included in this study using two different test methods to detect PFAS. The first method was developed by the Agency to specifically measure PFAS in pesticide samples containing surfactants and non-volatile oils, and the second method was used in the study published in the Journal of Hazardous Materials.

EPA obtained samples of the specific pesticide products from the study author and purchased additional products with the same EPA registration numbers on the open market to conduct analyses. EPA tested all samples using both methods and did not detect the presence of PFOS, nor any of 28 additional PFAS it screened for, above the lowest level that our lab instruments can detect (0.2 parts per billion) in any of the pesticide products using either method of detection. The equipment and methodology used by EPA would have shown PFAS detections if present in those pesticide products given that their level of detection (LOD) is 2,500 times more sensitive than the LOD reported by the equipment used by the study author.

EPA requested additional information, including raw data from the study author, but did not receive any beyond the published results.

# Science Policy Report



[Continued]

EPA's study [report](#) contains additional scientific details regarding how the two methods differ and the significance of using the Agency's new method when testing these specific formulations.

One of the most important differences between the two methods is that EPA's [method](#) ensures accurate measuring of PFAS by eliminating interference from the oils and surfactants present in these formulations which can result in false positive detections.

EPA will continue to invest in scientific research to fill gaps in understanding of PFAS, to identify which PFAS may pose human health and ecological risks at which exposure levels and develop methods to better test and measure them.

## A Future Without Glyphosate Report

A [new study](#) from Aimpoint Research finds that if glyphosate were no longer available, U.S. farmers would bear the burden of increased input and operating costs, with small farmers disproportionately affected. Further analysis reveals a cascading chain of likely higher-order effects and unintended consequences, the most impactful being the rapid release of additional greenhouse gases and the reversal of decades of conservation and sustainability gains. Key points from the report:

- Farmers' profits fall as labor costs rise and they turn to more expensive glyphosate alternatives.
- Use of alternatives would represent a 2-2.5X increase in cost/acre while switching to tillage could increase production costs by \$1.9B+
- Small farmers are hit the hardest by decreased profits.
- Costs to consumers rise as food prices experience marginal, inflationary pressures.
- CO2 emissions and fuel use increases

A Future Without Glyphosate: <https://report.aimpointresearch.com/>

## USDA-ARS NPL Steve Young Publishes Quarterly Weed Science Newsletter

Dr. Steve Young, National Program Leader (NPL) for Weeds and Invasive Species at USDA-ARS is now publishing a quarterly newsletter about [ARS weed science research news and highlights](#). It's an excellent short read on current weed science research, events and announcements such as recent ARS weed science hires, as well as completed searches and current openings.

### Recent Hires

- Mark Bernards – ARS [Soil Management Research Unit](#), Morris, Minnesota
- James Kim – ARS [Sugarbeet and Potato Research Unit](#), Fargo, North Dakota
- Dale Halbritter – ARS [Invasive Plant Research Lab](#), Fort Lauderdale, Florida

### Completed Searches

- Chemist – ARS [Natural Products Utilization Research Unit](#), Oxford, Mississippi
- Weed Scientist – ARS [Crop Production Systems Research Unit](#), Stoneville, Mississippi
- Research Leader – ARS [Invasive Plant Research Lab](#), Fort Lauderdale, Florida

### Current Openings

- Weed Ecologist – ARS [Columbia Plateau Conservation Research Center](#), Pendleton, Oregon (TBD)
- Weed Scientist – ARS [Northwest Sustainable Agroecosystems Research Unit](#), Pullman, Washington (TBD)

Download the [Summer 2023 ARS Weed Science Newsletter](#) or [Subscribe to Newsletter](#).

# Science Policy Report



[Continued]

## WSJ - Why Grass Is a Culprit in Some of the World's Worst Wildfires

In Maui, abandoned pineapple and sugar-cane fields filled up with flammable invasive grasses. By Daniela Hernandez, Wall Street Journal, Aug 22, 2023. 4 min, 7 sec. (best on Chrome) <https://www.wsj.com/video/series/daniela-hernandez/why-grass-is-a-culprit-in-some-of-the-worlds-worst-wildfires/0AF272ED-97BA-472C-8559-24171F997763>

## 9 Stakeholders Seek Funding for U.S. DOT Invasive Plant Elimination Program

The six national and regional weed science societies are signatories on a [letter to Congress](#), which requests \$10 million to start a pilot program for the Invasive Plant Elimination program authorized in the 2021 Infrastructure bill. The letter is addressed to House and Senate Appropriations Subcommittee for Transportation leadership. The [Invasive Plant Elimination Program](#) was authorized in the 2021 Infrastructure Law at \$50 million annually from FY 2022 – 2026, but has not been appropriated any money yet. We are requesting \$10M to start a pilot program. [Link to PDF](#).

Lee Van Wychen, Ph.D.  
Executive Director of Science Policy  
Weed Science Society of America  
5720 Glenmullen Pl, Alexandria, VA 22303  
Cell: 202-746-4686

## National and Regional Weed Science Society Meetings

- Dec. 11 - 14, 2023 North Central Weed Science Society (NCWSS), Minneapolis, MN - [www.ncwss.org](http://www.ncwss.org)
- Jan. 8 - 11, 2024 Northeastern Weed Science Society (NEWSS), Boston, MA - [www.newss.org](http://www.newss.org)
- Jan. 22 - 25, 2024 Southern Weed Science Society (SWSS), San Antonio, TX - [www.swss.ws](http://www.swss.ws)
- Jan. 22 - 25, 2024 Weed Science Society of America (WSSA), San Antonio, TX - [www.wssa.net](http://www.wssa.net)
- Feb. 26–Mar. 3, 2024, 25th National Invasive Species Awareness Week, Washington DC - [www.nisaw.org](http://www.nisaw.org)
- Mar 4 - 7, 2024 Western Society of Weed Science (WSWS), Denver, CO - [www.wsweedscience.org](http://www.wsweedscience.org)
- Jul. 14 - 18, 2024 Aquatic Plant Management Society (APMS), St. Petersburg, FL - [www.apms.org](http://www.apms.org)

# Sustaining Members

***APMS wishes to express our gratitude to our Sustaining Members for their support during the 2023-2024 period. Sustaining Members play a crucial role in the success and sustainability of organizations like APMS.***

***If you're interested in learning more about what Sustaining Membership entails or if you want to become a Sustaining Member yourself, you can visit the following link for more information: [APMS Sustaining Members](#).***

***Sustaining Memberships often come with benefits like increased visibility, networking opportunities, and a deeper connection with the organization, so it can be a rewarding partnership for both the organization and its supporters.***

***Thank you all for your support in 2023-24!***



[AgroShield](#) has been serving the Agriculture and Aquatic industries since 2015. Our Vodaguard product was developed to cure infections in the upper water column. Vodaguard's unique follow the bloom technology concentrates the cure where it is needed the most. Vodaguard C is a copper sulphate pentahydrate product. Vodaguard O is a sodium percarbonate that becomes hydrogen peroxide when introduced to water. Both products have a patented formulation that allows them to be buoyant for 24 to 36 hours. Reduces manpower, machinery, and un-necessary product which reduces cost. Please visit us at: <https://www.agro-shield.com/our-products/algacides>.



Since 1981, [Applied Aquatic Management, Inc.](#), (AAM) has provided innovative and effective water management services, selective vegetation control, wetland management and exotic weed control. AAM has clients throughout Florida including developers, homeowners associations, golf courses, mobile home communities, utilities, local, state and federal government agencies and industry. Our experienced professional staff provides unique knowledge along with advanced equipment to manage all types of waterway, right-of-way, wetland, and upland systems.



[AquaTechnex, LLC](#) is a lake and aquatic plant management firm that operates in the Western United States. The company is expert in the use of aerial and boat GIS/GPS technologies to assess aquatic environments. The firm is also expert in the management of invasive aquatic weed species and phosphorous mitigation to suppress toxic cyanobacteria blooms. Our web site is [www.aquatechnex.com](http://www.aquatechnex.com); please drop by regularly to get news updates as we have moved our blog onto the site.



# Sustaining Members



[Aquatic Control, Inc.](#) has been managing aquatic resources since 1966. As a distributor of lake management supplies, floating fountain aerators, and diffused aeration systems, Aquatic Control represents all of the major brands of quality supplies and equipment.

Aquatic Control has eight offices that offer aquatic vegetation management services including vegetation mapping, application services, fountain and aeration system installation, equipment maintenance, and factory-trained service and warranty repair throughout the Midwest. Harmful Algae Bloom monitoring programs with our in-house laboratory allow us to customize treatment plan design through control of the algae causing taste and odor or toxin production issues.



[Aquatic Vegetation Control, Inc.](#) (AVC) is a Florida corporation founded in 1986 offering vegetation management and general environmental consulting services throughout the southeast. Since its establishment as an exotic/nuisance vegetation management company specializing in the control of invasive wetland, aquatic and upland species, AVC has broadened its scope of capabilities to include; certified lake management, fish stocking, re-vegetation, mitigation and restoration services, mitigation monitoring services, aquatic, roadside, forestry and utility vegetation management, and environmental/ecological consulting.



[Atlantic-Oase](#) is a proud member of the Oase Group, the global leader of the Water Feature industry. We offer a continuously growing roster of

the most respected products in the world. From enchanting Fountain and Water Entertainment systems of every size imaginable, to innovative Formal Spillways, Spouts and WaterWalls, we offer unique products for the hardscape. From the strongest Pond-free Vaults, Eco- Blox and FastFalls to the most advanced filtration products, we satisfy the most demanding landscaper and hobbyist. We also design, build and bring to market the most extensive line of water garden and fountain pumps, along with dependable aeration products, pond accessories and lighting systems.



[Black Lagoon](#) advocates for a proactive and integrated approach to waterbody management. We mitigate conditions impacting water quality, land use, ecosystem balance, property value, recreation, and overall aesthetics by implementing technically sound management programs. We establish connected, long-term relationships with our clients to manage the water

quality challenges faced by their lakes, ponds, and wetlands...because everybody deserves clean, safe, enjoyable water.



[Brewer International](#) is a reputable manufacturer of aquatic and land management adjuvants that has been providing distribution services nationwide for over 40 years, with its headquarters located in Vero Beach, Florida. The company specializes in producing surfactants designed to improve pesticide penetration, wetting, bonding, and drift control. Our products are widely utilized by aquatic and land managers across the country to enhance pesticide uptake,

thereby increasing efficiency while reducing the chemical footprint in natural environments. As a family-owned business, Brewer International is committed to producing only the highest- quality products and has consistently invested in product development and manufacturing innovation to provide its distribution partners with the best possible value. We take great pride in our reputation as a reliable partner, providing superior quality products that meet and exceed industry standards.



[Chem One](#) is a national leader of Organic Copper Sulfate for aquatic management. With eight standard EPA label grades; Fine 20, 25, 30, 100, 200,

Small, Medium and Large. Chem One has a grade to meet every customer's needs. With our corporate offices and 78,000+ square foot warehouse in Houston, Texas, Chem One is a national wholesale company that is certified to ISO 9001, ISO 14001, OHSAS 18001.

# Sustaining Members



scientifically sound results.

[Compliance Services International](#) (CSI) is a leading regulatory consultancy providing innovative solutions for organizations faced with regulatory and environmental challenges. CSI's experienced scientists and regulatory specialists in the USA and the EU provide innovative approaches to solving regulatory and environmental challenges – combining traditional sciences with developing technologies to deliver economically sensible and



[Cygnet Enterprises, Inc.](#) is a national single source distributor of aquatic management products with offices and warehouses in Michigan, Indiana, Pennsylvania, North Carolina, California and Idaho. Cygnet is proud of its reputation for outstanding service, friendly, knowledgeable staff and our unmatched support of the aquatics industry. Cygnet Enterprises is the only aquatic distributor at the Charter Gold Member level in the Aquatic Ecosystem Restoration Foundation (AERF).



[Duke Energy](#) “Building a smarter energy future”. Duke Energy (NYSE: DUK), a Fortune 150 company headquartered in Charlotte, N.C., is one of the largest energy-holding companies in the U.S. It employs 30,000 people and has an electric generating capacity of 51,000 megawatts through its regulated utilities, and 3,000 megawatts through its nonregulated Duke Energy Renewables unit. Duke Energy is transforming its customers' experience, modernizing the energy grid, generating cleaner energy, and expanding natural gas infrastructure to create a smarter energy future for the people and communities it serves. More information about the company is available at [duke-energy.com](#). Follow Duke Energy on Twitter, LinkedIn, Instagram and Facebook.



Since 1973, [Diversified Waterscapes](#), Inc. has offered lake management services and ecological products to professional applicators. Our proven field experience in pond and lake cleaning enabled us to develop an eco-friendly line of products that show dramatic results in any aquatic environment. With more than 45 years of experience, we have been providing aquatic treatment products and maintenance service for some of the world's best water features, including the famous Bellagio Fountain in Las Vegas – delivering clearly better results without harming the environment. Our mission is to combine extensive industry experience, mechanical aptitude and scientific knowledge to bring clarity, cleanliness and beauty to water features across the country.



[Lake Restoration](#), located in MN, has specialized in controlling pond weeds, lake weeds, and nuisance algae since 1977. Lake Restoration's product line-up includes: Mizzen, a copper based algaecide, Spritflo and Dibrox herbicides, a variety of pond dyes and nutrient reducers. Lake Restoration also manufactures the TORMADA product application boat, Vitaflume floating fountains, the retractable Goose D-Fence system, and the patented LAKEMAID to eliminate lake weeds automatically.



The [Lee County Hyacinth Control District](#) was formed by the Florida Legislature in June 1961 to curtail excessive growths of water hyacinth. That same year, water managers from across the state convened in Lee County and formed the Hyacinth Control Society, now APMS, to share control strategies and develop a comprehensive management approach to Florida's most prolific aquatic plant. T. Wayne Miller, Jr. of Lee County served as the Society's President for the first two years and Lee County has been a supporting member of

# Sustaining Members

APMS since its inception.



[Maxunitech](#) is an integrated enterprise focusing on the Research and Development, production, sales of agrochemicals, and relevant intermediates and other fine chemicals. Established in 2000, under the principles of “people oriented, united for innovation and pursue excellence,” we have been researching and developing new products, solving commercial issues from the perspective of technology, and fulfilling enterprise value with value added for our clients.



For more than 100 years we’ve been growing with you, bringing crop protection choices to our supply partners and the growers they serve. [Nufarm](#) solutions are developed and manufactured right here in America from three state-of-the-art US manufacturing facilities.



[Nutrien Solutions](#) is a full-service vegetation management company, providing innovative solutions and quality products for the aquatic plant management industry. The cornerstone of our success is our highly educated and trained field staff. With strong commitments to environmental stewardship, innovation, and technology, Nutrien Solutions provides customized programs tailored to specific locations throughout the U.S. We are the country’s leading vegetation management provider, and we’re excited to introduce you to everything Nutrien Solutions has to offer.



[SOLitude Lake Management](#) is a nationwide environmental firm committed to providing sustainable solutions that improve water quality, enhance beauty and preserve natural resources. SOLitude’s team of aquatic scientists specializes in the development and execution of customized lake, stormwater pond, wetland and fisheries management programs. Services include water quality testing and restoration, algae and aquatic weed control, installation and maintenance of fountains and aeration systems, shoreline erosion control, muck and sediment removal and invasive species management. SOLitude partners with homeowners associations, golf courses, private landowners, businesses and municipalities. For more information, visit SOLitude Lake Management at [solitudelakemanagement.com](http://solitudelakemanagement.com).



Invasive weeds can devastate both natural and commercial habitats. [Syngenta](#) provides high performance products to control destructive weeds while helping to restore the habitat of aquatic environments. Syngenta offers proven aquatic herbicides like Reward® and Tribune™ that provide fast burn-down, work well in cool weather and are rainfast in as little as 30 minutes. The active ingredient, diquat dibromide, has been used successfully in sensitive aquatic areas for over 25 years.



[UPL NA, Inc.](#) is a premier supplier of crop protection products and technologies designed for the agricultural, specialty, fumigation and aquatic markets. The Aquatics Division is part of the Environmental Solutions group which has manufactured aquatic herbicides and algaecides for the management of lakes, ponds, rivers and irrigation canals for more than 40 years. These products are marketed as Aquathol®, Hydrothol®, AquaStrike®, Current®, Symmetry®, Cascade®, Teton®, and Top Deck™. Most recently the development and commercialization of the ADAPT aquatic drone boat for improved application accuracy and efficiency was launched. With a customer-centric focus, UPL is committed to providing product stewardship and technical support to ensure your plant management operations are successful.

**Incorporated in 1961 as a forum to share water hyacinth control experiences, today APMS and its seven Regional Chapters promote research and outreach to manage all species of aquatic plants and algae.**



# General Info for Membership, Etc.

The Aquatic Plant Management Society, Inc. is an international organization of scientists, educators, students, commercial pesticide applicators, administrators, and concerned individuals interested in the management and study of aquatic plants and algae. The membership reflects a diversity of federal, state, and local agencies, universities and colleges around the world, corporations, and small businesses.

## VISION

The Vision of the Aquatic Plant Management Society is to be the leading international organization for scientific information on aquatic plant and algae management.

## MISSION

The Mission of the Aquatic Plant Management Society is to provide a forum for the discovery and dissemination of scientific information that advances aquatic plant and algae management policy and practice.

## STATEMENT ON EQUITY, DIVERSITY, & INCLUSION

Creating an atmosphere of inclusion is vital to the Aquatic Plant Management Society (APMS). Contributions and perspectives from all members, students, event participants, and our local and international communities are important. Diversity includes age, culture, disability, ethnicity, gender, national origin, color, race, religion, sexual orientation, and diversity of thoughts and ideas. We recognize that embracing and encouraging diversity is critical to fulfilling our mission to 'Provide a forum for the discovery and dissemination of scientific information that advances aquatic plant and algae management policy and practice'. APMS will strive to further cultivate a Society built on mentorship, encouragement, tolerance, and mutual respect, and foster a welcoming environment for all.

To join, visit this link: <http://www.apms.org/society/membership/>

To renew a membership, login and visit this link: <http://www.apms.org/member-login/>

Follow us on Social Media at:



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@APMS1961



APMS now has a Professional Organizational Page (@Aquatic Plant Management Society), as well as a Public Group

Many of our regional chapters are active on social media, too. Give them a like and a follow!