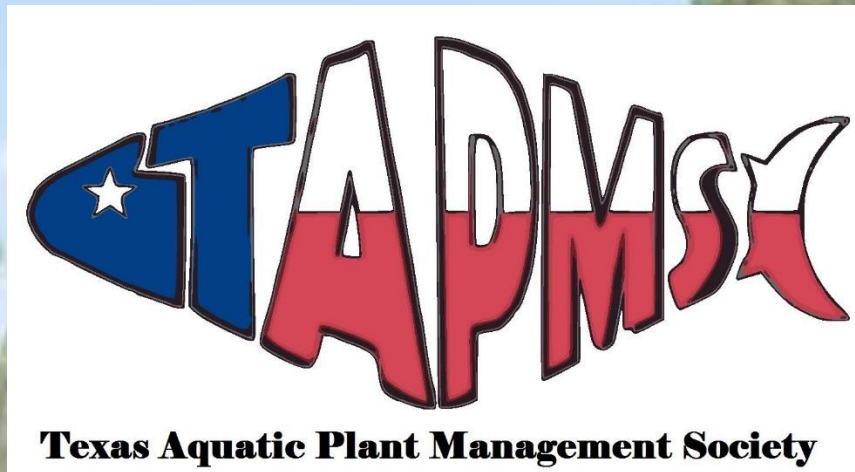


**2020 Annual Conference of the
Texas Aquatic Plant Management Society**



**Virtual
November 17, 2020**

ABOUT THE TEXAS AQUATIC PLANT MANAGEMENT SOCIETY (TAPMS)

The TAPMS is a sub-unit of the Aquatic Plant Management Society—an international organization of scientists, educators, students, commercial pesticide applicators, administrators, and concerned individuals interested in the management and study of aquatic plants. The Texas Aquatic Plant Management Society consists of aquatic vegetation management professionals, companies, researchers, students, and Extension specialists dedicated to aquatic vegetation management issues in Texas. Our focus is informing youth and adults about aquatic vegetation management and preservation of natural aquatic environments, including control of invasive aquatic plant species and conservation and propagation of native aquatic plant species including rare or threatened species.

Webpage: <http://www.tapms.org>

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Special Acknowledgments: The 2020 Texas Aquatic Plant Management Society Annual Conference would not have been possible without the efforts of Bill Torres (TAPMS Executive Director), the TAPMS Board of Directors, and the many presenters who helped to make this conference an outstanding event. We are especially grateful for the support of our conference sponsors, which are acknowledged in this program.

AGENDA

TUESDAY - NOVEMBER 17, 2020

- 12:00 PM Presidents introduction and TAPMS board member nominations
- 12:05 PM John Findeisen and Monica McGarrity- Statewide Integrated Pest Management of Aquatic and Riparian Invasive Species (1 IPM CEU)
- 1:00 PM 5 Min break/Sponsor Spot, Poll questions on Presentation 1
- 1:05 PM Chris Smith- Drift Minimization: Maximizing your chemical investment (1 Drift CEU)
- 2:00 PM 5 min Break/Sponsor Spot, Poll questions on Presentation 2
- 2:05 PM David Buzan- Golden Algae – Toxic Fish Killer in Texas (1 General CEU)
- 3:00 PM Break/Sponsor Spot, Poll questions on Presentation 3 and Poll for TAPMS board member selection
- 3:05 PM Monica McGarrity- Integrated Pest Management of Nuisance Aquatic Vegetation in Texas (1 IPM CEU)
- 4:00 PM Break /Sponsor Spot, Poll questions on Presentation 4 and Poll for TAPMS board member selection.
- 4:05 PM Casey Williams- An Overview of Important Aquatic Plant Families in Texas and Comparisons in Field Identification (1 General CEU)
- 5:00 PM Poll questions on Presentation 5. Closing statements and voting results for TAPMS board member nominations

PRESENTATION ABSTRACTS

Abstracts are listed alphabetically by presenting author last name.

** Indicates student presenter*

^{CEU} indicates attendance credit of 1.0 CEU

CEU

Statewide Integrated Pest Management of Aquatic and Riparian Invasive Species

John Findeisen and Monica McGarrity

This presentation will provide an update on Texas Parks and Wildlife Department's aquatic vegetation and invasive species management efforts in Fiscal Year 2020 (Sept. 2019 – Aug. 2020), with a focus on implementation of an Integrated Pest Management (IPM) strategy. Texas' IPM strategy employs a combination of prevention, herbicide treatments, biological control efforts, and outreach for not only prevention but also to promote environmental stewardship (e.g., enhancing creek health) and involvement in citizen science monitoring efforts. Early Detection and Rapid Response (EDRR) capacity is vital to efforts to monitor for new infestations of the most problematic species such as giant salvinia (*Salvinia molesta*) and zebra mussels (*Dreissena polymorpha*) and mount a rapid response when feasible. Management efforts continue to focus on floating, aquatic invasive plants and riparian invasive plants that crowd or shade out native plants, degrade habitat for fish and wildlife, and inhibit boater access. Management of aquatic and riparian invasive species using an IPM approach plays a key role in conserving Species of Greatest Conservation Need (SGCN) and providing hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

^{CEU}Drift Minimization: Maximizing your chemical investment... When bad things happen to good droplets

Chris Smith

There is a need to make sure spray applications reach their target. Maximum coverage is needed for optimal pesticide performance. Maximum coverage is needed to reduce the movement of pesticides to non-target areas. There are many factors that affect whether a spray application reaches its target. Actions can be taken to reduce spray movement and ensure spray applications reach their target. Topics covered in this presentation include: What is spray drift? Why is reducing drift important? What factors affect drift? What can be done to limit spray drift?

^{CEU}Golden Algae – Toxic Fish Killer in Texas

David Buzan

“Golden algae, *Prymnesium parvum*, was first identified as a causative agent for a major fish kill in the Pecos River in Texas in 1985. Historical fish kill records indicate a large fish die-off in the Pecos River on the Texas-New Mexico border and in Red Bluff Reservoir was also caused by golden algae. Since that time, golden algae has spread to the Colorado and Brazos river basins, killing tens of millions of fish in major reservoirs like Possum Kingdom, Granbury and Whitney. It is now recognized as a fish killer in a number of states in the continental U. S. Originally recognized as a brackish algae, it gained fame in the 1960's and 70's killing fish in brackish water aquaculture ponds in Israel. Although it has been found in other environments (coastal waters of Texas and some east Texas reservoirs) it seems to cause fish kills in higher conductivity/higher pH water bodies.

David Buzan (Continued)

David Buzan has investigated golden-algae caused fish kills across the state since 1985. He currently analyzes water samples from private ponds experiencing fish kills to determine if golden algae caused the fish kills. He sees golden algae fish kills occurring in ponds fed with brackish groundwater in south Texas. These kills typically occur from the spring into the summer. Some of his clients have also seen golden algae fish kills in ponds fed with brackish water from the upper Brazos River.

Texas Agrilife describes a number of treatment options for the control of golden algae in private ponds and lakes. Researchers at Texas Tech are investigating the use of extracts from giant cane as possible chemical controls. In this session, David will review the history of golden algae kills, golden algae biology, and observations on different control options like water quality management, liquid shades and chemical controls.”

^{CEU}**Integrated Pest Management of Nuisance Aquatic Vegetation in Texas**

Monica McGarrity

Control of nuisance aquatic vegetation in Texas waters often requires an integrated pest management approach with the best control method being identified and used for the individual situation. Nuisance aquatic vegetation management in Texas—regardless of method—must be done in accordance with the State Aquatic Vegetation Plan following key treatment approval and/or permitting processes for most activities. This presentation will discuss integrated pest management strategies and provide detailed guidance on understanding and navigating these requirements for implementing chemical, mechanical, biological, or cultural control methods in compliance with the state plan to successfully manage aquatic plants.

^{CEU}**An Overview of Important Aquatic Plant Families in Texas and Comparisons in Field Identification**

Casey Williams

The term “aquatic plant” is broad and covers a wide range of vascular plant families some of which share very similar characteristics between their aquatic representatives. In this presentation I will cover the fundamental points on what constitutes an “aquatic plant”. Knowledge of lifecycle strategies, morphological characteristics and growth habits are all important for understanding what an aquatic plant is. I will also highlight and discuss some of the more important aquatic plant families in Texas (examples include the milfoil family, frogbit family, waterlily family and primrose family and more) and representative species from each family to help reinforce field identification between families, especially species that look similar but belong to different families, as well as comparison of species within families.