



PONDerings®

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BENEFITS OF CONTROLLING NUISANCE AQUATIC PLANTS & ALGAE IN THE UNITED STATES

Dr. John A. Rodgers Jr., Ph.D., Clemson University

- Abundant water resources are essential to the well-being of the United States.
- Nuisance aquatic plant habitats can become too dense for optimal growth and survival of many aquatic animals.
- Invasive plants and algae have become major threats to rivers, lakes, wetlands, and riparian ecosystems.
- We must recognize that managing nuisance aquatic vegetation is, in reality, managing water.
- When invasive species grow too abundantly, they displace the resident native plants, upsetting the balance of ecosystem services provided by healthy water bodies.
- Aquatic plants can harbor disease-causing organisms that adversely affect human health or may affect people more directly.
- Algae-producing toxins in freshwater are prevalent and can cause restrictions in drinking water supplies and contact recreation such as swimming.
- Numerous diseases are known to be exacerbated by excessive growths of aquatic weeds.
- Aquatic weeds are often important for optimal breeding conditions for mosquitos and provide food and shelter from predators.
- Left unmanaged, nuisance aquatic vegetation can completely shut down boating activity.

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Benefits of Controlling Nuisance Aquatic Plants and Algae in the United States

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- Aquatic invasive species can depress land values and decreased property values often leave families "under water" in their home mortgages.
- Nuisance plants and algae have the ability to negatively impact aquatic communities and habitat in primarily four ways: (1) structurally changing habitat through fast growth rates, greatly increasing populations and biomass; (2) dominating the capture of energy from sunlight; (3) stabilizing and limiting water exchange processes; and (4) producing large amounts of dead plant material, or detrital matter.
- Freshwater provides the very basis of human health, ecological sustainability, and economic and homeland security.
- The detrimental effects of weeds on human water uses can be ameliorated and in some instances eliminated through management.
- Fishing is a significant part of recreation expenditures, and anglers have a unique view of aquatic weeds.
- On an annual basis, hundreds of millions of dollars in damages are caused by invasive aquatic vegetation.

Conclusion

How important is water? Life depends on it. Freshwater is arguably mankind's most precious commodity. The increasing scarcity of clean freshwater-through population growth and development, droughts, contamination, and other factors-places greater demands on the very foundation of society. Unfortunately, invasive plants and algae are progressively disrupting the ecological balance required for maintaining adequate freshwater resources-for flora, fauna, and humans. Once established and thriving, these plant infestations are threatening the long-term fitness and biodiversity of rivers, lakes, and wetlands. Their growth and spread do not respect "political" boundaries because watersheds can traverse many states, counties, and municipalities within broad regions of the United States.

Clearly, a sustainable civilization is contingent on clean and abundant freshwater resources. People must make the protection and conservation of these resources a top priority for the future. **Managing nuisance aquatic vegetation will be an increasingly important part of that priority.**

This commentary consists of excerpts from CAST; to view article in its entirety, visit the CAST website (www.cast-science.org) and click on Publications.



Dr. John A. Rodgers Jr., Ph.D. is a renowned water quality expert with Clemson University.

Your AQUA DOC® TEAM



"Don't let Phosphorus blow your pond!"



PHOSPHORUS An Explosive Element

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Phosphorus is also used to make weapons such as incendiary bombs. The head of a matchstick is comprised of phosphorus. At our 4th of July celebrations phosphorus is a key ingredient in fireworks!

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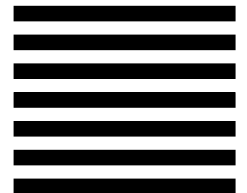
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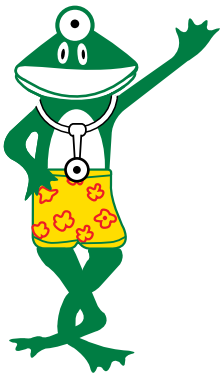
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