

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

Invasive plants and algae have become **major threats** to rivers, lakes, wetlands, and riparian ecosystems.

- Once established in their new environment, they easily spread within and between water bodies, infest nearby watersheds, and disrupt the ecological status quo.
- Thousands of acres across the country are being degraded at an annual cost of tens of millions of dollars.
- Every watershed in the United States is at some level of risk.

Aquatic plants can **harbor disease-causing organisms** that adversely affect human health.

- Aquatic plants have entangled swimmers and caused or contributed to drowning.
- Toxin-producing cyanobacteria are a serious and emerging issue for freshwater resource managers.
- Approximately 50 species of cyanobacteria produce freshwater toxins that are harmful to vertebrates, including humans.

In the United States, **invading alien species** (plants and animals) cause major ecological damages and economic losses estimated at almost \$120 billion per year.

- A major portion of commercial freight moves by water, and nuisance aquatic plants can interfere with movement of those goods.
- Direct impacts of nuisance aquatic plants to hydropower production include clogging turbines and penstocks, which increases costs of electricity to consumers.
- Lakes and reservoirs support a myriad of water-associated recreation.



Nuisance plants and algae have the ability to **negatively impact** aquatic communities and habitat in primarily four ways:

- Structurally changing habitat through fast growth rates, greatly increasing populations and biomass.
- Dominating the capture of energy from sunlight [outcompeting valuable native plants].
- Stabilizing and limiting water exchange processes [impairing water quality].
- Producing large amounts of dead plant material [which can degrade dissolved oxygen levels].

The **detrimental effects of weeds** on human water uses can be ameliorated and in some instances eliminated through [proactive and prudent] management.

- Drinking water supplies, water-based recreational activities, agricultural irrigation systems, and industrial water intakes depend on consistent and effective aquatic plant management programs.
- The most widespread management technique involves the use of environmentally compatible chemical herbicides [but other nonchemical techniques can help suppress plant growth].
- It should be noted that rapid-response approaches to eliminate pioneer infestations are becoming more accepted and that there are a few instances of active “eradication” programs.
- People must make the protection and conservation of [freshwater resources] a top priority for the future.

Experts to Contact for More Information:

Kurt Getsinger (Kurt.D.Getsinger@usace.army.mil); Eric Dibble (edibble@cfr.msstate.edu); John Rodgers (jrodger@clemson.edu); David Spencer (dfspencer@ucdavis.edu)

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