

AQUATIC PLANT MANAGEMENT TECHNIQUES



Photograph by: Chelsea Bohaty

BIOLOGICAL, CHEMICAL, MECHANICAL, PHYSICAL AND INTEGRATED CONTROL TECHNIQUES

Invasive plant management is a big issue in Florida. State agencies, the federal government, water management districts, counties and cities spend \$54-\$56 million annually to manage invasive aquatic and upland plants. These entities work together using a variety of tools to combat invasive plant species.

Biological Control

Biological control agents are insects, fish or pathogens that target a specific invasive plant and increase the competitive advantage of native plants. The development of a successful biological control agent begins with rigorous procedures for identifying and testing potential organisms. Development requires a significant amount of resources and involves international cooperation. Though many candidates fail to meet the criteria and are never released, successful agents can produce effective results. A few successful biological control agents include grass carp, and alligator weed flea beetles.

Chemical Control

Chemical control refers to the use of specially formulated pesticides to manage plants. All pesticides must complete a multi-year review by the United States Environmental Protection Agency, the Florida Department of Agriculture and Consumer Services and are rigorously tested by universities. These products are then re-reviewed at regular intervals to ensure their safety in the environment. State and federal laws require pesticide users to explicitly follow label directions and participate in continuing education.

Mechanical Control

Mechanical control refers to the use of machinery designed to cut, shear, shred, crush, press, lift, convey, transport, and remove invasive plants and associated organic material from water bodies. Mechanical controls range from shredders, small cutting boats to 90-foot long harvesters to track hoes and drag lines stationed on shorelines or mounted on barges that lift plants and debris out of the water.

Physical Control

Physical control in invasive plant management refers to the physical manipulation of plants or their habitat. This approach includes a number of different techniques such as pulling plants out of the water by hand; hand-netting floating plants and plant fragments; cutting them with a hand-held blade; or controlling them with environmental alterations such as water level manipulation, bottom barriers or prescribed fire.

Integrated Plant Management

Integrated plant management programs use a combination of control methods described above. This type of management requires continual ecosystem evaluation in order to weigh the pros and cons of each management method and combination.

FOR MORE
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