



Controlling Invasive Aquatic Plants

SUPPORT funding for U.S. Corps of Engineers' aquatic plant control and research programs

SUPPORT & CO-SPONSOR S.725, National Aquatic Invasive Species Act of 2007

SUPPORT & CO-SPONSOR H.R.260, Aquatic Invasive Species Research Act

SUPPORT H.R.2643, Interior Department budget, including programs under the U.S. Geologic Survey

The spread of invasive aquatic plants is creating serious problems for Texas water bodies and the people who depend on them. These plants significantly reduce available water supplies, choke waterways, interfere with power generation and agricultural irrigation, degrade water quality, and have contributed to some drowning deaths. They make boat travel and recreation dangerous, while threatening the health of native plants and animals that keep Texas unique.

Federal help is needed to address problems caused by invasive plant species through (1) financial assistance with operational control of existing problems and (2) technical assistance in developing and implementing scientifically sound, ecosystem-based management strategies for restoring native plant communities in weed-infested water bodies. The U.S. Army Corps of Engineers, through its Aquatic Plant Control (APC) Program and Aquatic Plant Control Research Program (APCRP), has the mission and the mandate to satisfy both needs.

The Corps' APC program has not been funded in recent years; in the past it has provided both funding and technical support for aquatic plant management operations in cost-sharing states, including Texas. The Corps' ARCRP, the only federally authorized research program for aquatic plant management, provides an ecosystem-based approach that seeks to integrate the use of biological, chemical, mechanical, and cultural controls to eliminate or greatly reduce the problematic non-native plants while promoting the establishment of beneficial native plants.

Executive Order 13112, adopted in 1999, created the National Invasive Species Council to coordinate the invasive species programs that are spread through 40 different federal agencies and to work with state, local, and private organizations on this critical area.

Here's a snapshot of the devastation across Texas:

Caddo Lake – This “mystical preserve of centuries-old mossy cypress breaks, teeming fisheries and waterfowl habitats is under siege,” says the *New York Times*, “by a fast-spreading, Velcro-like aquatic fern, *Salvinia molesta*, also known as Giant *Salvinia*.”¹ Recent surveys of this rare natural lake on the Texas-Louisiana border have tallied the extent of the problem: an estimated 4,184 acres of hydrilla, 3,663 acres of water hyacinth, and 700 acres of Giant *Salvinia*. The last, a native of South America, “can double again in size in less than a week, choke out all sunlight and deprive the water below it of oxygen, effectively crowding out all other marine life.”²

Rio Grande – The liquid border between Texas and Mexico is the source of irrigation for the billion-dollar agricultural industry in the Rio Grande Valley, as well as domestic, municipal, and industrial uses. Already strained by population growth and agricultural needs on both banks, the Rio Grande and its reservoirs endure an onslaught of invasive plants. The banks of the Upper Rio Grande, from El Paso to the Big Bend, are being sucked dry by salt cedar, which draw enormous amounts of water from the ground and drop salt-laden leaves on the ground, further damaging the ecosystem. The Middle Rio Grande, from Del Rio to Zapata, suffers from giant cane and water milfoil. The Lower Rio Grande, from Lake Amistad to the Gulf of Mexico, has been clogged with hydrilla and water hyacinth. In recent years, the Rio Grande Watermaster had to release 20 to 25 percent more water from Falcon Reservoir to push water past blockages in the middle of the river to irrigators.

Exotic *Arundo donax* (“Carrizo cane”), an excessive consumer of water, is reaching extreme densities along the Rio Grande and its tributaries as well as in the Colorado and Nueces watersheds. Because the weed is so widespread over such a large area, biological control is the most practical solution.

Invasive Aquatic Plants, *continued*

Lower Colorado River – The Colorado River, from the Highland Lakes to the Gulf Coast, has infestations of hydrilla, water hyacinth, Eurasian water milfoil, and Southern Naiad. The Lower Colorado River Authority spends up to \$100,000 each year trying to control these species. These plants have caused drownings, temporary power shutdowns, clogging of intakes at hydrogeneration units, and turbine damage at a major dam in Austin.

West Texas – The Canadian River Municipal Water Authority is reducing water allotments to 11 Panhandle towns because of extremely low water levels in Lake Meredith, a problem compounded by water lost to 7,800 acres of salt cedar. Salt cedar is depleting other reservoirs that communities depend on for water supply, including Hubbard Creek Reservoir near Abilene. Studies estimate a single salt cedar tree can consume 200 gallons of water per day.³ Salt cedar also affects water quality by increasing salinity levels in the soil, watershed runoff, and streams and lakes. Lakes infested by salt cedar may require more advanced – and costly – treatment processes to meet drinking water standards.

Pecos River – The upper reaches of the Pecos River in Texas, says Texas A&M researchers, “now resemble a very poor quality creek rather than a river.”⁴ Nearly 10,000 acres along the Pecos River and nearly 13,000 acres in the Pecos River Valley have been treated for salt cedar infestation. These plants deplete the river flow, lower the water table, and increase sediment production.

Toledo Bend Reservoir – This 65-mile long reservoir along the Texas-Louisiana border is the largest reservoir in the South and is famous for its largemouth bass fishery. The fishery is threatened by Giant Salvinia, which chokes shallow spawning habitat, boat launches, and fishing piers. The plant is readily redistributed by prevailing winds. A recent Texas Parks and Wildlife survey shows 2,500 to 3,000 acres of Giant Salvinia, which “forms thick floating mats that block sunlight and prevent the production of microscopic organisms vital to healthy fish populations. With good growing conditions, the plant can produce nearly 100 tons of biomass per acre, and once the floating mass dies and sinks, the decomposing material can use up all of the oxygen in the water.”⁵ Invasive plants also include 1,500 to 2,000 acres of water hyacinth. The problems continue despite an arsenal of tactics, such as releasing salvinia weevils,

applying herbicides, and drawing down water levels in the winter to expose the plants to cold weather in an attempt to kill them.

Lake Conroe – Communities around this Southeast Texas lake have been fighting hydrilla for nearly 30 years, first with Chinese grass carp and now with a combination of herbicides and 25,000 white amur carp from Texas Parks and Wildlife Department. Even with these weapons, the lake remains infested with nearly 2,000 acres of hydrilla. Homeowners and businesses around the lake have formed a private association to raise funds for the battle to keep the lake clean and safe for recreation and tourism. Lake Conroe is the main source of water for the City of Houston, the state’s largest city.

Southeast Texas Bayous – The Galveston Bay estuary, home to thousands of native birds, fish, and other wildlife, is infested with water hyacinth, common salvinia, water lettuce, and water spinach. “In the freshwater tributaries, water hyacinth sometimes multiplies to cover all the surface of the bayou.”⁶ In addition to damaging the ecosystem, these plants impede boat travel, hunting, fishing, and other recreational pursuits.

Lake Texana – Located between Houston and Corpus Christi, Lake Texana is the main source of water for the City of Corpus Christi and several large industrial businesses along the Coastal Bend. Hydrilla, water hyacinth, and giant salvinia cover 1,200 to 1,600 acres, about 10 to 15 percent of the lake’s surface. The plants block stream flow into the lake and interfere with boating. The biggest nuisance, water hyacinth, floats like a large island across the lake, moving as the wind blows.

Footnotes

¹ <http://www.nytimes.com/2007/07/30/us/30lake.html?ex=1343448000&en=5ce046f5ab426626&ei=5088>

² <http://www.statesman.com/news/content/news/stories/local/10/20/1020salvinia.html>

³ <http://www.wctmwd.org/saltcedar.shtm>

⁴ <http://pecosbasin.tamu.edu/>

⁵ <http://www.dallasoutdoors.com/news021805.html>

⁶ http://www.galvbaydata.org/projects/reports/docs/BriefingPaper%20Sp_Protection.pdf

