Florida's Invasive Plant Management Program
Year in Review - Fiscal Year 2012-2013

- **Invasive non-native plants** were reported in 96% of Florida's 451 public lakes and rivers that comprise 1.26 million acres of fresh water.

- Eradicating established invasive aquatic plant populations has proven nearly impossible; therefore, routine maintenance is needed to suppress invasive plants at low levels to sustain attributes like navigation, flood control, and recreation while conserving native plant habitat.

- **Floating water hyacinth and water lettuce**, two of the world's fastest growing plants, covered as much as 125,000 acres of Florida public waters as recently as the 1960s and are FWC's highest management priorities.

- Floating plants were present in 255 public lakes and rivers in 2013 covering about 5,880 acres and are under maintenance control in 98% of Florida's public waters. Eighty-four percent of the floating plant populations reported in 2013 covered 10 acres or less. (Figure 1)

- Managers spent about $5.80 million controlling 46,757 acres of floating invasive plants in Florida public lakes and rivers during FY 12-13 (Tables 1-3). This was about a 40% increase in funds expended and acres controlled in FY 11-12 as managers coped with increased floating plant growth, a common occurrence as lakes refill after extended drought.

- **Submersed hydrilla,** imported during the 1950s as an aquarium plant, is capable of growing several inches per day filling the water column and covering the surface of water bodies that are not frequently and routinely managed.

- Insufficient funding allowed hydrilla to evolve into statewide water and habitat management crises by the middle 1990s infesting about 100,000 acres in 365 (80%) of Florida's public lakes and rivers. Sufficient, recurring funding and improved technology aided by FWC-funded research enabled managers to reduce hydrilla to about 28,610 acres in 2013. (Figure 4)

- Hydrilla was reported in 194 public waters in 2013 and is considered to be under maintenance control in 98% of Floridas public lakes and rivers; however, tubers infest about 90,000 acres and represent the potential for immediate regrowth.

- 75% of the hydrilla populations reported in 2013 covered 10 acres or less (Figure 3). Sixty-five percent of the hydrilla reported in 2013 occurred in the four lakes of the Kissimmee Chain of Lakes, among Florida's largest and most important multiple-purpose waterways.

- Managers spent $7.43 million treating about 14,150 acres of hydrilla in Florida public lakes and rivers during FY 12-13 to conserve the multiple uses of these resources (Tables 1-3).

- The Florida Exotic Pest Plant Council lists 12 **Category I invasive plants**, capable of disrupting aquatic ecosystems and causing harm in Florida public waters. Seven Category I plant species in addition to hydrilla, water hyacinth, and water lettuce were detected covering about 6,670 acres in 91% of Florida's public waters in 2013.

- $2.74 million were spent managing about 6,670 acres of aquatic plants other than hydrilla and floating plants during FY 12-13 (Tables 1-3). Most for the control of tussock-forming plants like frog's bit, burhead sedge, and tropical American water grass in Lakes Okeechobee, and the Kissimmee Chain of Lakes, and floating islands and tussocks in Tsala Apopka to conserve fish and wildlife habitat and navigation in the extensive marsh systems of these waters.

Fiscal Year 2012-2013 Management Statistics

Table 1: Acres of Aquatic Plants Treated and Treatment Expenditures in Florida Public Waters during Fiscal Year 2012 - 2013.

Acres	Northwest	Suwannee	St Johns	Southwest	S. Florida	TOTAL
Floating	644.10	479.91	13,547.85	5,101.49	26,983.43	**46,756.78**
Hydrilla	13.95	9.16	1,687.11	3,060.18	9,381.63	**14,152.03**
Other Plants	375.90	127.68	616.82	1,103.47	4,448.41	**6,672.28**
TOTAL	**1,033.95**	**616.75**	**15,851.78**	**9,265.14**	**40,813.47**	**67,581.09**
Expenditures	**Northwest**	**Suwannee**	**St Johns**	**Southwest**	**S. Florida**	**TOTAL**
Floating	$69,148.73	$74,827.48	$1,189,089.27	$727,797.40	$3,738,510.20	**$5,799,373.08**
Hydrilla	$11,825.16	$12,154.82	$944,930.70	$1,625,352.37	$4,834,616.91	**$7,428,879.96**
Other Plants	$53,922.58	$47,554.29	$131,191.66	$1,667,592.84	$843,890.91	**$2,744,152.28**
TOTAL	**$134,896.47**	**$134,536.59**	**$2,265,211.63**	**$4,020,742.61**	**$9,417,018.02**	**$15,972,405.32**

Table 2: Federal and State Funds Expended during Fiscal Year 2012 - 2012 to Control Aquatic Plants in Florida Public Water Bodies.

Government /Plant	TOTAL
Federal	
Floating Plants	$1,830,823.95
Hydrilla	0
Other Plants	2,233.52
Subtotal	**$1,833,057.47**
State	
Floating Plants	$3,968,549.13
Hydrilla	$7,428,879.96
Other Plants	$2,741,918.76
Subtotal	**$14,139,347.85**
Federal + State	
Floating Plants	**$5,799,373.08**
Hydrilla	**$7,428,879.96**
Other Plants	**$2,744,152.28**
Total	**$15,972,405.32**

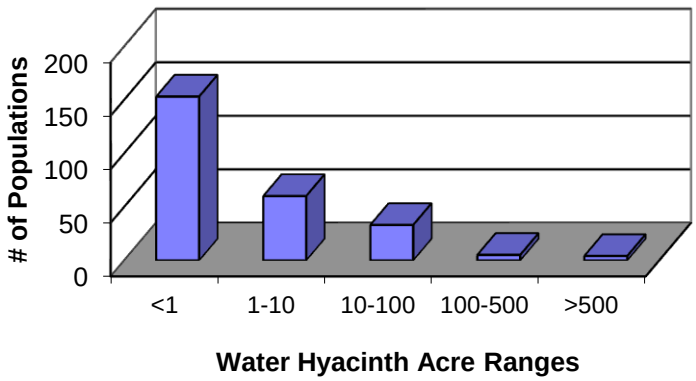
Table 3: Acres of Aquatic Plants Treated and Associated Expenditures in Florida Public Waters during Fiscal Year 2012-2013 Listed by Plant Type.

Plant	Acres Treated	Expenditures
Hydrilla	14,152.03	**$7,428,879.96**
Floating Plants	46,756.78	**$5,799,373.08**
Torpedograss	388.95	$52,307.32
Wild taro	28.50	$7,918.70
Paragrass	12.73	$2,114.07
Hygrophila	3.65	$2,703.53
W. Indian marsh grass	422.97	$49,712.29
Napiergrass	0	0
Aquatic soda apple	0	0
Water spinach	0	0
Giant salvinia	10.80	$1,415.23
Other plants	5,443.32	$1,240,002.54
Floating islands	361,37	$1,387,978.60
Total	**67,581.09**	**$15,972,405.32**

Floating Plants

Figure 1: Number of Public Lakes and Rivers in which Floating Plants Were Reported in 2013; Reported by Range of Population Size.

153 of the 255 floating plant populations reported in 2013 covered less than one acre. This is significant in that few floating plant populations are not under maintenance control. Those waters with large floating plant levels reported in 2013 are high priorities to regain control in 2014.



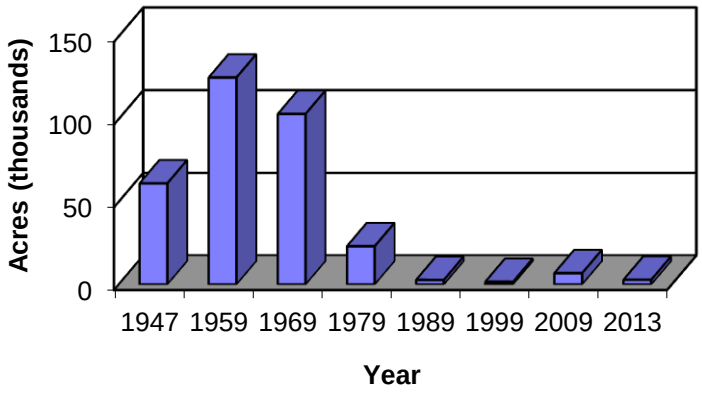


Figure 2: Acres of Water Hyacinth Reported in Florida Public Lakes and Rivers from 1947-2013.

Water hyacinth reached its apex, covering more than 125,000 acres in the early 1960s. Frequent and consistent management efforts coordinated on a statewide basis have allowed managers to reduce the standing crops of water hyacinth and water lettuce to low levels where they do not impair the multiple uses of Florida waters.

Hydrilla

Figure 3: Number of Public Lakes and Rivers in which Hydrilla Was Reported in 2013; Reported by Range of Population Size.

146 of the 194 hydrilla populations reported in 2013 covered 10 acres or less, signifying that most that are under maintenance control are at very low levels. Populations exceeding 100 acres are the higher management priorities for 2014.

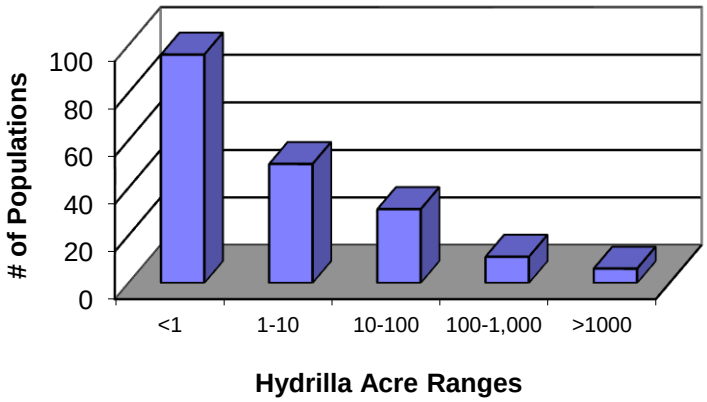
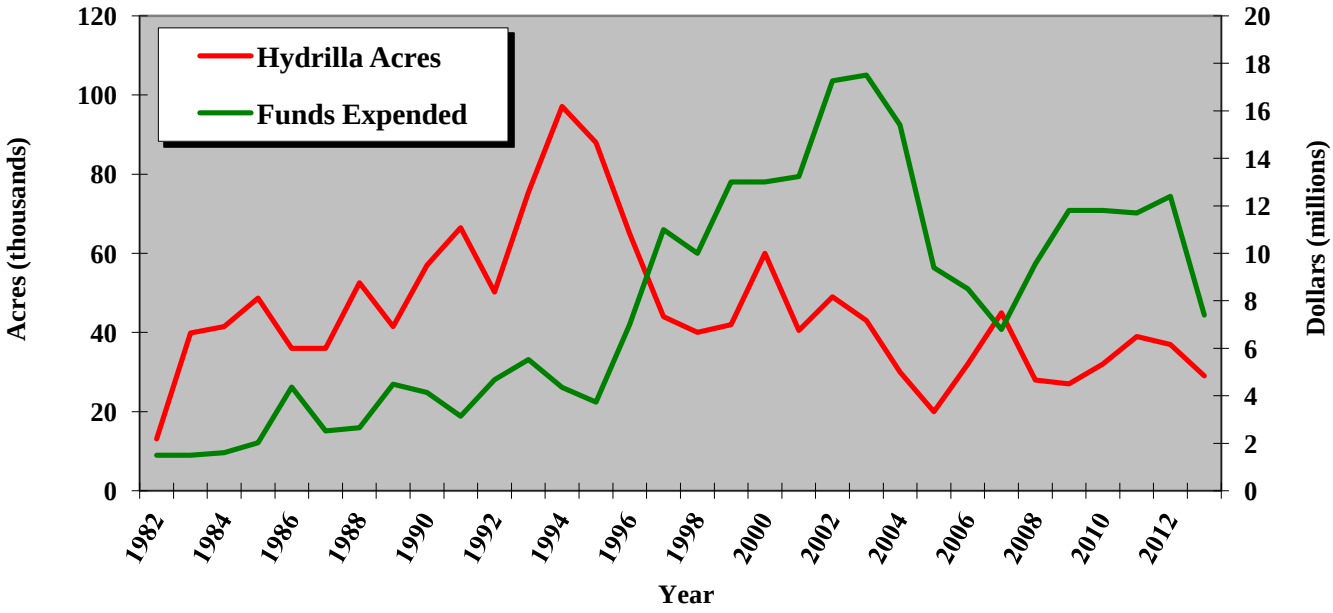


Figure 4: Acres Reported and Dollars Spent Managing Hydrilla in Florida Public Lakes and Rivers from 1982-2013.



When funds are sufficient, hydrilla can be managed at a low level. When funds decline, hydrilla expands to a higher level requiring additional recurring funding for control. Hydrilla reached its apex in Florida public waters in 1994, covering nearly 100,000 acres. Although the standing crop in the collective 194 waters in which hydrilla was reported in 2013 totaled about 28,610 acres, underground tubers, that represent hydrilla's ability to immediately sprout and refill the water column, are estimated at about 90,000 acres.