

Upland Invasive Exotic Plant Control Program Fiscal Year 2014-2015

Over one-and-one-half million acres of Florida's public conservation land have been invaded by alien (exotic, nonnative, nonindigenous) plants such as melaleuca, Brazilian pepper, cogon grass, and climbing ferns. However, invasive alien plants respect no boundaries and millions of acres of agricultural and private land are also been affected. Florida's nearly 11 million acres of public conservation land support a nature-based tourism economy valued at \$10 billion annually (total tourism spending in 2015 equaled \$89 billion).

The Fish and Wildlife Conservation Commission's Invasive Plant Management Section (IPMS) is the designated lead entity in Florida responsible for coordinating and funding the statewide control of invasive aquatic and upland plants in public waterways and on public conservation land. The Upland Invasive Exotic Plant Management Program (a subsection of IPMS) was established in 1997 to address the need for a statewide coordinated approach to the terrestrial (vs. aquatic) invasive exotic plant problem. The "Uplands Program" incorporates place-based management concepts, bringing together regionally diverse interests to develop flexible, innovative strategies to address weed management issues at the local level. The Uplands Program funds individual exotic plant removal projects statewide on public conservation land. Projects are considered for funding based upon recommendations from eleven Regional Invasive Plant Working Groups.

The mission of the Uplands Program is to achieve maintenance control of invasive exotic plants like cogon grass (*Imperata cylindrica*), melaleuca (*Melaleuca quinquenervia*), Brazilian pepper (*Schinus terebinthifolius*), Old World climbing fern (*Lygodium microphyllum*), and Japanese climbing fern (*L. japonicum*) on public conservation land.

Once invasive plants become established in native habitats, eradication is difficult, if not impossible to achieve. Thus, continuous maintenance of invasive plants must occur to preserve native plant communities, sustain wildlife habitat, and provide outdoor recreational opportunities.

Invasive plants infested fifteen percent of public conservation land statewide in 2015. Forty percent (666,300 acres) of the affected area is currently under maintenance control. Almost \$13 million was spent in fiscal year 2015 to control 150,178 acres of invasive plants on 150 publicly managed areas. The Uplands Program also provided herbicide at a cost of \$703,000 to assist public land managers with maintenance control treatments on 107,424 acres.

Funding for the program derives from the Invasive Plant Control Trust Fund, as set forth in Section 369.252(4), Florida Statutes, which reads: "use funds in the Invasive Plant Control Trust Fund as authorized by the Legislature for carrying out activities under this section on public lands. A minimum of 20 percent of the amount appropriated by the Legislature for invasive plant control from the Land Acquisition Trust Fund shall be used for the purpose of controlling nonnative, upland, invasive plant species on public lands."

During its eighteen years of operation, the Uplands Program has spent \$131 million on 2,600 invasive plant control operations targeting 2.5 million¹ acres of conservation land. The program has assisted land managers on more than 650 federal, state, county and city natural areas that comprise over 9 million acres. Cooperating agencies contributed \$50 million in matching funds toward these projects. Another \$8 million was spent on invasive plant surveys, research, outreach, and other related activities.

¹Annual maintenance figures include areas that were re-treated in previous years, so the cumulative acreage is greater than the estimated total area infested.

IPMS Fiscal Year 2014-15 Uplands Project Acres and Dollars by Managing Agency

AGENCY	ACRES	COST
Department of Environmental Protection	4,127	\$273,164
Fish & Wildlife Conservation Commission	35,739	\$1,634,224
Florida Forest Service	3,757	\$338,786
Florida Park Service	21,616	\$2,679,010
Universities	174	\$46,887
Water Management Districts ²	34,147	\$3,037,924
Department of Defense	884	\$115,672
National Park Service	21,990	\$763,449
US Fish & Wildlife Service	6,766	\$861,901
US Forest Service	2,188	\$83,144
Local government agencies	18,790	\$3,070,819
Total	150,178	\$12,872,343

²Includes \$1 million Melaleuca Program, as required by §206.606(1)(a), ES.

IPMS Uplands Program Projects for Fiscal Year 2014-15

Abbreviations used in following table:

MGR	manager (managing agency)
CTY	county government agency
DEP	Department of Environmental Protection (without FPS)
DOD	U.S. Department of Defense
FFS	Florida Forest Service, Department of Agriculture and Consumer Services
FPS	Florida Park Service, DEP
FWC	Florida Fish and Wildlife Conservation Commission
FWS	U.S. Fish and Wildlife Service
NPS	National Park Service
UNV	public university
USFS	U.S. Forest Service
WMD	water management district
TASK#	task assignment number (project identifier)
WG	working group (first two letters in TA#)
EC	East Coast
FK	Florida Keys
MC	Mosquito Coast
NE	Northeast
PH	Panhandle
SC	Sun Coast
SE	Southeast
SW	Southwest
TC	Treasure Coast
WC	West Central
WR	Withlacoochee River
AC	control acres
Herbicide Bank	only chemical was provided to agency
Task Amount	IPMS expenditures

TASK#	PROJECT NAME	MGR	ACRES	TASK AMOUNT
EC-117	City of Casselberry	City	68	\$22,560.00
FK-122	Tropical Forest and Botanical Garden	City	13	\$26,000.00
NE-088	Egans Creek Greenway	City	191	\$56,207.48
SC-151	Boyd Hill Nature Park	City	80	\$26,000.00
SE-209	Coral Reef Park	City	5	\$8,900.00
SE-218	Jones Creek Headwaters	City	10	\$18,500.00
WC-124	MacKay Gardens/Lakeside	City	58	\$22,020.00
WR-154	Cofrin Nature Park	City	9	\$17,370.00
WR-156	Loblolly Woods	City	27	\$11,610.00
City Total			461	\$209,167.48
EC-109	Eagles Roost/Isle of Pine	CTY	334	\$33,556.00
EC-111	Orange Co. Lake Lucie/Sandhill	CTY	246	\$20,910.00
EC-113	Chuluota Wilderness Area	CTY	38	\$7,410.00
EC-116	Geneva Wilderness Area	CTY	98	\$23,422.00
FK-121	Monroe County Maintenance	CTY	450	\$125,000.00
FK-126	Monroe County Contracted	CTY	10	\$70,000.00
MC-146	Lake Beresford	CTY	102	\$17,420.58
MC-148	Bevard County EEL Properties	CTY	520	\$116,469.00
MC-153	Volusia Longleaf and Wiregrass	CTY	88	\$9,990.00
MC-154	Indian River Sanctuary	CTY	40	\$21,520.00
SC-144	War Veteran's Memorial Park	CTY	35	\$8,394.75
SC-146	Weedon Island Preserve	CTY	107	\$41,880.00
SC-147	Wolf Branch	CTY	526	\$50,179.66
SC-149	Carlton Memorial Reserve	CTY	1,465	\$63,960.00
SC-154	Balm Scrub	CTY	450	\$99,984.15
SC-155	Duette Preserve	CTY	856	\$200,634.64
SC-156	Fort DeSoto Park	CTY	1,292	\$269,040.48
SE-205	Fern Forest Nature Center	CTY	38	\$43,450.00
SE-208	Juno Dunes Natural Area	CTY	578	\$75,000.00
SE-210	Castellow Hammock Preserve	CTY	60	\$49,967.71
SE-212	A.D Doug Barnes Park	CTY	21	\$49,999.77
SE-213	Bill Sadowski Park	CTY	1	\$10,000.00
SE-214	Kendall Indian Hammocks Park	CTY	14	\$16,094.50
SE-215	Deering Estate	CTY	147	\$87,361.16
SE-216	Tree Tops/Pine Island Ridge	CTY	209	\$27,170.00
SE-219	Zoo Miami	CTY	32	\$101,900.00
SE-222	Mikania et al EDRR	CTY	250	\$49,298.74
SE-225	Pond Apple Slough	CTY	26	\$32,051.50
SE-229	Military Trail Scrub	CTY	20	\$3,450.00
SE-230	Tradewind Park	CTY	50	\$10,529.00
SE-231	Loxahatchee Slough	CTY	1,737	\$72,954.00
SE-233	Loxahatchee Slough-Lucky Tract	CTY	1,450	\$60,900.00
SW-181	Matanzas Pass Preserve	CTY	45	\$24,689.50
SW-183	Rivers Road Preserve	CTY	77	\$15,319.15
SW-185	Alva Scrub Preserve	CTY	221	\$43,399.98
SW-189	Pepper Ranch Preserve	CTY	795	\$38,676.75
SW-191	Six Mile Cypress: MU 11	CTY	43	\$7,396.00
SW-192	Six Mile Cypress: MU 6	CTY	173	\$24,625.00
SW-201	Charlotte Harbor Buffer Preserve	CTY	60	\$153,975.00
SW-202	Hidden Cypress Preserve	CTY	383	\$22,980.00
SW-205	Buckingham Trails Preserve	CTY	572	\$32,644.04
SW-206	Six Mile Cypress Unit 16S	CTY	155	\$27,875.00
SW-209	Six Mile Cypress North 2	CTY	209	\$48,625.00
SW-210	Wild Turkey Strand Preserve	CTY	260	\$73,987.52
SW-211	Wild Turkey Strand Preserve	CTY	260	\$18,200.00
TC-171	Martin County Properties	CTY	1,731	\$168,009.00
TC-171b	Martin County Properties	CTY	308	\$80,189.00

TC-182	Bluefield Ranch	CTY	1,394	\$122,672.00
WC-129	Bok Tower - Pine Ridge	CTY	10	\$4,687.50
WC-135	The Sun N Lake Preserve	CTY	320	\$37,366.00
WR-158	Lake Townsend Preserve	CTY	23	\$13,800.00
County Total			18,329	\$2,829,014.08
SW-182	Babcock Ranch 1 Iygodium	DEP	3,281	\$194,853.00
SW-204	Babcock Ranch 2 cogon	DEP	653	\$48,975.00
WC-140	Homeland	DEP	193	\$29,336.00
DEP (non-Parks) Total			4,127	\$273,164.00
EC-115	Little Big Econ State Forest	FFS	538	\$52,799.32
NE-091	Cary State Forest	FFS	35	\$2,111.96
NE-094	Cary State Forest	FFS	144	\$8,608.93
NE-096	Four Creeks State Forest	FFS	65	\$19,186.70
PH-139	Blackwater River State Forest	FFS	344	\$32,651.36
SC-153	Myakka State Forest	FFS	41	\$31,141.96
SW-199	Picayune Strand SF	FFS	817	\$41,996.23
WC-125	Okaloacoochee Slough SF	FFS	1,626	\$95,900.00
WR-155	Withlacoochee State Forest	FFS	147	\$54,390.00
FFS Total			3,757	\$338,786.46
FK-123	Key Largo State Park	FPS	388	\$131,920.00
FK-125	John Pennekamp Coral Reef SP	FPS	229	\$80,150.00
MC-147	St. Sebastian River PSP	FPS	112	\$49,718.79
MC-150	Indian River Lagoon PSP	FPS	83	\$26,951.00
MC-151	North Peninsula State Park	FPS	225	\$13,275.00
MC-152	Tomoka State Park	FPS	340	\$99,999.30
NE-090	Lafayette Blue Springs SP	FPS	23	\$2,250.78
NE-093	Palatka-to-Lake Butler State Trail	FPS	280	\$48,000.40
NE-095	Ichetucknee Trace	FPS	114	\$13,340.00
PH-135	Alfred B. Maclay Gardens SP	FPS	50	\$15,900.00
SC-143	Myakka River State Park	FPS	1,278	\$60,705.00
SC-145	Little Manatee River State Park	FPS	710	\$108,630.00
SC-148	Oscar Scherer State Park	FPS	180	\$34,333.51
SC-150	Alafia River State Park	FPS	43	\$10,396.00
SC-152	Wingate Creek SP-Beker Tract	FPS	23	\$7,349.88
SW-186	Don Pedro Island State Park	FPS	36	\$8,538.48
SW-190	CHPSP North Matlacha Pass	FPS	355	\$26,625.00
SW-194	CHPSP Tippe-Canoe Flatwood	FPS	106	\$10,070.00
SW-195	Pepper Bustin' II - Fakahatchee	FPS	3,221	\$244,796.00
SW-196	Charlotte Harbor PSP	FPS	2,543	\$495,607.29
SW-203	CHPSP South Matlacha Pass	FPS	163	\$33,252.00
SW-207	Collier-Seminole State Park	FPS	150	\$53,750.00
TC-172	Jonathan Dickinson SP	FPS	2,210	\$154,310.00
TC-178	Seabranh PSP	FPS	193	\$49,850.04
TC-179	Savannas PSP	FPS	436	\$120,780.00
TC-180	Atlantic Ridge PSP	FPS	2,723	\$242,002.53
TC-180b	Atlantic Ridge PSP	FPS	1,079	\$77,181.81
TC-181	Okeechobee Battlefield	FPS	145	\$54,375.00
WC-131	Paynes Creek Historic SP	FPS	121	\$36,542.00
WC-134	Highlands Hammock SP	FPS	161	\$63,917.00
WR-157	Paynes Prairie PSP	FPS	135	\$27,793.80
WR-159	Silver River State Park	FPS	95	\$24,219.04
WR-162	Cross Florida Greenway	FPS	3,628	\$205,852.72
WR-163	Paynes Prairie PSP	FPS	14	\$37,100.00
WR-164	Rainbow Springs State Park	FPS	24	\$9,528.00
FPS Total			21,616	\$2,679,010.37

EC-108	Tosohatchee WMA	FWC	1,158	\$78,744.00
EC-110	Three Lakes WMA	FWC	199	\$30,774.50
EC-112	Herky Huffman/Bull Creek WMA	FWC	1,217	\$115,001.22
EC-118	Makinson Island Conservation Area	FWC	132	\$49,500.00
PH-133	Apalachee WMA	FWC	563	\$38,602.98
PH-136	Apalachicola River WEA	FWC	1,600	\$49,600.00
PH-137	Apalachicola River WEA-Cutoff Island	FWC	1,000	\$127,170.00
SE-206	Corbett WMA-North	FWC	6,666	\$399,960.00
SW-180	Hickey Creek Mitigation Park WEA	FWC	365	\$3,796.00
SW-188	Babcock-Webb WMA	FWC	17,036	\$260,777.60
WC-127	Lake Wales Ridge WEA	FWC	1,089	\$95,490.38
WC-128	Crooked Lake WEA	FWC	285	\$49,875.00
WC-130	Fisheating Creek WMA	FWC	3,465	\$197,505.00
WC-137	Platt Branch MP WEA	FWC	86	\$19,694.00
WC-139	Tenoroc Fish MA	FWC	86	\$16,770.00
WR-161	Chinsegut WEA	FWC	400	\$57,837.50
WR-165	Perry Oldenburg MP WEA	FWC	158	\$21,067.20
WR-166	Janet Butterfield Brooks WEA	FWC	234	\$22,058.85
FWC Total			35,739	\$1,634,224.23
EC-107	UCF Natural Areas	UNV	39	\$12,896.80
SE-207	Pine Jog Education Center	UNV	135	\$33,990.00
UNV Total			174	\$46,886.80
NE-089	Withlacoochee West CA	WMD	45	\$7,875.00
NE-097	Graham CA - Lake Rowell	WMD	71	\$12,145.00
SE-220	Melaleuca Program	WMD	10,094	\$996,271.95
SE-221	ExLox	WMD	16,125	\$998,311.21
SE-234	SFWMD Projects	WMD		\$200,000.00
SW-184	CREW-Bird Rookery Swamp	WMD	705	\$98,538.04
TC-173	Kissimme River Lygodium	WMD	3,164	\$299,782.81
TC-174	Dupuis south	WMD	2,045	\$200,000.00
TC-176	Dupuis north	WMD	548	\$100,000.00
WC-132	Kissimmee Chain of Lakes	WMD	1,350	\$125,000.00
WMD Total			34,147	\$3,037,924.01
FK-127	Naval Air Station Key West	DOD	259	\$38,907.00
PH-134	Tyndall Air Force Base	DOD	625	\$76,765.00
DOD Total			884	\$115,672.00
FK-124	National Key Deer Refuge	FWS	110	\$34,487.30
MC-144	Merritt Island NWR	FWS	2,611	\$143,734.88
MC-149	Archie Carr NWR/Sebastian Inlet SP	FWS	1,153	\$153,720.00
SW-187	Florida Panther NWR pepper	FWS	1,484	\$200,700.63
SW-193	FL Panther NWR Lygodium	FWS	460	\$19,320.00
TC-175	Pelican Island NWR	FWS	433	\$189,751.57
WC-133	Lake Wales Ridge NWR	FWS	426	\$107,289.74
WR-160	Lower Suwannee NWR	FWS	89	\$12,896.99
FWS Total			6,766	\$861,901.11
PH-132	Apalachicola National Forest	NFS	2,188	\$83,144.00
NFS Total			2,188	\$83,144.00
MC-145	Canaveral National Seashore	NPS	650	\$31,200.00
MC-145b	Canaveral National Seashore	NPS	1,809	\$265,561.20
PH-138	Gulf Islands National Seashore	NPS	182	\$23,977.80
SE-224	Everglades Block 6	NPS	646	\$242,250.00
SW-197	Big Cypress NP-Corndance	NPS	1,262	\$50,467.04
SW-198	Big Cypress NP-Monroe Station	NPS	17,441	\$149,992.60
NPS Total			21,990	\$763,448.64
Operational Projects Total			150,178	\$12,872,343.18

Herbicide Bank			
TA#	Project	Cost	Acres
EC-117	City of Casselberry	\$1,282.00	34
EC-ONP	City of Oakland	\$754.26	44
MC-070	Florida Forest Service Bunnell District	\$8,367.00	25
MC-096	Thousand Islands	\$1,352.50	31
MCBCP	Brevard County	\$12,609.64	60
MCFPS3	Florida Park Service District 3	\$25,111.81	2,084
NE-058	Caravelle Ranch Wildlife Management Area	\$3,122.32	173
PH-049	Blackwater River State Forest	\$11,221.47	1,108
PH-110	St. Marks National Wildlife Refuge	\$3,790.00	160
PH-133	Apalachee Wildlife Management Area	\$1,506.36	0 ⁴
PH1415	Chipola Forestry Center	\$697.00	13
PHARWE	Apalachicola River Wildlife and Environmental Area	\$28,783.62	0 ⁴
SC-011	Manatee County	\$6,490.74	368
SC-106	Myakka State Forest	\$6,238.98	8,593
SCHERN	Hernando County	\$11,436.00	966
SCPINE	Pinellas County	\$12,743.20	
SC-SAR	Sarasota County	\$928.06	2
SE-230	Broward County	\$3,459.00	*
SEPBC	Palm Beach County	\$163,205.38	31,052
SERBP	Riverbend Park	\$7,009.22	742
SEWMA	Corbett et al Wildlife Management Areas	\$139,099.08	29,751
SW-168	Panther National Wildlife Refuge	\$4,121.50	2,800
SW-198	Big Cypress National Preserve	\$34,931.35	0 ⁴
SW-204	Babcock Ranch	\$14,475.20	9,714
TC-155	Jonathan Dickinson State Park	\$1,310.25	0 ³
TC-180	Atlantic Ridge Preserve State Park	\$2,620.50	0 ⁴
TCFPS5	Florida Park Service District 5	\$19,258.70	3,844
WC-018	Hilochee Wildlife Management Area	\$5,680.20	150
WC-053	Homeland	\$6,601.35	300
WC-055	Seminole State Forest	\$617.02	19
WC-109	Lake Wales Ridge State Forest	\$262.05	110
WC-136	Dinner Island et al Wildlife Management Areas	\$102,670.80	9,694
WCFPS4	Florida Park Service District 4	\$34,701.55	
WCLCWA	Lake County Water Authority	\$2,764.80	527
WR-041	Chassahowitzka Wildlife Management Area	\$903.20	32
WR-052	City of Gainesville	\$1,467.72	381
WR-092	Ocala National Forest	\$3,681.35	133
WR-101	Crystal River Preserve State Park	\$1,149.00	
WR-118	Little Gator Creek	\$1,318.50	25
WR1415	Florida Park Service District 2	\$8,388.15	
WR-WRL	Gainesville Wildlife Lab	\$143.25	5
WR-WSF	Withlacoochee SF	\$6,959.23	4,486
Herbicide Bank Assistance Total		\$703,233.31	107,425
FY15 Total Acres and Costs		\$13,575,576.49	257,603

³Acres counted elsewhere or otherwise unspecified.

⁴Chemicals provided for operational projects; additional cost but not additional acres.