

**Program Name:** Exotic Vegetation Management Program  
**Project Name:** Everglades National Park Exotic Vegetation Management  
**Project ID:** 2819  
**Lead Agency:** National Park Service

**Strategy and Biennial Report Objective Addressed:** 2-B.4  
**Invasive Species Strategic Action Framework Goal:** 4

**Measurable Output(s):** Acres infested with Exotic Plants

**Project Synopsis:** Everglades National Park encompasses 1.5 million acres of which 1.3 million is designated as the only subtropical wilderness in the continental United States. Non-native (exotic) plants are a significant threat to the native plant communities of Everglades National Park. Approximately 1,000 plant species have been recorded in the park. Of these, over 250 species are non-native. Systematic treatments address 10 to 15 species. The most commonly targeted exotics are: Brazilian pepper (*Schinus terebinthifolius*), Melaleuca (*Melaleuca quinquenervia*), Australian pine (*Casuarina equisetifolia*), Lather leaf (*Colubrina asiatica*), and Old World climbing fern (*Lygodium microphyllum*). Exotic vegetation is estimated to affect approximately 200,000-250,000 acres of the park.

Over the last 20 years, funds provided by federal, state and county agencies, such as the National Park Service (NPS) South Florida Natural Resources Center, NPS Florida and Caribbean Exotic Plant Management Team, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Army Corps of Engineers, and Miami-Dade County Department of Environmental Resource Management have helped to treat exotic vegetation in Everglades National Park.

**Current Status:** Although contractors, volunteers, interns, and park staff were able to treat exotic vegetation in all districts of Everglades National Park, invasive exotic plant problems still occur in the East Everglades, Gulf Coast, Flamingo, and Key Largo Districts of the park. For example, *Lygodium* is established in the sparsely wooded coastal marsh areas along the western coast in both the Gulf Coast and Flamingo Districts. *Lygodium* was first recognized in the park in 1999. Treatment efforts have been effectively treating large dense stands, but the plant continues to expand its range within Everglades National Park.

Brazilian pepper is the most widespread of these species in Everglades National Park. Brazilian pepper is particularly abundant along the fringes of the mangroves. In some instances there are individual stands of Brazilian pepper that cover 4,000 to 6,000 acres and are comparable in size and density to those that occur in the Hole-In-The-Donut. A cost effective strategy for systematically removing Brazilian pepper from the park has not been identified. Treatment of this plant is done sporadically as a part of broader exotics projects and in discreet areas that have been identified as resource management priorities.

Although a great amount of progress has been made in the East Everglades Expansion Area treating melaleuca and Australian pine, there is still a great need for finishing the remaining initial treatment (~1,300 acres) and re-treatment. Re-treatment efforts are very important in order to continue the progress already achieved. Funding for re-treatment efforts are not guaranteed because there are no dedicated funds for this activity. However, re-treatment funds are crucially important in order to insure restoration success. Table 1 presents funding sources and acres of exotic vegetation treated between July 1, 2013 and June 30, 2014.

Table 1. Summary of agencies providing funding for exotic vegetation treatment projects completed in Everglades National Park between July 1, 2013 and June 30, 2014.								
Project Name	Major Species Treated	Funding Source	Treatment Type	Gross Infested Acres (hectares) Treated	Canopy Acres (hectares) Treated	% of area infested	Costs	Cost/gross acres
MOA_FY2013	<i>Melaleuca</i> <i>Casuarina</i>	MOA	Initial	229 (93)	18.9 (7.6) 0.39 (0.16)	8.24% 0.17%	\$162,586.18	\$709.98
FWC_North	<i>Melaleuca</i>	FWC	Re-treatment	923 (374)	27 (11)	2.9%	\$68,340.00	\$74.04
FWC_south_easr and west	<i>Melaleuca</i> <i>Casuarina</i> <i>Schinus</i>	FWC	Re-treatment	671 (271)	45.8 (18.5) 3.9 (1.6) 19 (7.7)	6.8% 0.6% 2.8%	\$209,840.00	\$312.73
FLCEPMT_FY2013	<i>Melaleuca</i> <i>Casuarina</i>	FLCEPMT	Re-treatment	9,206 (3,726)	49.4 (20) 59.2 (24)	0.5% 0.6%	\$88,604.00	\$9.62
In-house (EVMP, FLCEPMT, FIRE)	<i>Many</i>	EVMP/ FLCEPMT/ FIRE		365 (147)	45 (18)	12.3%	Portion of total budget for EVMP	
Total				11,394 (4,611)	268 (108)	2.4%		

\*Annual EVMP amount includes EVMP budget for field supplies, herbicide, helicopter, intern. and Full Time Equivalent salary of EVMP manager.

**Funding Sources**

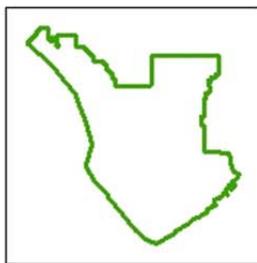
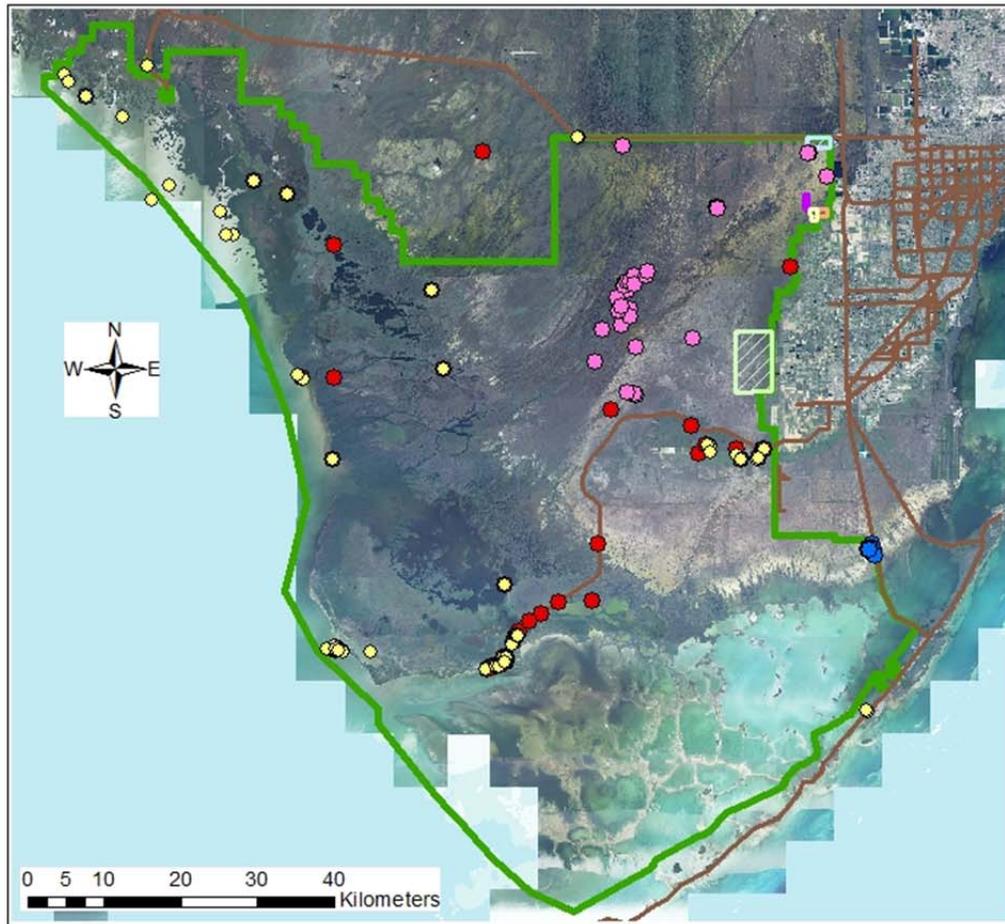
EVMP (Exotic Vegetation Management Program)  
FLCEPMT (Florida and Caribbean Exotic Plant Management Team)  
FIRE- Everglades Fire and Aviation Management  
FWC-Florida Fish and Wildlife Conservation Commission  
MOA-Miami-Dade County and Everglades National Park GP-59 Memorandum of Agreement

**Definitions:**

Gross acres is an estimate of the total land area covered by treatment crews. For this report it is based on a GIS shapefile summary of the field GPS tracklogs and/or treatment points from Daily Treatment Progress Reports for each project.

Canopy acres is an estimate of the percent of ground covered by a particular invasive species. For this report it is based on the sum of the daily treatment estimates provided by the field crew. The daily treatment estimates are calculated by multiplying the area treated by the mid-point of the range of cover estimate. For example, 20 acres treated at a cover range of 0.1-5%, invasive species cover would have the mid-point of 3% and have the estimated canopy acres of 6 acres.

### ENP July\_2013-June2014\_ Exotic Vegetation Treatment



Hillary Cooley June 17, 2014/NAD83-Zone 17

Figure 1: Areas treated in East Everglades between July 1, 2013 and June 30, 2014.  
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Cost: See table above

**Project Schedule:**

Start Date: 2002  
Finish Date: To be determined

**Detailed Project Budget Information:**

See Table 1 above.

**Hyperlink:** <http://www.nps.gov/ever/naturescience/exoticvegprogram.htm>

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