

**Program Name:** Invasive Exotic Species Management  
**Project Name:** Everglades National Park Exotic Control Program  
**Project ID:** 2506 (Formerly Project ID 2604)  
**Lead Agency:** National Park Service

**Strategic Plan Goal(s) Addressed:** 2.B.1

**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 200 species are non-native. Due to limited funding only a small number of these exotic plant species are targeted for treatment. Systematic treatments address 10 to 15 species. The most commonly targeted exotics are:

- Brazilian pepper (*Schinus terebinthifolius*), estimated to affect over 125,000 gross infested acres,
- Melaleuca (*Melaleuca quinquenervia*) and Australian pine (*Casuarina equisetifolia*), each estimated to affect 7,000 gross infested acres
- Lather leaf (*Colubrina asiatica*), estimated to affect over 5,000 gross infested acres, and
- Old World climbing fern (*Lygodium microphyllum*), estimated to affect more than 10,000 acres.

Overall, exotic vegetation is estimated to affect approximately 200,000-250,000 acres of the park.

The ability to successfully address the threat of exotic plants in the park is directly related to funding. Dedicated annual park funds for large-scale (over 15 acres) exotics treatment have been unavailable. So, large-scale treatment efforts have been subject to the frequency and amount of donated supplemental funds. Donors have prioritized projects that target widely distributed exotic species, both in Everglades National Park and regionally, or those having the ability to quickly invade and displace native vegetation. In some cases, exotic plants threaten areas of special concern, such as coastal hardwood hammocks or the habitat of the critically endangered Cape Sable Seaside Sparrow, and have also been funded. Over the last 20 years, funds provided by State and County agencies, such as the Florida Department of Environmental Protection, the South Florida Water Management District, the Army Corps of Engineers, and the Miami-Dade County Department of Environmental Resource Management, have helped found the exotics program. Since 1998, the National Park Service's Florida and Caribbean Exotic Plant Management Team have also provided funds for exotics control in Everglades National Park.

**Current Status:** Although contractors, volunteers, interns, and park staff were able to treat some 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 Everglades National 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.

In terms of sheer magnitude Brazilian pepper is the most widespread. 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 areas in the Hole-In-The-Donut Project that are affected by Brazilian pepper. 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.

*Project 2506 Everglades National Park Exotic Control Program Page 1 of 3*

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 (~1,650 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 and are crucially important in order to insure restoration success. In order not to lose the progress made to this point, dedicated funding for the exotic vegetation program is essential. Table 1 presents funding sources and acres of exotic plants treated in FY 09-10 with their associated costs.

Table 1. Summary of agencies providing funding for exotics treatment in Everglades National Park in fiscal years 2009 - 2010*						
Project Location	Funding Source		Gross Infested Acres Treated		Costs	
	2009	2010	2009	2010	2009	2010
Everglades NP East Everglades District (Initial treatment)	EPMT - NPS	n/a	2,508	Not treated	\$100,000	n/a
Everglades NP East Everglades District (Initial treatment)	SAMP	n/a	590	Not treated	\$54,752	n/a
Everglades NP East Everglades District (Spot Spray- Initial treatment)	EPMT - NPS	EPMT - NPS	10,000	On-going	\$9,026	\$30,000
Everglades NP East Everglades District (Tamiami Trail culvert exotic vegetation treatment)	USFWS / SFNRC - NPS	NPS	~40 acres	~63 acres	\$57,397	\$72,259
Everglades NP East Everglades District (Melaleuca re-treatment).	ENP - NPS	ENP - NPS	Not treated	2,170 acres	n/a	\$49,527
L-76 Shark Valley	n/a	EVER Fire	Not treated	~22,000	n/a	\$77,128
Total			~13,138 acres	~42,233 acres	\$221,175	\$228,914
* FY 10 budget as of Aug 2010						
<u>Federal Sources</u>						
National Park Service's Exotic Plant Management Team (EPMT)						
South Florida Natural Resources Center (SFNRC)						
United States Fish and Wildlife Service (USFWS)						
<u>Non-Federal Sources</u>						
Miami-Dade Department of Environmental Resource Management (DERM/SAMP)						

**Cost:** Expenditure by year depends almost entirely on donated funds.

**Total:**

TBD

**Project Schedule:**

Start Date: 2002

Finish Date: To be determined

**Detailed Project Budget Information:**

See Table 1 above.

**Hyperlink:** N/A

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*Project 2506 Everglades National Park Exotic Control Program Page 2 of 3*

**Additional Information:**

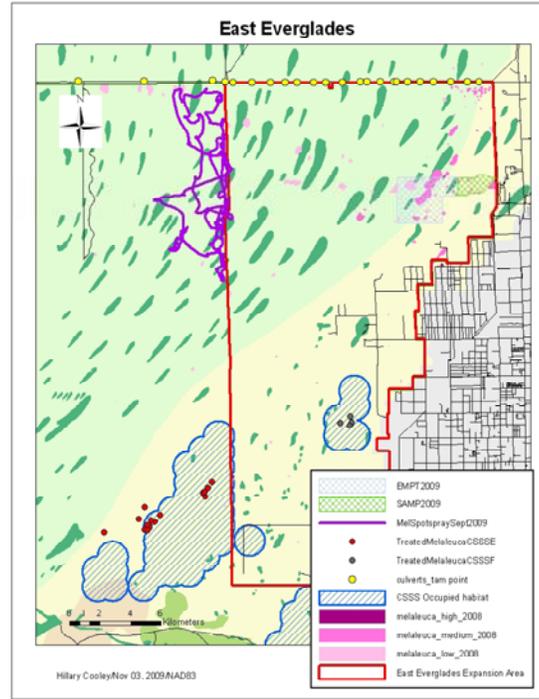


Figure 1: Area treated in East Everglades and Shark Slough in FY2009.



Figure 4: Tamiami Trail project. Photo taken September 23, 2009 at culvert 47 along the south side of Tamiami Trail.