

**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 (ENP) encompasses 1.5 million acres of which 1.3 million is designated as wilderness. Non-native (exotic) plants are a significant threat to the native plant communities of ENP. Approximately 1,030 plant species have been recorded in the park. Of these, over 270 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 200,000-300,000 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 ENP.

**Current Status:** Although contractors, volunteers, interns, and park staff were able to treat exotic vegetation in all districts of ENP, 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 ENP.

Brazilian pepper is the most widespread of these species in Everglades National Park. Brazilian pepper is particularly abundant in the western portion of ENP along the fringes of the mangroves. 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 District treating melaleuca and Australian pine, there is still a great need for finishing the remaining initial treatment (~1,4300 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 June 1, 2015 and May 31, 2016.

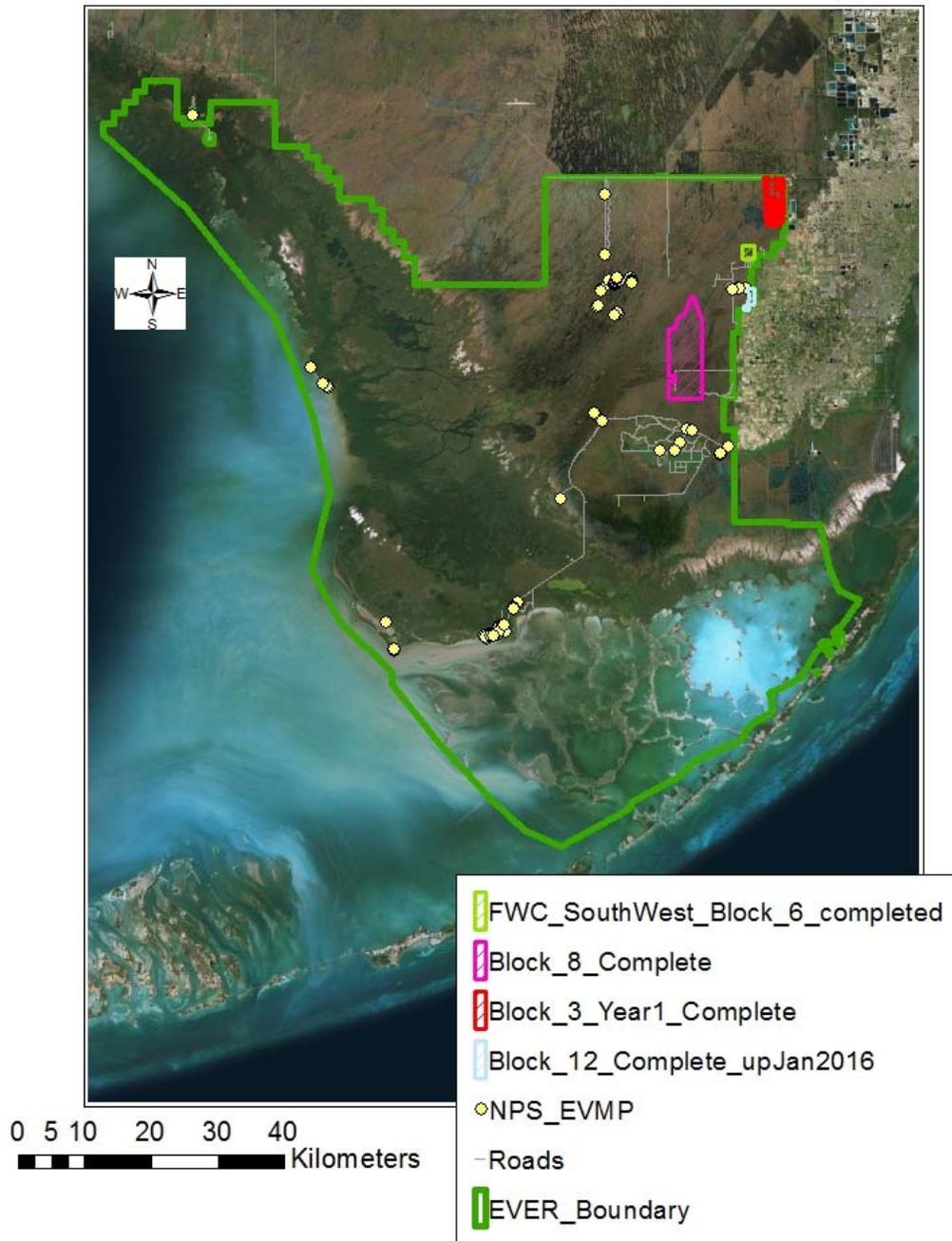
Table 1. Summary of exotic vegetation treatment projects in Everglades National Park between June 1, 2015 and May 31, 2016.							
Project Name	Major Species Treated	Funding Source	Treatment Type	Gross Infested Acres Treated	Canopy Acres Treated	% of area infested	Amount
FWC_SW_Block_6	<i>Melaleuca</i> <i>Casuarina</i> <i>Schinus</i>	FWC (SE-224)	Re-treatment	991	22.5 3 37.4	2.3% 0.3% 3.8%	\$371,625
Block_8	<i>Melaleuca</i> <i>Casuarina</i> <i>Schinus</i>	NPS_FLCEPMT	Re-treatment	15,554	15.2 6.3 0.9	<0.1% <0.1% <0.1%	\$90,000
Block_3	<i>Melaleuca</i> <i>Schinus</i> <i>Lygodium</i>	FWC (SE-237)	Re-treatment	2,549	150.4 58.7 0.87	5.9% 2.3% <0.1%	\$115,685
Block_12	<i>Melaleuca</i> <i>Casuarina</i> <i>Schinus</i>	NPS_EVER_ SFNRC	Re-treatment	970	9.8 11 13.1	1% 1% 1%	\$34,347.70
Exotic Vegetation Management Program	Many	NPS_EVER_ SFNRC EVMP	Re-treatment	106	10	9.3%	Part of program budget
<b>Total</b>				<b>20,170</b>	<b>339</b>		<b>\$611,657.70</b>

Funding Sources

EVER\_EVMP (Everglades National Park 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  
 NPS-National Park Service  
 SFNRC (South Florida Natural Resources Center)

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 0.6 acres.



Hillary Cooley June 23, 2016/NAD83-Zone 17

Figure 1: Map of contracted and in-house exotic vegetation treatment within Everglades National Park completed between June 1, 2015-May 31, 2016. In-house work is work completed by National Park Service staff, interns and volunteers.

**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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