

***Flamingo Lodge and Restaurant Florida Bay
Viewshed Maintenance***

Wetland Statement of Findings

PMIS 349285A and PEPC #129146



Recommended:

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Certification of Technical Adequacy and Service-wide Consistency:

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WSOF (August 2025)

Flamingo Lodge and Restaurant Florida Bay Viewshed Maintenance

PEPC ID: 129146/ PMIS 349285A

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Section 1. Preparers

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Section 2. List of Abbreviations

CERP - Comprehensive Everglades Restoration Plan

DBH - Diameter at Breast Height

FAC – Facultative

FACW – Facultative Wet

FDEP - Florida Department of Environmental Protection

FLUCCS - Florida Land Use Cover Classification System

OBL - Obligate

NPS - National Park Service

NRCS - Natural Resources Conservation Service

NWI - National Wetland Inventory

NWPL - National Wetland Plant List

PMT - Professional Mangrove Trimmer

UPL - Upland

USFWS - US Fish and Wildlife Service

USDA - United States Department of Agriculture

WSOF - Wetland Statement of Findings

Section 3. Preparer Qualifications

Maria Vasquez completed her undergraduate and graduate degrees in Biology with an interest in invasive exotic plant management and ecosystem restoration. She is a biologist at Everglades National Park (ENP) with ten years experience in wetland restoration and invasive removal. She is also the project manager for the Hole-in-the-Donut In-Lieu-Fee Mitigation Bank program at ENP; the only wetland mitigation bank in the National Park Service. Her specific areas of expertise include wetland environments, plant community ecology, invasive exotic plant species management, and ecological restoration. She has conducted wetland delineations and UMAM scoring to comply with Army Corps of Engineers and Florida Department of Environmental Protection permitting, as well as compliance with NPS wetland policies.

Section 4. Introduction

Project Description/Setting:

The National Park Service (NPS) is proposing a mangrove trimming project adjacent to the Flamingo Lodge and Restaurant in the Flamingo District of Everglades National Park (the Park). The Flamingo Lodge and Restaurant are located 38 miles south from the Park entrance gate (1 Flamingo Lodge Hwy). Project actions include trimming of two separate mangrove and wetland vegetation sites in areas adjacent to the Flamingo Lodge and Restaurant (Figure 1).

Mangrove Wetland Site (FMXar - 0.98 acres)

NPS will follow guidelines established by Florida Department of Environmental Protection (FDEP) 1996 Mangrove Trimming & Preservation Act (F.S. 403.9321-403.9333) for the trimming and undercutting actions conducted on the mangrove site. Project actions for this site include:

Window Trimming

1. Window trimming will be conducted on mangroves 10-20 feet (~3-6 meters) in height providing vista views from the restaurant and lodge while retaining the health of the mangrove stand.
2. No trimming will occur over a height of 24 feet (~7 meters).
3. Mangroves below 6 feet in height will be excluded from trimming.
4. No Red mangrove (*Rhizophora mangle*) roots will be cut.
5. Trimming will occur during the months of October through March, annually as needed.
6. No more than 25 percent of the foliage within the window cut will be removed annually.
7. All mangrove tree trunks over five inches in diameter at breast height (DBH) will be excluded from cutting.

Undercutting

1. Undercutting (trimming the lower portion of a tree, below 6 feet (~2 meters)) of White (*Laguncularia racemosa*) and Black (*Avicennia germinans*) mangroves limbs will occur as permitted by FDEP.
2. Young mangroves under 6 feet (~2 meters) will not be removed, defoliated, or destroyed.
3. Undercutting will occur within the 175-foot area between the southwestern corner of the restaurant balcony and the southeastern corner of the first lodge building, which coincides with the lowest area of canopy height on site.

Succulent Salt Marsh Site (MSS - 1.24 acres)

Trimming of the wetland site directly behind the restaurant and lodge will be limited to 4 feet in height and be done mechanically (e.g., weed wacker or trimmer) or manually (e.g., loppers, machete, etc.). Herbicide treatments may be applied if necessary. Vegetation maintenance may occur multiple times throughout the year as needed, in perpetuity.

Project Purpose:

The purpose is to enhance and routinely maintain the visitor viewshed of Florida Bay by selectively trimming and maintaining up to 0.98 acres of mangrove wetland site and an additional 1.24 acres of succulent salt marsh site between the Guy Bradley Trail and the Florida Bay Bay shoreline. The Limits of Disturbance (LOD) for the two wetland areas are shown in Figure 1. The Succulent Salt Marsh (MSS – 1.24 acres) wetland is bordered by the maintained lawn area maintained by the concessionaire to the north and the Guy Bradley Trail to the south. The mangrove wetland sites (FMXar – 0.98 acres) consists of four small parcels that are bordered by the Guy Bradley Trail to the north and connects to Florida Bay to the south. The areas in between the parcels have fully open canopies with no mangroves.

The intent is to open scenic vistas from the stilted Flamingo infrastructure and grounds, while preserving the ecological integrity and resilience of the mangrove and wetland communities. The approach includes phased window trimming, undercutting, and canopy height maintenance in accordance with FDEP guidance in the mangrove wetland site, as well as cutting and trimming of vegetation using hand and power tools in the succulent salt marsh site. Herbicide treatment of the wetland site may also be applied as necessary.

**Flamingo Restaurant and Lodge Florida Bay
Viewshed Project
EVER Vegetation Mapping Codes**

South Florida Natural Resources Center
Everglades National Park
National Park Service
US Department of the Interior

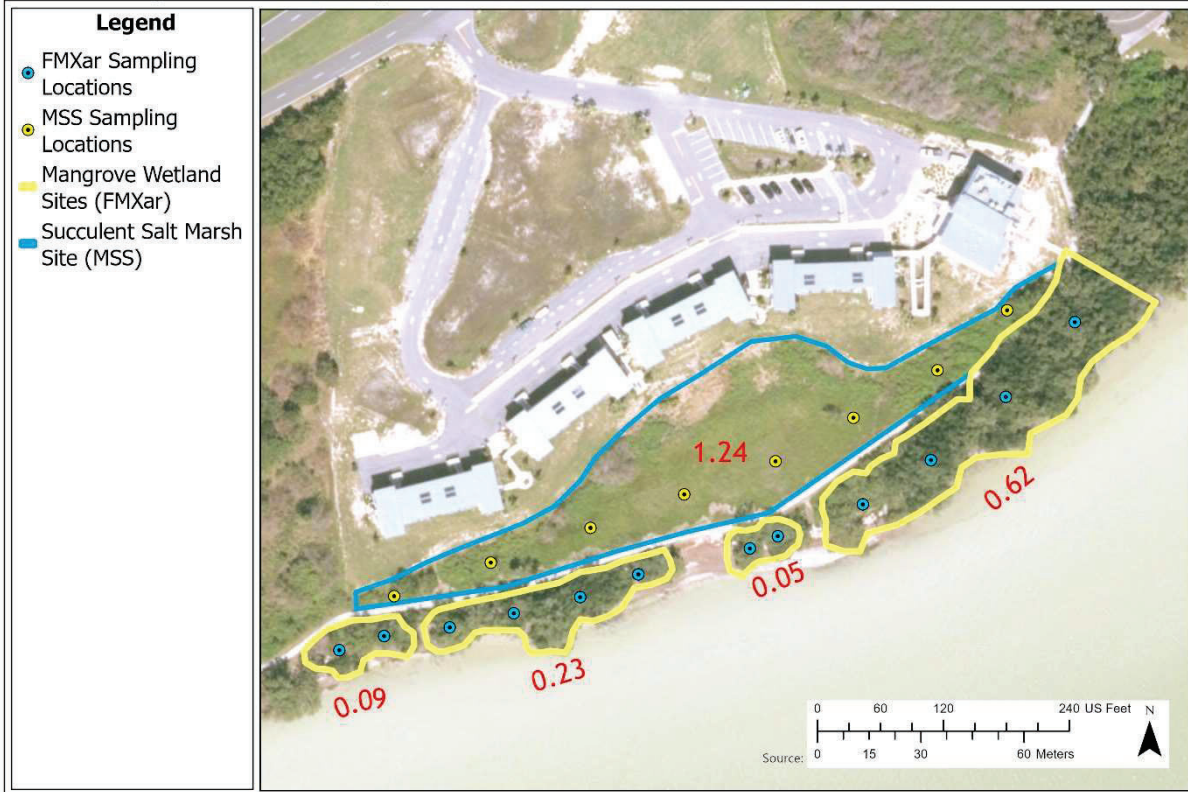


Figure 1 Mangrove and wetland vista clearing project area located behind Flamingo Lodge and Restaurant. The blue polygon indicates the limit of disturbance for the Succulent Salt Marsh site (MSS) and yellow polygons are limits of disturbance for the Mangrove Wetland site.

Applicable NPS Policy and Federal Compliance:

This project is governed by NPS Director's Order (#77-1: Wetland Protection and associated Procedural Manual #77-1. Compliance with Executive Order 11990 (Protection of Wetlands), NEPA, and the Clean Water Act (Section 404, if applicable) is required. A Wetland Statement of Findings (WSOF) is necessary because the proposed action will have short- and long-term adverse impacts on wetlands.

Section 5. Methods and Results

Wetland Determination

Site visits were conducted by NPS staff in March, July, and September 2025 to assess both mangrove and wetland sites within the project area. Using data collected in the field, US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), and FDEP Florida Land Use Cover Classification System (FLUCCS) wetland classifications were determined. Field

determination of jurisdictional wetlands required positive identification of three wetland characteristics: wetland hydrology, hydric soils, and hydrophytic vegetations. NPS collected data on physical and ecological characteristics from representative sampling locations within the assessment areas.

In lieu of conducting a formal wetland delineation to determine the extent of jurisdictional wetlands, presence of wetland resources is assumed for 100% of the proposed action area. The following wetland classification and functional assessment, as well as all proposed impacts and associated compensatory mitigations assume wetland occurrence in all portions of the proposed project area.

Riverine/Stream Delineation:

Not applicable to current project area. No riverine systems were identified within the proposed trimming zone.

Wetland/Stream Classification and Functional Assessment:

National Wetland Inventory

In 2008, ENP published the Flamingo Commercial Service Plan Environmental Assessment in which wetland classifications were determined using NWI survey data from 2007 for the entire Flamingo commercial area, including the restaurant and lodge areas. USFWS NWI previously had the commercial area classified as PUBHx – Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated. USFWS NWI has since redacted that classification and does not have updated information regarding the habitat for the project area directly to the south of the Flamingo Lodge and Restaurant.

The wetlands adjacent to the project area were classified as E2SS3P (Estuarine, Intertidal, Scrub-Shrub, Broad-Leaved Evergreen, Irregularly Flooded) in the 2007 Flamingo Commercial Service Plan EA which coincide with the current NWI classification. Both areas have similar obligate vegetation such as saltwort, sea-ox-eye daisy, seepweed for the understory and red, black, and white mangroves in the canopy. Adjacent wetlands south of the Guy Bradley Trail are where undisturbed mangrove forests are located. Their soils are similar to the Mangrove Wetland site with anaerobic peat soils that have tidally influenced flooding conditions. Adjacent wetlands to the north of Guy Bradley Trail are cut off from Florida Bay and receive their waters from direct rainfall. However, during particularly high tides, such as King tides, waters from Florida Bay are known to inundate the Guy Bradley Trail and connect with the Succulent Salt Marsh wetland.

Florida Land Use Cover Classification System

The FDEP FLUCCS classifies the project area as 1400: Commercial and Services. The wetlands adjacent to the project area are classified as 6120: Mangrove Swamp.

Everglades National Park Vegetation Mapping

In 2017, the Park created a spatially and thematically accurate vegetation map of Everglades National Park as part of the Comprehensive Everglades Restoration Plan (CERP). Through

photo-interpretation and ground truth data collection the Everglades National Park and Big Cypress National Preserve Vegetation Mapping Project is able to provide vegetation and land-cover information for use in park management, resource management, research and monitoring when other sources lack relevant data. Due to inaccuracies from other sources, this wetland statement of findings will be using Ruiz et al.'s Vegetation Mapping Project to accurately classify the wetlands in the project area. The mangrove site adjacent to the Flamingo Lodge and Restaurant is classified as FMXar – Black Mangrove-Red Mangrove Forest and the wetland site is MSS – Succulent Salt Marsh (Ruiz et al. 2017) (Figure 3).

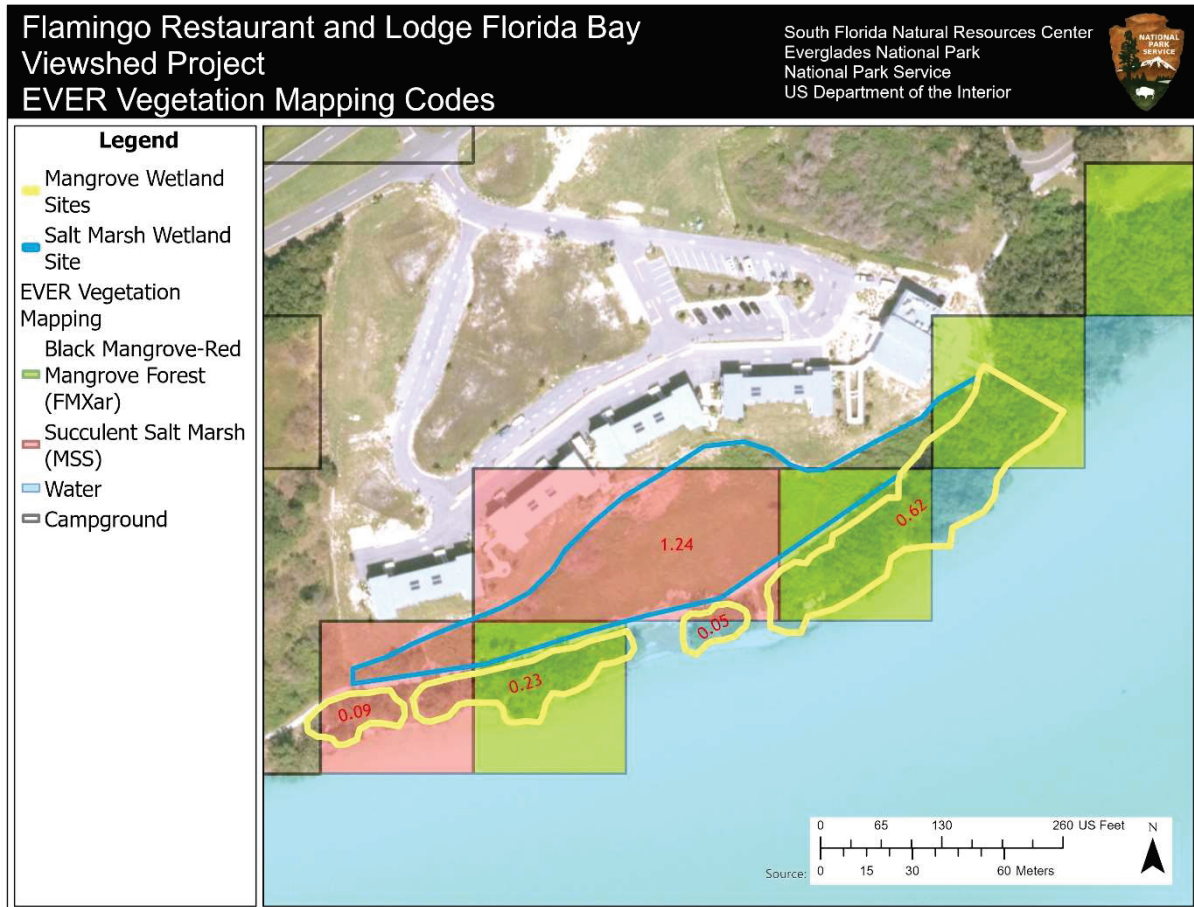


Figure 2. Vegetation mapping codes at project site

Mangrove Wetland Site (FMXar - 0.98 acres)

Although located within the Flamingo developed area, the mangrove stand in this area has remained largely untouched. The site proposed for window trimming, undercutting, and height maintenance is a high functioning mangrove estuarine wetland which is connected to Florida Bay and influenced by tidal hydrology. The mangroves in the area help to stabilize shorelines and provide storm protection. They provide a first line of defense to the newly constructed Flamingo Restuarant and Lodge. They provide rookery habitat for birds, fish, and invertebrates which are important ecologically and economically for Florida Bay. These activities are expected to primarily affect the community structure by altering the canopy, as well as impacting

regeneration, recruitment, and the age and size distribution of the vegetation due to land management practices. There may also be some impacts to wildlife that rely on the canopy cover. However, by adhering to Florida Department of Environmental Protection (FDEP) guidelines, these impacts will be minimized. Specifically, the proposed methodology retains canopy, avoids stem damage to red mangroves, and removes no more than 25% foliage annually within trimming zones.

Succulent Salt Marsh Site (MSS - 1.24 acres)

The wetland site located directly behind the Flamingo Lodge and Restaurant is a low functioning wetland separated from Florida Bay by the Guy Bradley Trail. The substrate consists of a mixture of organic soil and fill introduced during the development of the Flamingo area. The wetland has been fragmented from Florida Bay via the Guy Bradley Trail and, as such, its hydrology has been altered. Where originally it was tidally influenced by Florida Bay, now it primarily receives water from direct rainfall. The vegetation in the area includes both native plants and non-native invasive exotics.

Section 6. Summary of Project Alternatives

- **Alternative 1: No Action**
 - No trimming will occur; current viewshed remains obstructed. No direct wetland impacts.
 - Dismissed: Does not meet project objectives.
- **Alternative 2: Mangrove Hedging and Mowing Succulent Salt Marsh Wetland Site**
 - Gradual top-down canopy reduction across entire stand.
 - Mow wetland site to create a lawn.
 - Dismissed: High mortality risk to mature mangroves; poor ecological outcomes.
- **Alternative 3 (Preferred): Mangrove Window Trimming, Undercutting, Height Maintenance, and Trimming of Succulent Salt Marsh Wetland Site**
 - Selective undercutting below 6ft, window trimming between 10-20ft.
 - Height maintenance trimming to prevent future obstruction.
 - Conducted by DEP-licensed Professional Mangrove Trimmer (PMT); ongoing maintenance by NPS.
 - Wetland Site trimmed to a height of 4 feet via mechanical or manual means; ongoing maintenance by NPS.

Section 7. Impacts from Preferred Alternative

Justification for Use (Impacts) of Wetlands:

While the project will have short- and long-term impacts to estuarine wetlands, trimming is limited to aboveground biomass with no root, soil, or hydrology alterations. Following the guidelines established by FDEP's 1996 Mangrove Trimming & Preservation Act (F.S. 403.9321-403.9333) for the trimming and undercutting actions will minimize impacts to certain functions of the wetlands. The project balances ecological integrity with public use and visibility goals in a high-use visitor zone.

Section 8. Compensation / Mitigation

Avoidance and Minimization Measures:

- No root cutting or soil disturbance in either mangrove or wetland sites.
- Mangrove trimming will be limited to October-March.
- Use of manual and powered hand tools and low-impact equipment.
- No trimming of red mangrove prop roots.
- Fewer than 25% of leaves removed annually from mangroves.
- Young mangroves under 6 ft (~2m) in height will not be trimmed
- Retention of upper canopy to maintain ecological function.

Section 9. Compensation Measures:

Because the impacts to wetlands resulting from project actions exceed 0.1 acres; this project does not meet any of the exempted actions outlined in PM #77-1 Section 4.2.1.

Trimming mangroves will disrupt and reduce wetland functions by altering local biota due to the routine vista trimming activity that will occur to the mangrove canopy; however, this action is not expected to cause permanent impairment of wetland functions because precautions have been taken to minimize complete canopy clearing and the overall Mixed Forested Mangrove wetland structure will be maintained. As such, a 1:1 ratio to compensate for impacts to wetland functions was deemed acceptable. Total wetland impacts resulting from the project amount to 2.22 acres (Mangrove Wetland site (FMXar - 0.98 acres) and Succulent Salt Marsh site (MSS - 1.24 acres)).

The Park will remove invasive exotic plant species from three parcels adjacent to the Flamingo Lodge and Restaurant (Figure 3). The three parcels are located within the Flamingo Commercial area and, as such, have similar soil composed of marl/clay that has been mixed with fill from previous construction activities. The two northern parcels (0.56-acre and 0.92-acre) are similarly

cut off from Florida Bay via the Guy Bradley Trail. They receive water from direct rainfall. The 1.74-acre parcel is similar to the Mangrove wetland site and is tidally influenced by Florida Bay. The soil could be similar to that of the Mangrove wetland site with the same hydric soil indicators.

Currently, the three parcels are overgrown with Guineagrass, Brazilian peppertree, and Latherleaf (*Colubrina asiatica*). While those three invasive exotic plant species are the primary targets for treatment, the Park will also treat any Category I and II invasive exotics, as listed by the Florida Invasive Species Council (FISC), encountered. Total mitigation area equates to 3.21 acres which is slightly higher than the 1:1 compensation for loss of wetland functions ratio.

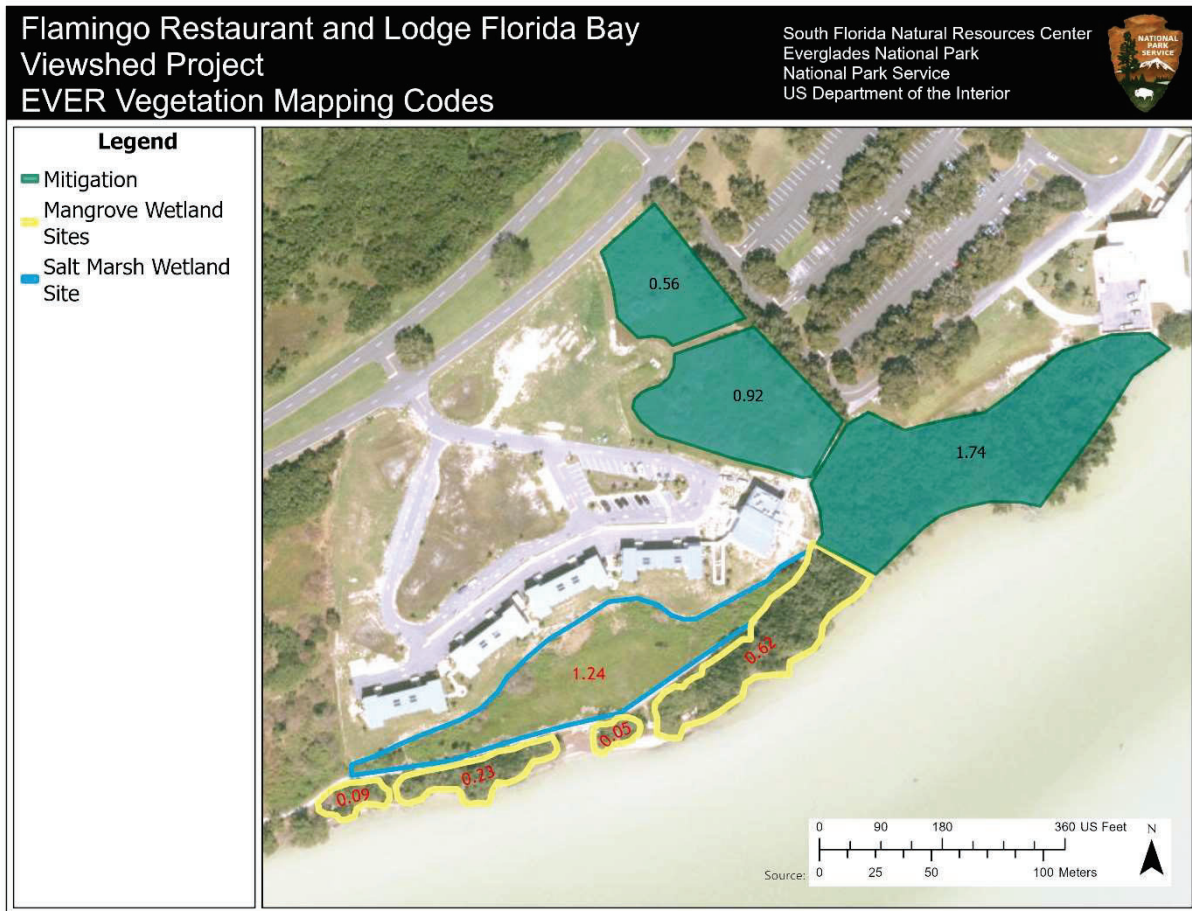


Figure 3. Proposed parcels for mitigation via invasive exotic plant removal.

Removal of invasive exotics may occur via herbicide application and manual or mechanical removal with follow up treatments taking place on an annual basis for a period of five years or until the site is deemed successful to satisfy the FDEP permit (44-08195-010-MA) requirements. Removal of invasive exotic plants from the parcels will result in an open ground stratum which will allow natives such as saltwort, purslane, and sea-ox-eye-daisy to recolonize. The removal of invasive species will also enhance the visitor experience by creating a more open vista along a heavily trafficked trail.

Section 10. Conclusions / Summary

This project proposes selective mangrove trimming and undercutting and trimming of wetland site in estuarine wetland areas within Everglades National Park to restore views of Florida Bay. The action is consistent with NPS policies under DO #77-1 and includes appropriate mitigation as well as multiple minimization measures.

Section 11. References

- Everglades National Park. 2025. Flamingo Vista Mangrove Trimming Proposal.
 - Florida Department of Environmental Protection (FDEP) Mangrove Trimming Guidelines.
 - Ruiz et al. 2017. The Everglades National Park and Big Cypress National Preserve Vegetation Mapping Project Interim Report – Southeast Saline Everglades (Region 2), Everglades National Park. Natural Resource Report NPS/SFCN/NRR – 2017/1494. National Park Service, Fort Collins, Colorado.
 - United States Army Corps of Engineers. 1987. Environmental Laboratory. Wetlands Delineation Manual [Technical Report Y-87-1].
 - United States Department of Interior, National Park Service. 2002. Director’s Order #77-1: Wetland Protection.
 - United States Department of Interior, National Park Service. 2025. Procedural Manual #77-1: Wetland Protection.
 - United States Department of Interior, National Park Service. Everglades National Park. 2007. Flamingo Commercial Services Plan/Environmental Assessment.
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