

APPENDIX A
Referenced Correspondences

July 15, 2014 Letter

From: Craig Aubrey (USFWS)

To: Jim Sopher (Applicant)

HCP Relevance: Notification of potential presence of federally listed species within CRC



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

July 15, 2014

Jim Sopher
Project Manager
RAM Realty Services
4801 PGA Boulevard
Palm Beach Gardens, Florida 33418

Dear Mr. Sopher:

The purpose of this letter is for the U.S. Fish and Wildlife Service (Service) to express concern regarding the RAM Realty Services' intent to construct the Coral Reef Commons development within the Richmond Pine Rocklands region of Miami, in Miami-Dade County, Florida. It is our understanding that Coral Reef Commons will contain a variety of commercial (*e.g.*, Wal-Mart, L.A. Fitness) and residential (*i.e.*, condominiums) development on approximately 150 acres. As discussed further below, the development of Coral Reef Commons is of the nature that could result in the take of federally protected species, and RAM Realty Services could be liable for violating Federal law. The following comments are provided in accordance with the Endangered Species Act, as amended (Act) (16 U.S.C. 1531–1543).

The pine rockland community of south Florida is critically imperiled globally (FNAI 2012). Destruction of the pinelands for economic development has reduced this habitat community by 90 percent on mainland south Florida (O'Brien 1998). The Richmond Pine Rocklands retain some of the largest remaining contiguous fragments of pine rockland habitat outside of Everglades National Park, and this area is known to be occupied by a number of rare plants and animals.

One such species is the endangered Florida bonneted bat (*Eumops floridanus*). Existing data indicate that the Florida bonneted bat uses pine rocklands and is present in the Richmond Pine Rockland area (Marks and Marks 2012; Ridgley 2012; J. Maguire, in litt. 2012; F. Ridgley, pers. comm. 2013a-c; 78 FR 61004). Repeated early emergence echolocation calls from the Zoo Miami and surrounding lands suggests that the Florida bonneted bat may also be roosting on-site or nearby, potentially on the site proposed for construction of Coral Reef Commons.

Another such species is the Bartram's scrub-hairstreak (*Strymon acis bartrami*), a butterfly that has been extirpated from the majority (over 90 percent) its former historic range. As a result, on August 15, 2013, the Service proposed rules to list the Bartram's scrub-hairstreak as endangered, as well as to designate critical habitat for the butterfly. These rules are currently being evaluated for finalization. The Bartram's scrub-hairstreak has occurred throughout the Richmond Pine Rocklands for several decades (Smith et al. 1994, Salvato and Salvato 2010), and was observed within the proposed project footprint of Coral Reef Commons as recently as June 27, 2014.

In addition to the Florida bonneted bat and Bartram’s scrub hairstreak, a number of other federally listed, proposed listed, and candidate species occur within the Richmond Pine Rocklands, and have either been documented or are likely to occur within the project footprint. These additional species and their statuses are summarized in the following table.

Species	Status	Critical Habitat	Presence at Richmond
Florida bonneted bat <i>Eumops floridanus</i>	Endangered	To be proposed	Present
Florida leafwing butterfly <i>Anaea troglodyta floridalis</i>	Proposed Endangered	Proposed	Historically
Bartram’s hairstreak butterfly <i>Strymon acis bartrami</i>	Proposed Endangered	Proposed	Present
Florida brickell-bush <i>Brickellia mosieri</i>	Proposed Endangered	Proposed	Present
Carter’s small-flowered flax <i>Linum carteri</i> var. <i>carteri</i>	Proposed Endangered	Proposed	Unknown
Deltoid spurge <i>Chamaesyce deltoidea</i> ssp. <i>deltoidea</i>	Endangered	None	Present
Tiny polygala <i>Polygala smallii</i>	Endangered	None	Present
Miami tiger beetle <i>Cicindelidia floridana</i>	Potential Candidate	TBD	Present

The Service is concerned that RAM Realty Services may construct the Coral Reef Commons project without first securing an Incidental Take Permit pursuant to section 10 of the Act. Consequently, if the proposed project results in Take of the Florida bonneted bat or the Bartram’s scrub-hairstreak (if listed), the Coral Reef Commons could be in violation of section 9 of the Act. Section 9 of the Act and its implementing regulations prohibit the “take” of any federally endangered or threatened species. Take is defined to mean harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Harm and harass are further defined in the Code of Federal Regulations (50 CFR 17.3); harass is defined as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is further defined as an act that results in significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Therefore, any activity or omission including disruption or modification of habitat occupied by listed species which significantly alters their behavior or creates the likelihood of injury or death may constitute a violation of section 9 of the Act. If a person is found guilty of violating section 9 of the Act, potential criminal penalties include fines of up to \$200,000 and/or up to 6 months imprisonment per violation.

The premise of take in reference to development of Coral Reef Commons will include the destruction, alteration, or reduction of Florida bonneted bat habitat. Our final listing rule for the Florida bonneted bat identifies those activities that would constitute a violation of section 9 of the Act, including unauthorized destruction or alteration of occupied or potentially occupied habitat in ways that kills or injures individuals by significantly impairing the species' essential breeding, foraging, sheltering, or other essential life functions (78 FR 61004). We would like to work with you to help avoid and minimize impacts to the species and avoid a possible violation of section 9 of the Act. Take of a roost site is a clear violation of the Act and determination of whether Florida bonneted bat is roosting on site is essential to avoiding this. Thus, prior to clearing the property, we highly recommend that you conduct a survey to determine whether the species is roosting on the site. Survey methodology and results should be coordinated with the Service.

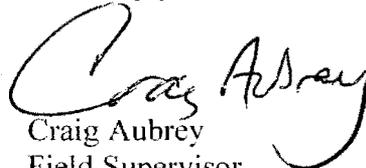
If listed, take would also include the destruction, alteration, or reduction of Bartram's scrub-hairstreak habitat, including the butterfly's larval hostplant, pineland croton (*Croton linearis*). Take may occur in ways that kill or injure individuals by significantly impairing the butterfly's essential breeding, foraging, sheltering, or other essential life functions.

In addition, we are also concerned about indirect impacts that may result from development of Coral Reef Commons. Specifically, we are concerned that the project, as proposed, will compromise land managers' abilities to conduct conservation activities on their lands (*i.e.*, prescribed fire treatments, exotics removal, etc.) within the Richmond Pine Rocklands.

We are communicating these concerns in an effort to assist RAM Realty Services from incurring potential legal liability under the Act for development activities recently approved by Miami-Dade County. We request that RAM Realty Services refrain from conducting any activities that could result in the take of federally listed species on the subject property until they have either (1) received confirmation from the Service that the proposed project will not result in the take of federally listed species or (2) demonstrated that they have received incidental take authorization under the Act.

Thank you for your cooperation in the effort to conserve fish and wildlife resources. If you have any questions, please contact Mark Salvato at 772-469-4340.

Sincerely yours,



Craig Aubrey

Field Supervisor

South Florida Ecological Services Office

cc: electronic only

FWS, Office of Law Enforcement, Miami, Florida (David Pharo)

Corps, Miami, Florida (Audrey Siu)

FWC, West Palm Beach, Florida (Mary Truglio, Ricardo Zambrano)

Miami-Dade Park and Recreation Department, Miami, Florida (Joe Maguire, Sonya Thompson)

Miami-Dade Environmentally Endangered Lands Program, Miami, Florida (Cynthia Guerra,
James Duncan, Tim Joyner, Craig Grossenbacher)

SFWMD, West Palm Beach, Florida (Brian Garrett)

LITERATURE CITED

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August 20, 2014 Email with Attachment

From: Shawn Christopherson (USFWS)

To: Church Roberts (JEI)

HCP Relevance: Plant survey methodology

From: Christopherson, Shawn [mailto:shawn_christopherson@fws.gov]
Sent: Wednesday, August 20, 2014 11:35 AM
To: Church Roberts
Cc: Ashleigh Blackford
Subject: Re: Coral Reef Commons/File 20149839

Thank you Church! Our office botanist (Dave Bender) has returned from vacation and has recommended the attached survey guidelines for the listed plants. The full list of plants is documented within the recommended guidelines. I did not receive the attachment referencing the approximate location of the recorders in your email, should I assume it was the original map/kml file I sent with no edits? We look forward to meeting with you on site. It looks like Tuesday, September 2nd is going to be the day. I am waiting on one or two more people to respond before I finalize the date/time with you.

Regards,
Shawn

~~~~~  
Shawn Christopherson  
U.S. Fish and Wildlife Service  
1339 20th Street  
Vero Beach, Florida 32960  
Tel.: 772-469-4336  
Fax: 772-469-4336  
E-mail: [Shawn\\_Christopherson@fws.gov](mailto:Shawn_Christopherson@fws.gov)

On Wed, Aug 20, 2014 at 6:28 AM, Church Roberts <[CLR@johnsoneng.com](mailto:CLR@johnsoneng.com)> wrote:

Shawn, based on yesterday's discussion the following is the agreed upon methodology to survey for the bonneted bat and the following plants - Florida brickell-bush, Carter's small-flowered flax, deltoid spurge, Tiny polygala and Pineland croton ( being surveyed for purposes of addressing the Florida's leafwing butterfly and Bartram's hairstreak butterfly ) for the proposed Coral Reef's Commons development, in response to the FWS' letter dated July 15, 2014.

**Bonneted Bat** – For the acoustic surveys, SM3BAT bioacoustics recorders will be utilized. SM3BAT can record in full spectrum and zero crossing. The acoustic recording locations will be located in a grid pattern, approximately 400' apart, to allow for a complete acoustic survey of the subject property. A total of 24 acoustic recording locations will be utilized. [The attached map shows the approximate location of the recorders]. Acoustic surveys will be conducted for four nights at each recording location. The acoustic surveys will also follow the Service's "Additional Guidance on Acoustic Surveys for Florida Bonneted Bat – August 18, 2014 for proposed Coral Reef Commons development". Abandoned

buildings will be physically inspected for potential bonneted bat roost sites. If evidence of bats is observed in the abandoned buildings, nighttime surveys will be conducted to confirm the bat species, utilizing both the SM3BAT bioacoustics recorder and handheld Echo Meter Touch recorder. A field meeting will be coordinated with FWS for the week of September 1, 2014, to review the bonneted survey methodology, initial survey results, and determine any refinements to the survey methodology.

**Plants** – Plant surveys for those species listed in the Service’s letter dated July 15, 2014, specifically, the Florida brickell-bush, Carter’s small-flowered flax, Deltoid spurge, and Tiny Polygala, in addition to the pineland croton (included for purposes of surveying for the Florida leafwing butterfly, and Bartram’s hairstreak butterfly), will be conducted in accordance with the methodology outlined in the 2013 “Survey and Mapping of the Distribution of Pineland Croton (*Croton linearis*) in Pine Rocklands in Miami – Dade County, Final Report”.

## GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES FOR FEDERALLY LISTED, PROPOSED, AND CANDIDATE PLANTS

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed, and candidate plants, and describes minimum standards for reporting results. The U.S. Fish and Wildlife Service (Service) will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed, or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigators should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitats. If access to reference populations is not available, investigators should study specimens from local herbaria.
3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.
4. Report results of botanical field inventories that include the following:
  - a. Surveyor names, survey dates and survey methodologies.
  - b. A description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.
  - c. A map or aerial photographs of project locations showing scale, orientation, project boundaries, parcel size, and map quadrangle name.
  - d. A representative list of all vascular plants occurring on the project site for each habitat type.
  - e. Current and historic land uses of the habitats and degree of site alteration.
  - f. Presence of target species off site on adjacent parcels, if known.
  - g. An assessment of the biological significance or ecological quality of the project site in a local and regional context.
5. If target species are found, report the results, including the following:
  - a. A map or aerial photographs showing federally listed, proposed, and candidate species distribution as they relate to the proposed project.

- b. If target species are associated with wetlands, describe the direction and integrity of flow of hydrology. If target species are affected by adjacent off-site hydrological influences, describe these factors.
  - c. Describe target species phenology and microhabitat, and an estimate of the number of individuals of each target species per unit area. Identify areas of high, medium and low density of target species over the project site, and provide acres or square feet of occupied habitat of target species. Investigators should provide color slides or photos of target species or representative habitats to support information or descriptions contained in reports.
  - d. The degree of impacts of the proposed project as it relates to occupied and potential unoccupied habitat.
6. Document findings of target species by completing field report and submit to: Dave Bender, U.S. Fish and Wildlife Service, South Florida Ecological Services Office, 1339 20th Street, Vero Beach, FL 32960; also submit report to the Florida Natural Areas Inventory, 1018 Thomasville Road, Suite 200-C, Tallahassee, Florida 32303.
7. Report as an addendum to the original survey any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than 3 years from the current date of project proposal submission will likely need additional surveys.
9. Adverse conditions may prevent investigators from determining presence or identifying some target species in potential habitats of target species. Disease, drought, or herbivory may preclude the presence or identification of target species in any year. Additional botanical inventories in subsequent years may be required if adverse conditions occur in potential habitats.

# Federally Listed and Candidate Plants

## Miami-Dade Pine Rocklands

### Documented on RAM parcel

|                |                                                          |            |
|----------------|----------------------------------------------------------|------------|
| Tiny polygala  | ( <i>Polygala smallii</i> )                              | Endangered |
| Deltoid spurge | ( <i>Chamaesyce deltoidea</i><br>ssp. <i>deltoidea</i> ) | Endangered |

### Proposed Critical Habitat located on RAM parcel

|                              |                                              |                             |
|------------------------------|----------------------------------------------|-----------------------------|
| Carter's small-flowered flax | ( <i>Linum carteri</i> var. <i>carteri</i> ) | Proposed<br>Endangered w/CH |
| Florida Brickell bush        | ( <i>Brickelia mosieri</i> )                 | Proposed<br>Endangered w/CH |

### Documented in adjacent parcels (may occur on RAM parcel)

|                            |                                                                   |            |
|----------------------------|-------------------------------------------------------------------|------------|
| Small's milkpea            | ( <i>Galactia smallii</i> )                                       | Endangered |
| Crenulate lead-plant       | ( <i>Amorpha crenulata</i> )                                      | Endangered |
| Sand flax                  | ( <i>Linum arenicola</i> )                                        | Candidate  |
| Blodgett's silver bush     | ( <i>Argythamnia blodgettii</i> )                                 | Candidate  |
| Florida pineland crabgrass | ( <i>Digitaria pauciflora</i> )                                   | Candidate  |
| Florida prairie clover     | ( <i>Dalea carthagenensis</i> var. <i>floridana</i> )             | Candidate  |
| Everglades bully           | ( <i>Sideroxylon reclinatum</i><br>ssp. <i>austrofloridense</i> ) | Candidate  |

**September 5, 2014 Letter**

**From:** Cynthia Marks (Florida Bat Conservancy)

**To:** David Ceilley (JEI)

**HCP Relevance:** Site Inspection Summary

P.O. Box 516, Bay Pines, FL 33744

727-710-BATS (2287)



Email: [floridabats@aol.com](mailto:floridabats@aol.com)

[www.floridabats.org](http://www.floridabats.org)

September 5, 2014

David W. Ceilley  
Johnson Engineering, Inc.  
2122 Johnson Street  
PO Box 1550  
Fort Myers, FL 33902-1550

Dear David,

On September 2-3, 2014 we inspected buildings A, B, C, the garage west of building A, the DOD guard house, and DOD entrance checkpoint station for the presence of bats. All buildings were determined to be free of bats, and there were no signs that bats had previously roosted in any of the buildings.

### **Inspections**

On September 2, 2014 the exteriors of Buildings A, B, C and the garage to the west of Building A were inspected for any exterior roosting opportunities such as loose flashing, gaps, and crevices. The only potential entry points for crevice roosting species such as the Florida bonneted bat were two openings in deteriorated fascia on the south side of Building A, however no signs of bat usage were seen.

On September 3, 2014 a room by room inspection of buildings A, B, C and the garage to the west of Building A was conducted. All floors and walls were examined for the presence of bat guano. (Bats frequently leave droppings as they exit a roost area.) All openings in walls or ceilings were checked for staining. (When bats use an opening over a period of time a brown staining occurs at the entrance and egress point.)

The ceiling construction was fully visible in many areas. These areas were checked for any bat roosting signs or opportunities. No signs of bat roosting were seen. Furthermore, it was determined that the type of construction used for the underside of the roof and the locations where it joins the walls was not conducive to bat roosting. The areas between the ceiling and roof, although containing pipes, wires, and AC ducts were too open to be attractive as bat roosts for any native species in the area. The areas below any open AC ducts were checked for bat guano.

*Donations to support the ongoing operations of the Florida Bat Conservancy are greatly appreciated. The Florida Bat Conservancy is a 501(c)(3) organization and donations are tax deductible. Our registration number with the Florida Department of Agriculture, Division of Consumer Services is CH-13129.*

EXHIBIT 13

Inspections cont'd.

On September 3, 2014 the exterior of the DOD guard house and DOD entrance checkpoint were examined. There were no exterior areas that would provide opportunities for bat roosting. All soffit screens were intact. No crevices or openings were found where bats could have entered the building. Consequently these buildings were determined to be free of bats.

### **Monitoring**

As an additional precaution, Buildings A, B, and C were monitored for one hour following sunset to see if any bats were observed leaving the building. There was no need to monitor the garage since all areas within it were fully visible for inspection. It was not necessary to monitor the DOD buildings since there were no potential entrance or egress points.

On September 2, 2014 Building A was monitored for bat emergence. The east wall was checked and found to be secure (no opportunities for bat emergence). One person with a bat detector was stationed at the NW corner of the building and one person with a bat detector stationed near the SW corner. This enabled the observance of the south, west, and north walls to be monitored, including the two openings in the fascia. See Figure 1 for clarification. No bats were seen or heard leaving the building during the emergence period.

On September 3, 2014 the west and south walls of Building B and the north and west walls of Building C were monitored. All other walls were secure (no open doors or windows). Again, see Figure 1 for clarification. No bats were seen or heard leaving the building during the emergence period.

### **Conclusion**

We have examined buildings A, B, C, the garage west of building A, the DOD guard house, and DOD entrance checkpoint station. We have determined that bats are not currently roosting in any of these buildings, nor are there signs that they have roosted in the buildings in the past. We recommend that the demolition take place as soon as possible now that the buildings have been determined to be free of bats.

Sincerely,



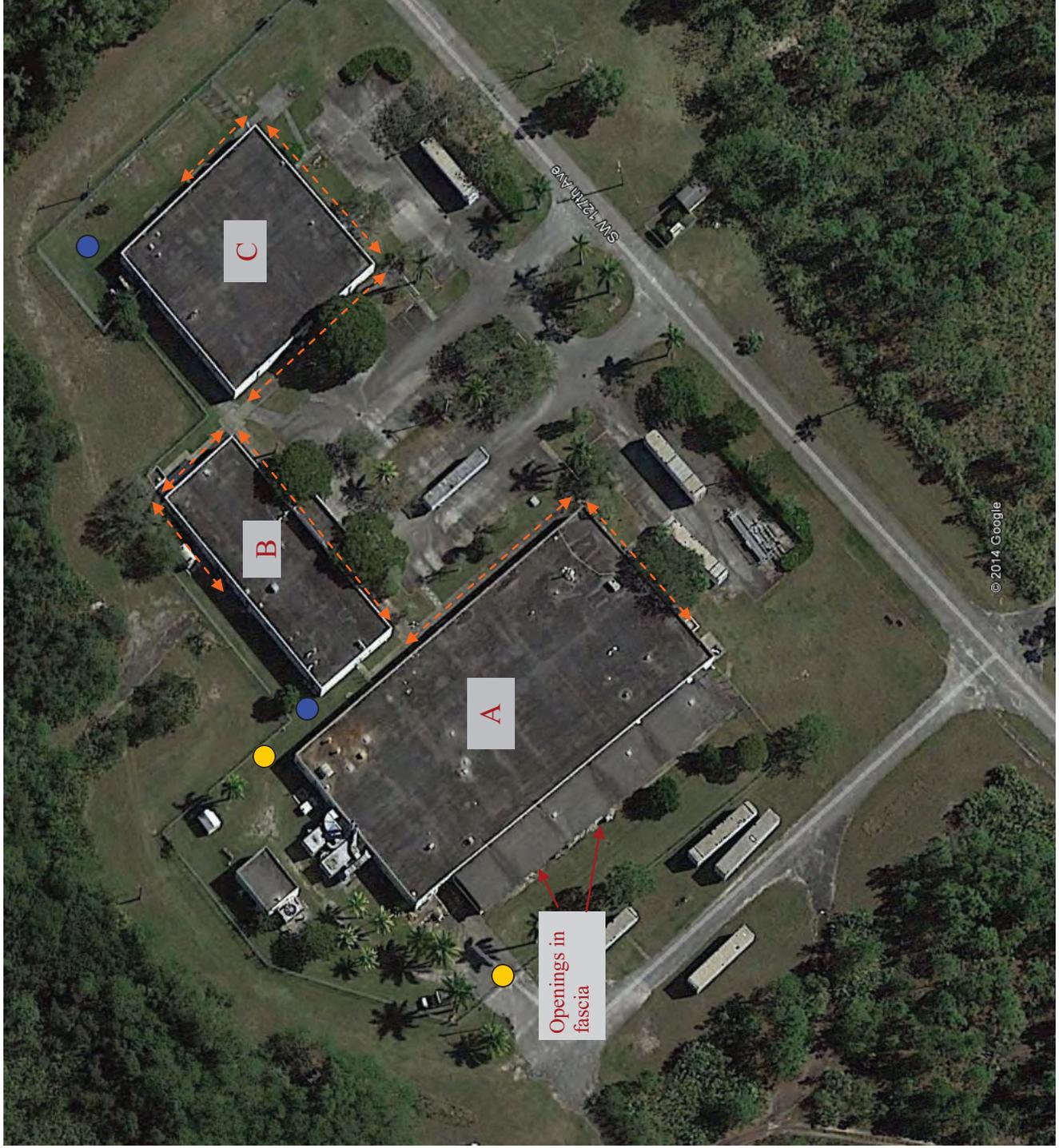
Cynthia S. Marks  
Florida Bat Conservancy

**Figure 1.** Diagram of buildings at Coral Reef Commons site monitored September 2-3, 2014.

● Observer stations Sept. 2  
from 7:39-8:39 pm

● Observer stations Sept. 3  
from 7:39-8:39 pm

◀ --- ▶ Sides that were  
secure (no open doors or  
windows) and were not nec-  
essary to monitor at emer-  
gency time.



**October 8, 2014 Letter**

**From:** Cynthia Marks (Florida Bat Conservancy)

**To:** David Ceilley (JEI)

**HCP Relevance:** Expert opinion on potential FBB utilization of CRC

P.O. Box 5834, Lakeland, FL 33807

727-710-BATS (2287)

Email: [floridabats@aol.com](mailto:floridabats@aol.com)



[www.floridabats.org](http://www.floridabats.org)

To: David W. Ceilley  
Johnson Engineering, Inc.  
2122 Johnson Street  
PO Box 1550  
Fort Myers, FL 33902-1550

October 8, 2014

RE: Coral Reef Commons

Bats are possibly the most abundant mammals in urban areas. The Family Molossidae in particular appears to be successful in urban areas and populations may have increased along with availability of manmade structures in which they commonly roost. However, their populations are vulnerable in urban areas due to illegal killing by homeowners and pest control operators, improper exclusions from buildings, and pesticides. Because of their tendency to roost in manmade structures, loss of natural habitat is not as important of an issue for molossids as it is for other species, however good sources of water and availability of insect prey is critical.

Initially I visited the Coral Reef Commons site concerned that *Eumops floridanus* might be roosting in rock outcroppings such as the roost that was once at the University of Miami campus, or that they could be roosting in a cavity in the rock closer to the ground. I was surprised to find that the site was already mostly developed and I saw no obvious roosting habitat for this species.

In conversations with Dr. Ted Fleming at the University of Miami about the Florida bonneted bat in Coral Gables, he stated that you can often hear their calls over traffic while sitting at stop lights. Of the three recordings of *E. floridanus* I collected in Homestead, two were in the Miami Speedway/Homestead Sports Complex area, which is well lit. The road leading into the Speedway had tall lights and we observed a large number of Night Hawks foraging in the lights, indicating an abundance of insect prey. The third recording was along a road bordered by two residential subdivisions.

After visiting the Coral Reef Commons site and looking at the *E. floridanus* calls that were recorded there by Johnson Engineering, I believe that this species would not be impacted by development of the site. In my opinion, the Development will not impact or impair the ability of the bat to continue its essential behavioral patterns such as roosting, foraging or breeding.

With respect to roosting, the calls recorded, based on time and call type, did not indicate that a roost was nearby. The number of sites where detectors were placed should be more than sufficient to determine if there is a roost on the site and none were detected.

With respect to foraging, while bat species in general forage around water sources, molossids are also commonly found foraging over parking lots, golf courses, and other urban landscapes. During surveys, I have often found the greatest activity of *Tadarida brasiliensis* and *Molossus molossus* over large parking lots. Molossids are less likely affected by fragmentation as other species because they fly high and commute and forage over cleared and open areas. The site does not currently contain the type of foraging habitat that is preferred by the bats (open area, parking lots, and freshwater lakes) and therefore does not provide preferred foraging habitat for the bat. *E. floridanus* is likely commuting over the site to forage in more open areas and over nearby lakes. This is also indicated by the types of calls recorded at the site.

Although little is still known about the Florida bonneted bat, my opinions are based on twenty five years of working with Florida's bat species, especially in urban areas. The threats to this species are great, but I do not believe that development of the Coral Reef Common site poses a significant threat to the Florida bonneted bat. The greater threat exists in surrounding neighborhoods where a colony could be willfully or accidentally destroyed. Education of condominium and apartment complex managers, pest control operators, county workers, and residents in areas where the Florida bonneted bat has been regularly recorded, should be a priority. More research is also critical for this species, especially to determine what insects they are foraging on locally in order to ensure a source of prey.

Respectfully,



Cynthia S. Marks

**December 5, 2014 Letter**

**From:** USFWS (Al Begazo)

**To:** Church Roberts (Johnson Engineering, Inc.)

**HCP Relevance:** Age and size of trees not old/large enough for cavities and to potentially be used by FBB

December 5, 2014

Church Roberts  
Babcock Ranch Community  
Charlotte-Lee Counties

Service Federal Activity Code: 2014-FA-1048  
Service Consultation Code: 2014-TA-1202  
Date Received: October 20, 2014  
Project: Rainwater Storage Area  
Applicant: Babcock Ranch Community  
County: Charlotte - Lee

Dear Mr. Roberts:

The Fish and Wildlife Service (Service) South Florida Ecological Services Office has received your request for technical assistance regarding a proposed rainwater storage area within the permitted Babcock Ranch Community. On August 21, 2009, the Service issued a Biological Opinion for the Babcock Ranch Community Project. This response letter is in accordance with section 7 of the Act, as amended (87 Stat. 884; 16 U.S.C. 1531 et seq.).

#### DESCRIPTION OF PROJECT

The project consists of building a 1,500-acre rainwater storage area that includes a dyke along the perimeter, culverts, and risers for control structures. The area chosen for the implementation of this project includes a combination of agricultural fields and pine flatwoods subject to harvest rotations. The dyke will be almost entirely constructed along existing trails or fields.

The storage area will be divided into three different cells where only rain water is expected to be held for additional treatment. No water will be pumped into the proposed structure. In general, the water depth will be between zero and 2 feet with the deeper water area located along the south side of each of the three cells. The average depth will be approximately 1 foot. This will be a gravity system with water generally leaving the storage area by percolation or evaporation.

No clearing of native habitat is proposed, except for a small portion of the perimeter berm or dyke. Pine mortality resulting from prolonged standing water is expected to be minimal. The water storage area shows a variety of elevations and water is expected to be held as needed during the rainy season. The project is located within the Babcock Ranch Community site. The coordinates for a central point within the proposed water storage project is Latitude 26.782171, Longitude -81.698966.

## THREATENED AND ENDANGERED SPECIES

The Service has reviewed its GIS database for recorded locations of federally listed threatened and endangered species and critical habitats on or adjacent to the project site. The GIS database is a compilation of data received from several sources.

## Red-cockaded Woodpecker

The proposed rainwater storage is located within the consultation area for the endangered Red-cockaded woodpecker (*Picoides borealis*). The area for the rainwater storage has been historically managed for pine harvesting rotations; hence pine trees do not meet the conditions of minimum diameter and age favored by red-cockaded woodpeckers for nesting cavities. Red-cockaded woodpecker's clusters do occur in the Babcock Ranch property in areas not subject to pine harvesting. Based on the information gathered, the Service believes that the proposed rainwater storage areas is not likely to result in take of the red-cockaded woodpecker.

## Florida Bonneted Bat

The proposed rainwater storage is located within the consultation area for the endangered Florida bonneted bat (*Eumops floridanus*). The bat is thinly distributed in the southern part of Florida and is known to use a variety of cavities or cavity-like structures for roosting and shelter.

Pine trees on the area proposed for the rainwater storage have been subject to harvest rotations. As such, trees are not old enough to be used by red-cockaded woodpeckers and potentially used by the bonneted bat. Moreover, pine mortality is expected to be minimal. If tree mortality occurs, trees will be left standing.

Some pines are proposed for cutting along the dykes. The applicant will inspect these pines to ensure that no cavity or structures with potential for roosting bats are being destroyed. Based on the information gathered, the Service believes the proposed project is not likely to occur in take of the endangered Florida bonneted bat.

Thank you for your effort and cooperation in protecting federally listed threatened and endangered species and other wildlife resources. For additional questions about this letter, please contact Al Begazo at 772-469-4234.

Sincerely yours,

*Al Begazo*

Alfredo (Al) Begazo  
Fish and Wildlife Biologist  
South Florida Ecological Services Office

**July 25, 2014 Email**

**From:** Barry Knisley (Randolph-Macon College)

**To:** Emily Bauer (USFWS)

**HCP Relevance:** Miami tiger beetle survey results and habitat suitability within CRC

**From:** [Knisley, C. \(Barry\)](#)  
**To:** [Emily Bauer](#)  
**Subject:** RE: Survey data west of Zoo Miami Rd.  
**Date:** Friday, July 25, 2014 9:42:53 AM  
**Attachments:** [Knisley Zoo Miami Waypoints RAM.docx](#)

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Emily, Attached is a small file of the Waypoints I recorded for my survey of the UM South Campus site (west of SW 124). My colleague also surveyed some of this area in 2011 and found not beetles; he did not record waypoints. At the time we assumed this was Zoo property and only after meeting with Frank Ridgley last Wed did I realized this the UM site that was sold and creating the controversy. I did not do any resurveys of it in part because it is probably off limits and also thinking my previous surveys provided a pretty good indication that this site was not suitable habitat. Of course management could make it suitable. The status of the Cstars UM site is uncertain and Frank did not know anything about it. I contacted Dan Trimarco about a visit last week but he said he was not there anymore and would pass on my request to the appropriate person. Nothing happened and as I gathered last year, the folks in charge were uncooperative and seemed not to want me to survey. The results of the two primary zoo sites produced small numbers of adults 15 in site 2 and 1 in site 1; these numbers are about the same as a colleague found a month ago, and confirm a likely decline in the population. Vegetation encroachment has gotten worse and a probable cause for the likely reduction in adult numbers. As you may know from an earlier report, Let me know if you need further info. Barry

Dr. C. Barry Knisley, Research Professor  
Department of Biology  
Randolph-Macon College  
304 Caroline St.  
Ashland, VA 23005

My Web page: [faculty.rmc.edu/bknisley/public\\_html/](http://faculty.rmc.edu/bknisley/public_html/)  
Use cell number, 804-314-0061  
office, 804-752-7254; Fax: 804-752-4724  
Home address: 1510 Beaverdam Ck. Rd., Crozier, VA 23039

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From: Emily Bauer [emily\_bauer@fws.gov]  
Sent: Thursday, July 24, 2014 10:02 AM  
To: Knisley, C. (Barry)  
Subject: Survey data west of Zoo Miami Rd.

Hi Barry,

Do you have point location data from the surveys you did west of the Zoo Miami Rd. (Please see attached pages [yellow highlights] from your 2013 final report for the Miami tiger beetle)? If you don't have the specific point location data, perhaps you could draw in a polygon on Google Earth to give me a better idea of how far west these surveys went.

Were you able to access any of the Univ. of Miami's south campus in the area of the proposed development? I'm guessing no, but just wanted to check. We met with the developers the other day. Apparently the only thing that has taken place thus far is hand clearing of exotic vegetation within a hammock that sits adjacent to SW 152nd St.

Thanks,  
Emily

.. ^ ^ . . . ><(((°> .. ^ ^ . . . . . ^ ^ . . . ><(((°> .. ^ ^ . . . . . ^ ^ . . . ><(((°>

Emily Bauer  
U.S. Fish & Wildlife Service  
South Florida Ecological Services Office

1339 20th Street  
Vero Beach, FL 32960  
Phone: (772) 469-4335  
Fax: (772) 562-4288  
Email: emily\_bauer@fws.gov<[mailto:emily\\_bauer@fws.gov](mailto:emily_bauer@fws.gov)>

**July 25, 2014 Email**

**From:** David Almquist (FNAI)

**To:** Emily Bauer (USFWS) and Barry Knisley (Randolph-Macon College)

**HCP Relevance:** Habitat potential for Miami tiger beetle following restoration

Sent: Wednesday, July 30, 2014 10:04 AM  
To: Almquist, David  
Cc: Mark Salvato; Emily Bauer; Knisley, C. (Barry)  
Subject: Re: FW: RAM Walmart site

Hi Dave,

Thanks very much for your help with the tiger beetle and for sharing any additional information.

I believe our office has requested a search of the database from Nathan now for the proposed development areas, which should be very helpful, as we do not want to overlook any listed, proposed listed, or other imperiled species.

I learned yesterday that we recently received plans for the proposed development project. We have a meeting with developers, hopefully U of M, and the county next week.

With regard to your question about the State listing process, I would say it is generally faster than the Federal process, based upon my experience with the Miami blue butterfly (original petition to list under ESA in 2000; our emergency rule 2011 and final rule 2012; emergency petition to State in Nov. 2002, listed under executive order in Dec. 2002). I do not know if the State process is still the same or still that fast. Dave Cook is FWC's invertebrate taxa coordinator and can perhaps better advise.

Thanks again,  
-Paula

On Fri, Jul 25, 2014 at 1:59 PM, Emily Bauer  
<emily\_bauer@fws.gov <[mailto:emily\\_bauer@fws.gov](mailto:emily_bauer@fws.gov)>> wrote:  
FYI...

-----Original Message-----

From: Almquist, David  
[<mailto:DAlmquist@admin.fsu.edu> <<mailto:DAlmquist@admin.fsu.edu>>]  
Sent: Friday, July 25, 2014 10:40 AM  
To: Knisley, C. (Barry); Emily Bauer  
Subject: RE: RAM Walmart site

Thanks for the info.

I do have your 2011 report. If you have others that you could fwd, that would be great.

I'll see if I can find out anything about the sortof conservation/management status of the U of Miami Richmond Campus/CSTARS site. If you want to know what we have in our database as far as rare spp on that site, send an email to Nathan Pasco, npasco@fnai.org <<mailto:npasco@fnai.org>>, asking for that and he can prepare you a (free) data request detailing what's been found there and in nearby areas.

The possible development of some of this only habitat for amusement parks is depressing. It would be rather ironic if the Walmart thing goes through and the pine rockland that they hopefully manage properly becomes the best florida habitat.

I'm usually very leery of listing insects, but this is one that definitely

should be. I wonder what the state process is for listing and whether it's any faster than federal.

Dave

-----Original Message-----

From: Knisley, C. (Barry)

[<mailto:bknisley@rmc.edu> <<mailto:bknisley@rmc.edu>>]

Sent: Friday, July 25, 2014 10:15 AM

To: Almquist, David; emily\_bauer@fws.gov <[mailto:emily\\_bauer@fws.gov](mailto:emily_bauer@fws.gov)>

Subject: RE: RAM Walmart site

Dave, I do not think there is a problem with collecting as all sites are gated or pretty well protected. Not sure if you got my reports on floridana, but there are 3 contiguous site, Coast Guard when only a very few beetles were found in 2 visits (like all sites it is in need of veg mgmt. and could be improved), the UMiami CSTARS campus, also adjacent) where I surveyed several times a few years ago with small numbers of adults but some scattered patches of habitat and probably more there. I wonder if any surveys for other rare stuff have been done at CSTARS and if this could be acquired for conservation??

Frank Ridgley at zoo is very involved in conservation efforts and filled me on the county proposals for the zoo property and related issues. He could provide necessary details, but he mentioned two proposals for venues that would clear the main patches of floridana habitat and probably some of the coast guard site. ((There is one patch within the zoo enclosure area near the Australian section with some habitat and some floridana have been found.)) One proposal was from a German company with large moving dinosaurs, etc. and the other from a Ruppert Murdock company for a water park, etc. County zoning or whatever required the site to be used for something educational. Apparently the two groups may be working together so both of these options could be combined since an educational component would quality.....Not sure how much of what Frank knows is for public consumption.... Of course any of these developments would have indirect effects including further complicating prescribed burns which are already long overdue (One scheduled for this year was canceled due to money, or maybe that was an excuse). As I have mentioned before, I think the zoo floridana habitat could be improved simply by hand reduced of encroaching vegetation and litter to expand the small declining open patches and connect them. I think this should be done now or prior to the 2015 adult flight season. Barry

Dr. C. Barry Knisley, Research Professor Department of Biology  
Randolph-Macon College  
304 Caroline St.  
Ashland, VA 23005

My Web page:

[faculty.rmc.edu/bknisley/public\\_html/](http://faculty.rmc.edu/bknisley/public_html/) <[http://faculty.rmc.edu/bknisley/public\\_html/](http://faculty.rmc.edu/bknisley/public_html/)>

Use cell number, 804-314-0061

office, 804-752-7254; Fax: 804-752-4724

Home address: 1510 Beaverdam Ck. Rd., Crozier, VA 23039

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From: Almquist, David

**November 6, 2014 Memorandum**

**From:** Carlos Gimenez (MDC)

**To:** Rebecca Sosa (MDC) and Members of Board of County Commissioners  
(MDC)

**HCP Relevance:** Placing a hold on development of CRC pending negotiations with  
USFWS

# Memorandum

MIAMI-DADE  
COUNTY

**Date:** November 6, 2014

**To:** Honorable Chairwoman Rebeca Sosa  
and Members, Board of County Commissioners

**From:** Carlos A. Gimenez  
Mayor 

**Subject:** Coral Reef Commons

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The following information is provided regarding development of the proposed Coral Reef Commons project in south Miami-Dade in the vicinity of Zoo Miami.

The Coral Reef Commons project relates to private development on approximately 138 acres of property located at the southwest corner of SW 152<sup>nd</sup> Street and SW 124<sup>th</sup> Avenue. The property has been owned by the University of Miami since the early 1980's and received Community Zoning Appeals Board (CZAB) approval (Resolution No. CZAB14-10-13) for a multifamily residential and retail development on October 17, 2013.

Subsequent to the CZAB approval, on September 11, 2014, the U.S. Fish and Wildlife Service (USFWS) listed new endangered species and designated critical habitat for these species within the Richmond Pineland complex, which includes the proposed Coral Reef Commons Project site. The federal government has indicated that the developers' plans for the property may result in harm to newly listed endangered species. As has been publicized in the media, the developer had announced that certain activities on the site were on hold pending negotiations with the USFWS. More recently, the developer had communicated a willingness to coordinate with the County regarding future site activities.

In light of the recent federal action and in an abundance of caution, should the County fail to reach agreement with all interested parties for voluntary cessation of activities, the County would take appropriate steps to suspend any existing County authorizations for activities on the site. This suspension will be in effect until the developer reaches agreement with other governmental entities, including but not limited to USFWS, and obtains any necessary authorization pursuant to the Endangered Species Act. Reinstatements will be considered as progress is made with USFWS on allowable actions.

Please note that other areas of the County may also be affected by the new federal designation, including the Zoo Miami Entertainment Area (ZMEA). We have designated a team composed of multi-disciplinary County professionals to guide development in those areas in accordance with federal requirements.

We will continue to keep the Board apprised of actions related to these sites. Please do not hesitate to contact Jack Osterholt, Deputy Mayor/Director, Department of Regulatory and Economic Resources (RER), at 305-375-5695 should you have any further questions.

c: Office of the Mayor Senior Staff  
R. A. Cuevas, Jr., County Attorney  
Department Directors  
RER Senior Staff

**July 3, 2008 Memorandum**

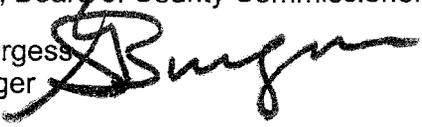
**From:** George M. Burgess (MDC)

**To:** Bruno A. Barreiro (MDC) and Members of Board of County Commissioners (MDC)

**HCP Relevance:** Amendment of Metrozoo Master Plan to incorporate Miami Wild

# Memorandum



**Date:** July 3, 2008  
**To:** Honorable Chairman Bruno A. Barreiro  
and Members, Board of County Commissioners  
**From:** George M. Burgess  
County Manager 

Substitute  
Special Item No. 1

**Subject:** Substitute Ordinance Acting Upon Miami Metrozoo DRI Application to Amend the Comprehensive Development Master Plan (CDMP)

THE ENCLOSED SUBSTITUTE ORDINANCE DIFFERS FROM THE ORIGINAL IN THAT IT REVISES THE PREAMBLE OF THE ORDINANCE TO REFLECT (1) THE REQUEST TO EXTEND THE DRI/CDMP AMENDMENT DEADLINES PURSUANT TO CHAPTER 380.06(6)(b)3, F.S., (2) THE ACTIONS TAKEN BY THE BOARD OF COUNTY COMMISSIONERS AT ITS "TRANSMITTAL" PUBLIC HEARING ON JULY 26, 2007, AND THE RECEIPT OF THE OBJECTIONS, RECOMMENDATIONS AND (3) COMMENTS (ORC) FROM THE FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS (DCA) BY LETTER DATED OCTOBER 12, 2007. IN SECTION 2 OF THE SUBSTITUTE ORDINANCE, PARAGRAPH NO. 1 WAS AMENDED TO INCLUDE INTENSITY STANDARDS AND PERCENTAGES OF USE IN RESPONSE TO THE ORC COMMENTS, AND PARAGRAPH NO. 4 WAS ADDED TO STATE THAT TABLE 3 ON PAGES VIII-10 AND VIII-11 OF THE INTERGOVERNMENTAL COORDINATION ELEMENT OF THE CDMP WAS AMENDED TO INCLUDE "MIAMI METROZOO" AND THE "MIAMI METROZOO ENTERTAINMENT AREA" AS FACILITIES OF COUNTYWIDE SIGNIFICANCE. FURTHERMORE, PARAGRAPH NO. 5 WAS ADDED TO STATE THAT TWO CAPITAL IMPROVEMENT PROJECTS WERE INCLUDED IN THE PARK AND RECREATION (TABLE 6) COMPONENT OF THE CAPITAL IMPROVEMENTS ELEMENT (CIE).

## RECOMMENDATION

It is recommended that the Miami-Dade County Board of County Commissioners (BCC) approve the attached ordinance, which provides for adoption, adoption with change, or denial of the proposed Miami Metrozoo Development of Regional Impact (DRI) application to amend the Comprehensive Development Master Plan (CDMP) at the public hearing scheduled for **9:30 AM on Thursday, July 3, 2008**. The CDMP amendment application was filed for concurrent processing with a separate, but related, application requesting changes to the existing Miami Metrozoo DRI (a.k.a. Miami Metrozoo and Larry and Penny Thomson Park). Under the special concurrent process provided in Chapter 380.06(6), F. S., and Section 2-116.1 of the Code of Miami-Dade County, the BCC is to take final action on the CDMP amendment ordinance and the proposed changes to the DRI.

## SCOPE

The CDMP is a broad-based countywide policy-planning document to guide future growth and development, to insure the adequate provision of public facilities and services for existing and future populations, and to maintain or improve the quality of the natural and man-made environment. The application site is located within District 9, and relates to a 170-acre property generally located within Miami Metrozoo and the Gold Coast Railroad Museum. The proposed CDMP amendment is expected to have a countywide impact.

## FISCAL IMPACT

Fiscal impact refers to the cost to the County of implementing the activities or actions that would be incurred after approval of the amendment Application, as per Ordinance 01-163. The costs associated with the development of the project, including public infrastructure improvements,

construction costs and operation of the facilities, will be borne by private sector partners that will be selected through a competitive request for proposal (RFP) process. The proposed development includes the construction of a water park, a family entertainment center, and a hotel, as well as improvements to the site of the Gold Coast Railroad Museum. Except for signage and improvements to roads and parking areas within the Metrozoo property [which will be funded through the General Obligation Bonds (GOB) for Miami Metrozoo], Miami-Dade County will not use Park and Recreation funds or other County funds for the proposed development. Below are the most current estimates of public infrastructure and operational costs resulting from the proposed development that will be borne by the private developer selected as a result of the RFP process:

- Water impact fee: \$151,257
- Sewer impact fee: \$609,382
- Annual operating and maintenance costs for water and sewer: \$87,397
- Total construction cost for water and sewer infrastructure: \$1,916,171 (*Includes a 16-inch water main and two 10-inch water meters; a lift station and installation of a 12-inch sanitary sewer force main and a pump station for Metrozoo's private sewer system.*)
- Water conservation improvements (Cost to be determined)
- On-site stormwater retention system and stormwater utility fee (Cost to be determined)
- All required permit fees associated with the development from DERM, WASD, etc.

#### **TRACK RECORD/MONITOR**

CDMP Amendments do not involve contracts; therefore, information on Track Record/Monitoring is not applicable.

#### **BACKGROUND**

The Miami Metrozoo CDMP amendment application requests the creation of a new CDMP Land Use Plan (LUP) map category, identified as the "Miami Metrozoo Entertainment Area," with text establishing development standards for allowable land uses, including intensities and percentages of use. The Application proposes to change the land use designation on 170 acres of land within the existing Metrozoo and Gold Coast Railroad Museum properties from "Parks and Recreation" to "Miami Metrozoo Entertainment Area" on the adopted 2015-2025 Land Use Plan map. Approximately 52 acres would be "new" land added to the Miami Metrozoo DRI.

The attached ordinance provides for final action on the proposed CDMP application requesting text and map amendments to the CDMP. The BCC's previous action on the proposed Miami Metrozoo CDMP amendment application was to "Adopt with Change and Transmit with Staff's Recommendation, as revised on July 3, 2007."

The DCA coordinated the State agency consistency review on the transmitted CDMP application at the request of Miami-Dade County. In its Objections, Recommendations and Comments (ORC) report, dated October 12, 2007, the DCA issued two objections to the Metrozoo CDMP amendment application. The first DCA objection called for Miami-Dade County to add intensity standards and percentages of use to the proposed "Miami Metrozoo Entertainment Area" CDMP land use category. In response, intensity standards were added allowing a maximum floor area ratio (F.A.R.) of 0.30 for the water theme park and the Gold Coast Railroad Museum and an F.A.R. of 0.40 for the family entertainment center and hotels. The percentages for the allowable mix of uses were also included in the proposed land use category (60 to 99 percent for attractions and recreation and 1 to 40 percent for hotels and other lodgings).

The second objection in the DCA ORC called for Miami-Dade County to coordinate with the Florida Department of Transportation (FDOT) in addressing traffic congestion at intersection of SW 152 Street and SW 117 Avenue. The County, FDOT, and the Florida Turnpike Enterprise (FTE) were able to reach an agreement and the County, as well as FTE, committed to various improvements to facilitate traffic flow at the intersection, including a free-flow right turn lane onto SW 152<sup>nd</sup> and a continuous right turn lane from the southbound exit ramp of the HEFT. These improvements will be incorporated into existing funded projects, including the County's SW 117 Avenue widening project and the FTE's HEFT widening project on SW 117 Avenue. As such, no additional funding will be required to implement the proposed improvements.

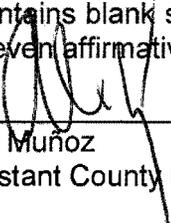
In addition to the DCA ORC objections, the following provides a summary of other key issues related to the application. First, although the project originally called for non-potable water to be used for the water park pool, the Miami-Dade Water and Sewer Department (MDWASD) has required the water park to utilize potable water due to possible public health concerns, and determined that there is sufficient capacity to meet the project's potable water demand. Second, MDWASD has required the proposed development to incorporate various water conservation and reuse practices. This includes treating and injecting the water from the water park pool into the zoo's moat at the end of each season in order to recharge the aquifer, using reclaimed water for irrigation where feasible, and integrating water conservation into the design of all the proposed facilities. Third, Miami-Dade County was required to execute an Agreement in Principal (AIP) with the U.S. Department of the Army regarding the modifications and transfer of federal deed restrictions necessary to develop the proposed Miami-Metrozoo Entertainment Area. On September 19, 2007 the AIP was executed; however no development will be permitted until the deed related actions outlined in the AIP are complete. All of the items discussed above are part of the development order conditions for the proposed changes to the Miami-Metrozoo DRI, including requirements to protect the Natural Forest Communities (NFCs) and the historical/archeological resources located within the amendment site.

Attached you will find the "Revised Recommendation, Miami Metrozoo DRI Application to Amend the Comprehensive Development Master Plan," report dated April 25, 2008 prepared by DP&Z staff and revised May 5, 2008. That report summarizes the pending Miami Metrozoo CDMP application as transmitted to DCA, presents the DP&Z's revised recommendation and principal reasons for the revised recommendation, and includes the ORC report and DP&Z's response to the ORC.

The Planning Advisory Board acting as the Local Planning Agency (LPA) conducted its final public hearing on the pending CDMP application on May 5, 2008, and recommended that the proposed Miami Metrozoo CDMP application be "Adopted as Transmitted with Additional Changes." The PAB's recommendation is contained in the attached PAB resolution and meeting minutes, both dated May 5, 2008.

#### Ordinance Format

The ordinance follows the same format used for other CDMP amendment applications. That is, it contains blank spaces to record your action on the requested CDMP amendment. A minimum of seven affirmative votes is required by County Code to amend the CDMP.

  
\_\_\_\_\_  
Alex Muñoz  
Assistant County Manager

**MIAMI METROZOO DRI APPLICATION MATRIX**  
**Summary of Recommendations/Revised Recommendations by DP&Z, Community Council, PAB and BCC**

**Miami Metrozoo DRI Application to Amend the CDMP**

| <b>Application</b>                                   | <b>Commissioner/<br/>BCC District/</b> | <b>DP&amp;Z Initial<br/>Recommendation</b><br><br>(June 22, 2007) | <b>Redland<br/>Community<br/>Council 14</b><br><br>(June 27) | <b>Local Planning<br/>Agency<br/>Recommendation</b><br><br>(July 9, 2007)                                                                          | <b>Board of County<br/>Commissioners<br/>Recommendation</b><br><br>(July 26, 2007)                                                                    | <b>Objections,<br/>Recommendations<br/>and Comments<br/>Issues</b><br><br>(Oct. 12, 2007)                                                    | <b>DP&amp;Z Revised<br/>Recommendation</b><br><br>(April 25, 2008) | <b>Local Planning<br/>Agency Final<br/>Recommendation</b><br><br>(May 5, 2008) | <b>Board of County<br/>Commissioners<br/>Final Actions</b><br><br>(July 3, 2008) |
|------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>Miami<br/>Metrozoo<br/>DRI/CDMP<br/>Amendment</b> | Dennis C. Moss<br>/ 9                  | Adopt with Changes<br>and Transmit                                | Transmit with<br>Change<br>Recommended by<br>Staff)          | Adopt With Change<br>and Transmit with<br>Staff's<br>Recommendations,<br>as Revised July 3,<br>2007, and PAB<br>Recommendations<br>of July 9, 2007 | Adopt With Change<br>and Transmit with<br>Staff's<br>Recommendations,<br>as Revised<br>July 3, 2007,<br>and PAB<br>Recommendations of<br>July 9, 2007 | 1. Need for intensity<br>standards and<br>percentage of<br>uses<br><br>2. Transportation<br>impact and need<br>for coordination<br>with FDOT | Adopt as Transmitted<br>with Additional<br>Changes                 | Adopt as Transmitted<br>with Additional<br>Changes                             |                                                                                  |

2

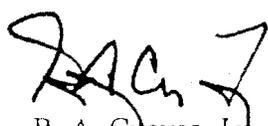


# MEMORANDUM

(Revised)

TO: Honorable Chairman Bruno A. Barreiro  
and Members, Board of County Commissioners

DATE: July 3, 2008

FROM:   
R. A. Cuevas, Jr.  
County Attorney

SUBJECT: Substitute  
Special Item No. 1

Please note any items checked.

- "4-Day Rule" ("3-Day Rule" for committees) applicable if raised
- 6 weeks required between first reading and public hearing
- 4 weeks notification to municipal officials required prior to public hearing
- Decreases revenues or increases expenditures without balancing budget
- Budget required
- Statement of fiscal impact required
- Bid waiver requiring County Manager's written recommendation
- Ordinance creating a new board requires detailed County Manager's report for public hearing
- Housekeeping item (no policy decision required)
- No committee review

5

Approved \_\_\_\_\_ Mayor  
Veto \_\_\_\_\_  
Override \_\_\_\_\_

Substitute  
Special Item No. 1  
7-03-08

ORDINANCE NO. \_\_\_\_\_

ORDINANCE RELATING TO MIAMI-DADE COUNTY COMPREHENSIVE DEVELOPMENT MASTER PLAN; PROVIDING DISPOSITION OF APPLICATION REQUESTING AMENDMENTS TO THE COMPREHENSIVE DEVELOPMENT MASTER PLAN FILED FOR CONCURRENT PROCESSING WITH PROPOSED CHANGES TO "MIAMI METROZOO" DEVELOPMENT OF REGIONAL IMPACT (DRI); PROVIDING SEVERABILITY, EXCLUSION FROM THE CODE AND EFFECTIVE DATE

**WHEREAS**, Chapter 163, Part 2, and 380.06, Florida Statutes, and associated administrative regulations establish procedures for amending local government comprehensive plans; and

**WHEREAS**, this Board has provided a procedure (codified as Section 2-116.1 of the Code of Miami-Dade County, Florida) to amend, modify, add to or change the Miami-Dade County Comprehensive Development Master Plan (CDMP); and

**WHEREAS**, Chapter 380.06(6), F.S., and Section 2-116.1 of the Code of Miami-Dade County, provides a procedure for accepting and processing applications to amend the Comprehensive Development Master Plan (CDMP) concurrently with a Notice of Proposed Change (NOPC) to an existing Development of Regional Impact (DRI); and

**WHEREAS**, a CDMP amendment Application was filed for concurrent processing with a Notice of Proposed Change to the existing Miami Metrozoo (a.k.a. Miami Metrozoo and Larry and Penny Thompson Park) DRI, as provided in Chapter 380.06(6), F.S., and Section 2-116.1, of the County Code; and

**WHEREAS**, the CDMP amendment Application and applicable initial recommendations of the Department of Planning and Zoning are contained in a document entitled "Application and Initial Recommendations, Miami Metrozoo DRI Application to Amend the CDMP" dated June 22, 2007 and revised July 3, 2007 and July 26, 2007; and

**WHEREAS**, affected Community Council Number 14 has acted in accord with County procedures, and conducted a duly noticed public hearing on June 27, 2007, to receive public

comments on the subject CDMP amendment Application and on the recommendations of the Department of Planning and Zoning (DP&Z), and to formulate recommendations regarding transmittal and final action on the requested amendments; and

**WHEREAS**, the Planning Advisory Board (PAB), acting as the Local Planning Agency (LPA), conducted a duly noticed public hearing on July 9, 2007 to address the subject CDMP amendment Application, the recommendations of the affected Community Council, the DP&Z transmittal of the amendment Application to DCA for State agency review, and to formulate recommendations regarding final action on the requested Plan amendments; and

**WHEREAS**, the Miami-Dade County Board of County Commissioners conducted a duly noticed public hearing on July 26, 2007, to address the subject CDMP amendment application, the recommendations of the affected Community Council, the PAB and the DP&Z, to address transmittal by the Board to the DCA of the subject amendment application for State agency review and comment, and to address subsequent action on the application by the Board; and

**WHEREAS**, an Objections, Recommendations, and Comments (ORC) report on the Metrozoo DRI CDMP amendment application was issued by DCA on October 12, 2007; and

**WHEREAS**, the Board of County Commissioners is required by the Code of Miami-Dade County ("Code") to take final action to Adopt, Adopt With Change, or Not Adopt the amendment Application not later than sixty (60) days after receipt of written comments from DCA addressing the Application, unless an extension of that deadline is timely requested by the applicant; and

**WHEREAS**, an extension to the Code deadlines was requested on October 31, 2007 and granted by DP&Z, as allowed by Section 2-116.1(5)(a)(7) of the Code of Miami-Dade County, in order to resolve outstanding issues raised by DCA in the ORC report dated October 12, 2007; and

**WHEREAS**, the DP&Z and the LPA may issue revised recommendations addressing the transmitted plan amendment Application after receipt of comments from the DCA, prior to final hearing and action by the Board of County Commissioners; and

**WHEREAS**, consideration of such special Application is exempt from the twice-per-year statutory limitation on adoption of comprehensive plan amendments pursuant to Chapter 163, F.S.; and

7

**WHEREAS**, DP&Z's revised recommendations addressing the Metrozoo DRI CDMP amendment application, DCA's ORC report, and DP&Z's response to the ORC report are contained in a document titled "Revised Recommendation, Miami Metrozoo DRI Application to Amend the Comprehensive Development Master Plan," dated April 25, 2008; and

**WHEREAS**, on May 5, 2008, the PAB acting as the Local Planning Agency conducted a duly noticed public hearing to receive public comments on the pending CDMP amendment application as transmitted for review and comment by DCA; on the revised recommendations of the DP&Z; on the ORC report; and to issue a final recommendation to the Board of County Commissioners regarding final actions on the pending Metrozoo DRI CDMP amendment application; and

**WHEREAS**, all existing lawful uses and zoning in effect prior to a CDMP amendment are deemed to remain consistent with the CDMP as amended unless the Board of County Commissioners, in conjunction with a particular zoning action, finds such preexisting zoning or uses to be inconsistent with the CDMP based upon a planning study or activity addressing the criteria set forth in the CDMP; and

**WHEREAS**, the approval of an amendment to the CDMP does not assure favorable action upon any application for zoning or other land use approval but is part of the overall land use policies of the County; and

**WHEREAS**, any application for zoning or other land use approval involves the application of the County's overall land use policies to the particular request under consideration; and

**WHEREAS**, the County's overall land use policies include, but are not limited to, the CDMP in its entirety and the County's land development regulations; and

**WHEREAS**, this Board has conducted the public hearings required by the referenced procedures preparatory to enactment of this ordinance;

**NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:** that,

**Section 1.** All matters set forth in the preamble are found to be true and are hereby incorporated by reference as if set forth verbatim and adopted.

**Section 2.** This Board hereby desires to take further action on the pending CDMP amendment Application filed in association with the Notice of Proposed Change for the Miami Metrozoo DRI as follows:

| Application                       | Applicant/Representatives<br>Location and Size<br>REQUESTED CHANGES TO THE CDMP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | • Recommendation as to Final Action |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Miami Metrozoo DRI/CDMP Amendment | <p>Miami-Dade County Park and Recreation Department/<br/>(Jack Kardys, Director and Kevin Asher, Project Manager)</p> <p>Location and Size: 12400 SW 152 Street, Miami, Florida<br/>170 acres</p> <p><u>Requested Change to the CDMP:</u></p> <ol style="list-style-type: none"> <li>1. Add "Miami Metrozoo Entertainment Area" as a new land use category to the Land Use Element with text establishing development standards for allowable land uses, intensities and percentages of use. The text is to be added under the section entitled Interpretation of the Land Use Plan Map: Policy of the Land Use Element, following the Parks and Recreation category.</li> <li>2. Add "Miami Metrozoo Entertainment Area" as a new land use category to the adopted 2015 and 2025 Land Use Plan (LUP) map.</li> <li>3. Change the land use designation of the subject property (170 acres):<br/><br/>From: Parks and Recreation<br/>To: Miami Metrozoo Entertainment Area</li> <li>4. Amend Table 3 on pages VIII-10 - VIII-11 of the Intergovernmental Coordination Element of the CDMP to include "Miami Metrozoo" and the "Miami Metrozoo Entertainment Area."</li> <li>5. Add two capital improvement projects to the Park and Recreation (Table 6) component of the Capital Improvements Element (CIE).</li> </ol> |                                     |

**Section 3.** If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected thereby. If any application, or portion of an application is found to be not in compliance pursuant to Section 163.3184, F.S., the remainder of the application subject to such a finding adopted by this ordinance shall not be affected thereby.

**Section 4.** It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance shall be excluded from the Code of Miami-Dade County, Florida.

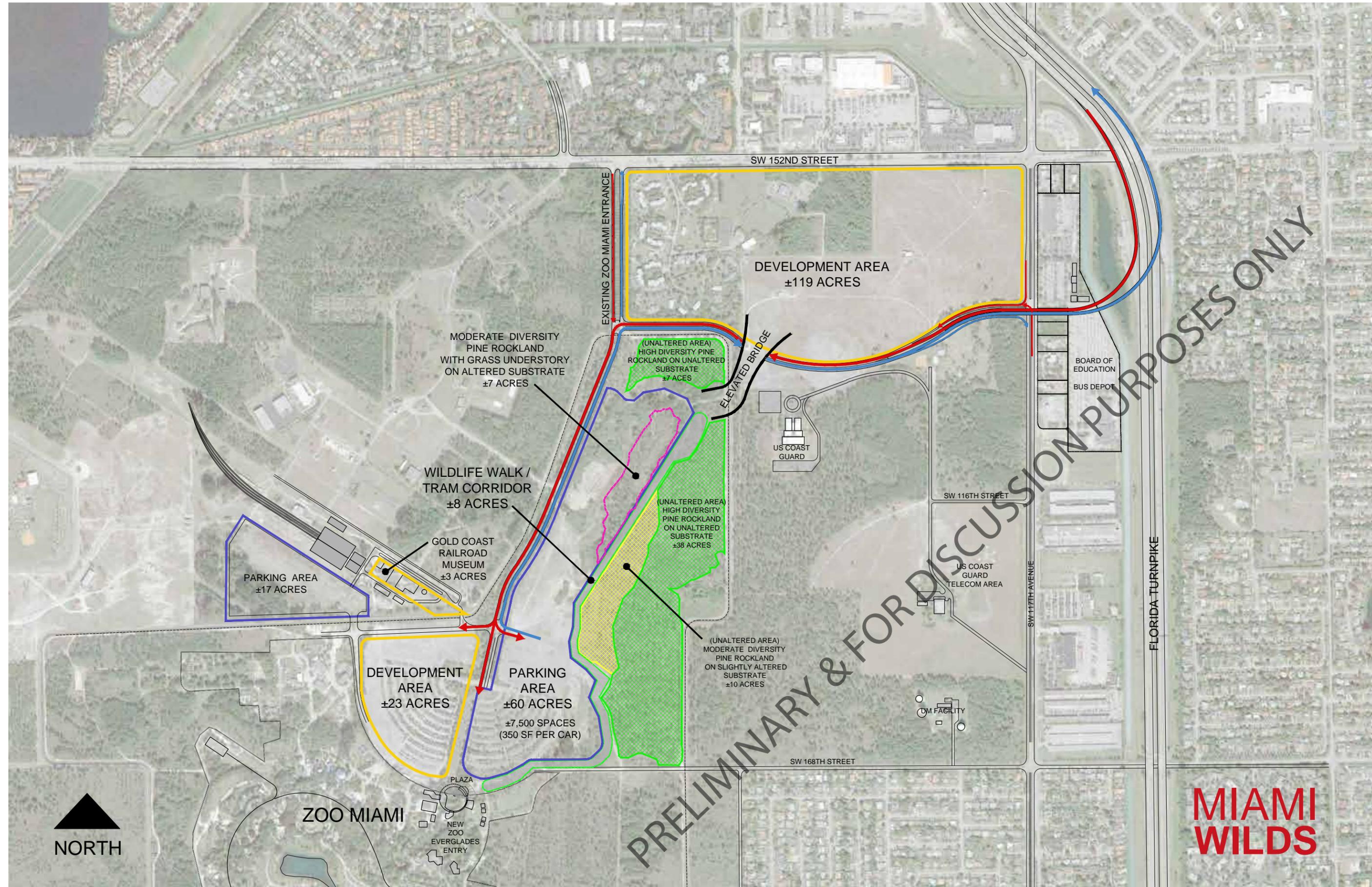
**Section 5.** This ordinance shall become effective ten (10) days after the date of enactment, unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board; however, the effective date of any plan amendment shall be in accordance with the following language which is included at the request of the Florida Department of Community Affairs without any admission by Miami-Dade County of the authority of the Department of Community Affairs or any other governmental entity to request or require such language: "The effective date of any plan amendment approved by this ordinance shall be the date a final order is issued by the Department of Community Affairs or Administration Commission finding the amendment in compliance in accordance with Section 163.3184(1)(b), Florida Statutes, whichever occurs earlier. No development orders, development permits, or land uses dependent on such amendment may be issued or commence before it has become effective. If a final order of noncompliance is issued by the Administration Commission, this amendment may nevertheless be made effective by adoption of a resolution affirming its effective status, a copy of which resolution shall be filed with the Clerk of the Board and sent to the Department of Community Affairs, Division of Resource Planning and Management, Plan Processing Team. The Department's notice of intent to find a plan amendment in compliance shall be deemed to be a final order if no timely petition challenging the amendment is filed."

**Section 6.** This ordinance does not contain a sunset provision.

PASSED AND ADOPTED:

Approved by County Attorney  as  
to form and legal sufficiency.

Prepared by:   
Joni Armstrong Coffey



ZOO MIAMI

PLAZA  
NEW ZOO  
EVERGLADES  
ENTRY

PRELIMINARY & FOR DISCUSSION PURPOSES ONLY

MIAMI  
WILDS

**December 2, 2014 Letter**

**From:** Donald Progulske (USFWS)

**To:** Carlos Gimenez (MDC)

**HCP Relevance:** Notification to MDC that Miami Wilds will require consultation with USFWS



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960



December 2, 2014

Carlos A. Gimenez  
Miami-Dade County  
Stephen P. Clark Center  
111 N.W. 1st Street  
Miami, Florida 33128

Dear Mayor Gimenez:

This letter is a follow-up to the conversations that the U.S. Fish and Wildlife Service (Service) had with Michael Spring of your staff, along with Jack Kardys (County Parks, Recreation, and Open Spaces), Lee Hefty (Division of Environmental Resources and Management), Eric Stephens (Zoo Miami), and others on September 12, 2014, regarding the County's proposed development, Miami Wilds (Project), in Miami-Dade County. During that meeting, the Service expressed concern regarding the County's interest in developing portions of the critically imperiled pine rockland community (FNAI 2012). As you are likely aware, the Richmond Pine Rocklands retain some of the largest remaining contiguous fragments of pine rockland habitat outside of Everglades National Park and this area is known to be occupied by a number of rare plants and animals. The following comments are provided in accordance with the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*)

Our September meeting was a productive sharing of information and we appreciate the County's willingness to work with the Service and its intentions to build the proposed Project in a responsible manner that considers species listed under the Act. The Service's responsibilities include administering the Act, including sections 7, 9, and 10. As we stated on September 12, 2014, based on survey information provided to our office from the Richmond Pine Rockland area, development of the proposed Project is likely to result in take of federally listed species.

Unless "take" is authorized via a section 7 biological opinion with an incidental take statement or a section 10 incidental take permit, section 9 of the Act and its implementing regulations prohibit the take of any federally threatened or endangered species. Take is defined to mean harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Harass and harm are further defined in the Code of Federal Regulations (50 CFR 17.3); harass is defined as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is further defined as an act that results in significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Therefore, any activity or omission including disruption or modification of habitat occupied by listed species which significantly alters their behavior or

creates the likelihood of injury or death (even if incidental to an otherwise lawful activity) may constitute a violation of section 9 of the Act. If a person is found guilty of violating section 9 of the Act, potential criminal penalties include fines of up to \$100,000/individual and \$200,000/organization, and/or up to 1 year imprisonment per violation.

It is our understanding that the County and the U.S. Coast Guard (Coast Guard) are discussing a land exchange so that the County can build the proposed Project. Section 7 of the Act requires that all Federal agencies consult with the Service when funding, authorizing, or implementing a discretionary activity that has the potential to affect federally listed species; therefore, this land exchange would necessitate the Coast Guard to consult with the Service.

The section 7 interagency consultation process can be briefly summarized as follows. The Federal action agency determines whether the project may affect and is likely to adversely affect a listed species. When this is the case, the action agency will initiate formal consultation with the Service and provide the Service with a biological assessment that describes the proposed action and its potential effects on listed species. It is then the responsibility of the Service to determine whether the proposed project is reasonably certain to result in take as defined under section 9 of the Act and whether it will jeopardize the continued existence of any federally listed species [section 7(a)(2)]. If a jeopardy determination is made, then the Service must provide a Reasonable and Prudent Alternative to the proposed project. If jeopardy is not likely to occur but take is still reasonably certain to occur, the Service issues a biological opinion with an incidental take statement and reasonable and prudent measures to minimize the amount of take.

Our preliminary assessment is that the proposed Project is reasonably certain to take listed species, including but not limited to, the Bartram's scrub-hairstreak butterfly (*Strymon acis bartrami*). For example, the final listing rule for the Bartram's scrub-hairstreak butterfly identifies those activities that would constitute a violation of section 9 of the Act, including unauthorized destruction or alteration of occupied habitat in ways that kills or injures individuals by significantly impairing the species' essential breeding, foraging, sheltering, or other essential life functions (78 FR 61004). Because the site is currently occupied by the Bartram's scrub-hairstreak butterflies, the proposed Project has the potential to take the species through injury or death of adult, egg, larval, or instar forms of the species, as well as through modification of the habitat to the point that it would injure or kill an individual by impairing essential life functions. The Service would like to work with you to help avoid and minimize impacts to this species.

In addition to the Bartram's scrub-hairstreak butterfly, several other federally listed and candidate species occur within the Richmond Pine Rocklands and have either been documented or are likely to occur on the proposed Project site. The Service recommends that the County conduct surveys throughout the proposed Project site for the species listed below, following Service approved protocols, when applicable.

| Species                                                                        | Status            | Critical Habitat | Presence at Richmond |
|--------------------------------------------------------------------------------|-------------------|------------------|----------------------|
| Bartram's scrub-hairstreak butterfly<br><i>Strymon acis bartrami</i>           | Endangered        | Yes              | Present              |
| Carter's small-flowered flax<br><i>Linum carteri</i> var. <i>carteri</i>       | Endangered        | Proposed         | Present              |
| Crenulate lead-plant<br><i>Amorpha crenulata</i>                               | Endangered        | None             | Present              |
| Deltoid spurge<br><i>Chamaesyce deltoidea</i> ssp. <i>deltoidea</i>            | Endangered        | None             | Present              |
| Eastern indigo snake<br><i>Drymarchon corais couperi</i>                       | Threatened        | None             | Historically         |
| Florida bonneted bat<br><i>Eumops floridanus</i>                               | Endangered        | To be proposed   | Present              |
| Florida brickell-bush<br><i>Brickellia mosleri</i>                             | Endangered        | Proposed         | Present              |
| Florida leafwing butterfly<br><i>Anaea troglodyta floridalis</i>               | Endangered        | Yes              | Historically         |
| Small's milkpea<br><i>Galactia smallii</i>                                     | Endangered        | None             | Present              |
| Tiny polygala<br><i>Polygala smallii</i>                                       | Endangered        | None             | Present              |
|                                                                                |                   |                  |                      |
| Blodgett's silver bush<br><i>Argythamnia blodgettii</i>                        | Candidate         | TBD              | Present              |
| Everglades bully<br><i>Sideroxylon reclinatum</i> ssp. <i>austrofloridense</i> | Candidate         | TBD              | Present              |
| Florida pineland crabgrass<br><i>Digitaria pauciflora</i>                      | Candidate         | TBD              | Present              |
| Florida prairie clover<br><i>Dalea carthagenensis</i> var. <i>floridana</i>    | Candidate         | TBD              | Present              |
| Sand Flax<br><i>Linum arenicola</i>                                            | Candidate         | TBD              | Present              |
| Miami tiger beetle<br><i>Cicindelidia floridana</i>                            | Highly Imperiled* | None             | Present              |

\*Currently no Federal status.

It was expressed at the September meeting that the County had already under taken surveys for a number of the species listed above and it was indicated that the preliminary work and data would be shared with the Service. To date we have not yet received any survey information, although we recently scheduled a meeting with Parks, Recreation, and Open Spaces staff to discuss the proposed Project on December 5, 2014. We urge the County to include the Service in the project

planning stage so that we can assist the County in ways to avoid, minimize, and mitigate impacts to federally listed species. We also encourage the County to establish a meeting with the Service and Coast Guard so we can ascertain whether consultation under section 7 of the Act will be appropriate or if the County will need to consider consultation under section 10, which includes the application for an incidental take permit and development of a Habitat Conservation Plan.

The Service remains committed to work with the County to ensure that the proposed Project is developed in a manner that does not risk jeopardizing any species listed under the Act. To that end, we would like to offer the following preliminary guidance on ways that the County could avoid take of listed species.

**Measures to Avoid Take of Bartram's Scrub-hairstreak**

- Avoid removal, destruction, or alteration of any pineland croton.
- Avoid use of herbicides and pesticides throughout the Project area.

**Measures to Avoid Take of Florida Bonneted Bat (FBB)**

- Avoid removal or destruction of forested areas and other natural vegetation that may result in the reduction in abundance or diversity of insects or otherwise impair essential life functions.
- Verify FBB are not using any building structures for roosting just prior to demolition.
- Verify that FBB are not using any natural cavities prior to removal or destructions of the feature.
- Avoid use of pesticides throughout the Project area.

**Measures to Avoid Take of Eastern Indigo Snake**

- Implement the Service's 2013 Standard Protection Measures for Eastern Indigo Snake.

**Measures to Avoid Loss of Federally Listed Plants**

- Avoid removal of listed or candidate plants.
- Avoid use of herbicides throughout the Project area.

**Best Management Practices**

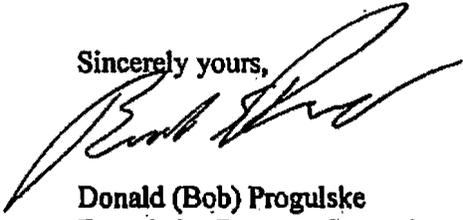
- Limit lighting so that it does not interfere with bat behavior or the abundance and diversity of insects.
- Limit removal of native Florida vegetation.
- Remove exotic plants and plant native Florida vegetation.
- Implement prescribed burning in a mosaic pattern that allows species to seek refuge in adjacent unburned habitat.

Carlos A. Gimenez

Page 5

Thank you for your cooperation in the effort to conserve fish and wildlife resources. If you have any additional questions please contact Jeff Howe at 772-469-4283 or his supervisor Ashleigh Blackford at 772-469-4246.

Sincerely yours,


Donald (Bob) Progulske  
Everglades Program Supervisor  
South Florida Ecological Services Office

cc: electronic only

FWC, West Palm Beach, Florida (Marissa Krueger)  
Miami-Dade County, Florida (Jack Kardys, Lee Hefty, Eric Stephens, Joe Maguire,  
Craig Grossenbacher, Lisa Spadafina)  
Office of Mayor, Miami Dade County, Florida (Michael Spring)  
U.S. Coast Guard, Civil Engineering Unit Miami, (Andrew Bobick, Robert Kappel,  
Patricia Dixon, Michael Jackson)

**January 16, 2015 Press Release**

**From: Miami-Dade County**

**HCP Relevance: Notice that MDC intends to coordinate with USFWS for Miami Wilds project.**



**For Immediate Release:**  
January 16, 2015

**Media Contact:**  
Doris Howe  
[dhow@miamidade.gov](mailto:dhow@miamidade.gov)  
305-755-7884

## **Miami Wilds Project committed to preserve Richmond Pinelands Natural Area and Wildlife**

**(MIAMI, January 16, 2015)** - As preliminary plans continue to evolve for the proposed "Miami Wilds" project, Miami-Dade County and its private sector partners are working closely with key stakeholders, like the US Fish & Wildlife Service, to affirm both the pre-eminent importance and value of preserving the area's environment and the strong commitment to follow the regulatory process diligently. This project is being planned for public land surrounding ZooMiami in South Miami Dade and is being led on the private side by Miami Wilds LLC, which will be responsible for construction, maintenance, operation and financing.

"Let me be absolutely clear, we are committed to the principles of conservation and protection of the environment. At the same time, we have an opportunity to take full advantage of all of the economic opportunities that this project will provide to this important part of our community and to our entire region," said Miami-Dade County Mayor Carlos A. Gimenez. He continued, "We understand and share all of the concerns at hand and are working conscientiously as a team to ensure that preservation strategies are thoroughly vetted in these preliminary planning stages. Miami-Dade County has always sought to acquire, preserve and manage the various intact natural areas of the Richmond Pinelands complex that comprised the former Richmond Naval Air Station, the largest tract of pinelands outside of the Everglades National Park."

The proposed Miami Wilds project offers the opportunity to both consolidate forest management and also provide the resources to put in place the infrastructure programs necessary to properly maintain the Richmond Pinelands for the benefit of the biological species that rely on them. "The goal of this effort is to create a unique model of environmental conservation practices that is economically sustainable and ecologically consistent with the latest federal guidelines, while at the same time creating new economic growth and opportunity," said Miami-Dade County District 9 Commissioner Dennis C. Moss.

The Miami Wilds project which is proposed to include hotel and retail entertainment components, a Sony Music Theatre, theme and water parks with licensing arrangements with 20th Century Fox for branding and intellectual property, and an interpretative nature trail and electric vehicle transportation spine connecting all of the project elements to ZooMiami, the Gold Coast Railroad and Military Museums represents a \$930 million investment in South Miami Dade that will bring an estimated 3,550,000 plus new visitors each year, with 1.5 million additional overnight visitors. The project is designed to complement ZooMiami by generating increased audiences and additional support for this major cultural attraction. It is anticipated that new infrastructure serving the project will include new Turnpike access and road improvements to mitigate impacts on local roads and in particular divert traffic from Coral Reef Drive (SW 152nd Street). The proposed project is projected to create over 2,750 new jobs in South Dade an area that historically has had the lowest wage rates in the county, and the project will be among the top three private sector employers south of Kendall Drive.

The planned Community Redevelopment Agency is being proposed to capture incremental tax revenue generated by the Miami Wilds project to help the County fund preservation and infrastructure needs.

The following principles are guiding Miami-Dade County's involvement in this project:

- The County is taking a pro-active role in working closely with the U.S. Fish & Wildlife Service to ensure that all federal requirements are met. Discussions to accomplish this already are underway.
- The County has assembled a team of professionals to lead this project and accomplish the mutually supportive goals

of developing a great attraction and preserving, managing, providing broad access to scientists, and interpreting the entirety of Pine Rocklands throughout the Richmond Pineland complex. This team includes all of the Deputy Mayors and leadership from the County's environmental resources management, planning, zoning and Parks staff.

- The Miami Wilds development is proposed to be located outside of any natural areas. Furthermore, the project is intended to be sensitive to biological populations whose migration or feeding patterns extend beyond natural areas. Revenue from the project will insure the necessary financial and personnel resources and infrastructure to allow for the proper maintenance of the surrounding natural areas, including exotic plant control, pine rocklands forest structure (including the Bartram Hairstreak Butterfly, Miami Tiger Beetle, the Bonneted Bat and others), fire management and monitoring.

These guiding principles are shared and strongly supported by the Miami Wilds team that is working closely with the County on these issues. There is an ongoing commitment to work with our many environmental partners to ensure that there is not only a sound conservation plan but also the long-term source of the necessary, additional financial resources to conduct proper management of these natural areas.

The County and its partners will keep the media, key stakeholders and the public informed as progress continues in the planning for this project.

**###**

**MIAMI-DADE PARKS, RECREATION AND OPEN SPACES DEPARTMENT**

275 NW 2nd Street, 3rd Floor  
Miami, Florida 33128

**APPENDIX B**

**NFC Permit No. NFC2012-012**



Carlos A. Gimenez, Mayor

Department of Regulatory and Economic Resources

Environmental Resources Management

701 NW 1st Court, 6th Floor

Miami, Florida 33136-3912

T 305-372-6567 F 305-372-6407

miamidade.gov

July 23, 2013

Mr. Gerry Altshul
University of Miami Real Estate Department
1320 South Dixie Highway, #705
Coral Gables, Florida 33146

CERTIFIED MAIL NO.: 70040750000191598570
RETURN RECEIPT REQUESTED

Mr. Bob Skinner
RAM Realty Services
4801 PGA Boulevard
Palm Beach Gardens, Florida 33418

CERTIFIED MAIL NO.: 70040750000191598587
RETURN RECEIPT REQUESTED

Re: Fully executed After-the-Fact Natural Forest Community (NFC) permit (NFC2012-012) and NFC Covenant, for the properties located in the vicinity of SW 152 Street and SW 124 Avenue, Miami, Florida. (Folios: 30-5926-000-0060, 30-5925-000-0015 and 30-5925-000-0025).

Dear Messer's Altshul and Skinner:

Please find attached fully executed copies of after-the-fact NFC Removal permit NFC2012-012 and executed NFC Covenant, with the approved NFC Management Plan, for the above-referenced properties. Per condition #1 of the NFC permit, the NFC Covenant will be recorded with the Clerk's Office within 10 (ten) days of the date of approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129.

Thank you for your attention to this matter. If you have any questions concerning the above, please contact me at (305) 372-6548 or via e-mail at joynei@miamidade.gov.

Sincerely,

Handwritten signature of John T. Joyner

John T. Joyner
Natural Resources Planning Section

Attachments: Executed NFC permit (NFC2012-012), executed NFC Covenant and Management Plan

cc: Joseph G. Goldstein, Holland and Knight, LLP



COVENANT RUNNING WITH THE  
LAND OF UNIVERSITY OF MIAMI  
REAL ESTATE DEPARTMENT IN  
FAVOR OF THE BOARD OF COUNTY  
COMMISSIONERS OF MIAMI-DADE  
COUNTY, FLORIDA, CONCERNING  
NATURAL FOREST COMMUNITY  
LAND LOCATED AT SW 124 AVENUE  
AND SW 152 STREET, MIAMI-DADE  
COUNTY FOLIO NOS. 30-5926-000-0060,  
30-5925-000-0015 AND 30-5925-000-0025.

The undersigned, University of Miami Real Estate Department, being the present owner(s) of the following real property, legally described as set forth in Exhibit A (hereinafter called "the Property"):

Located at SW 124 Avenue SW 152 Street, Miami-Dade County (folios 30-5926-000-0060, 30-5925-000-0015 and 30-5925-000-0025) pursuant to Section 24-49.7(I) (C) of the Code of Miami-Dade County, hereby submits this executed covenant running with the land in favor of Miami-Dade County:

The undersigned agrees and covenants to the following

1. All conditions and stipulations contained within Miami-Dade County Tree Removal Permit No. NFC2012-012, attached hereto as Exhibit B and incorporated herein by reference, shall be adhered to.

The Tree Preservation Area of the property, as shown on the Plan entitled "Proposed NFC Area Impacts", prepared by Schwebke-Shiskin & Associates, Inc., dated June 22, 2012 and attached hereto as Exhibit C and incorporated herein by reference, shall be preserved in a natural condition so that existing pineland/hammock canopy and pineland/hammock understory vegetation are not disturbed or removed and remain free from exotic herbaceous and exotic woody vegetation.

3. Any and all persons holding a security interest of any kind whatsoever in the property has/have been advised of, and has/have agreed to, the execution of this Covenant Running With the Land.
4. The Miami-Dade County Environmental Resources Management Department (hereafter referred to as "DERM") shall have the right to inspect the Property at reasonable times to determine whether the Property is being used and maintained in the manner promised by the undersigned owner in this covenant and in compliance with Chapter 24-49.
5. After this Covenant is accepted by the County, the Covenant shall be promptly filed with the Clerk of Court for recording in the official records of Miami-Dade County.

6. The undersigned owner(s) covenant(s) and agree(s) that no trees or understory shall be removed from the area(s) designated as the Natural Forest Community Preservation Area, attached hereto as Exhibit "C", without the prior written consent of DERM.
7. The undersigned owner agree(s) and covenant(s) that no trimming of vegetation other than minor trimming that does not substantially alter the size or canopy spread of a tree(s) shall be conducted on the area(s) designated as the Natural Forest Community Preservation Area of the Property, without the prior written consent of DERM.
8. Prior to the entry into a landlord-tenant relationship with respect to the Property, the undersigned agree(s) to notify in writing all proposed tenants of the Property of the existence and contents of this Covenant.
9. The undersigned agree(s) and covenant(s) that this Covenant and the provisions contained herein may be enforced by the Director of DERM by preliminary, permanent, prohibitory, and mandatory injunctions, as well as otherwise provided for by law or ordinance.
10. This agreement and Covenant shall be recorded in the Public Records of Miami-Dade County, Florida and the provisions hereof shall constitute a Covenant Running with the Land and shall remain in full force and effect

and be binding upon the undersigned, their heirs, legal representatives,  
estates, successors, grantees and assigns.

IN WITNESS WHEREOF, the undersigned, being the Owner(s) of the Property, agree(s) to the terms of this Covenant, hereby create same as a covenant Running with the Land, and set their hands and seal unto this Covenant this 8 day of JULY, 2013.

INDIVIDUAL

WITNESSES:

sign Margaret Perri  
print MARGARET PERRI  
sign Virginia Avozani  
print Virginia Avozani

WITNESSES:

sign \_\_\_\_\_  
print \_\_\_\_\_  
sign \_\_\_\_\_  
print \_\_\_\_\_

OWNER(S):

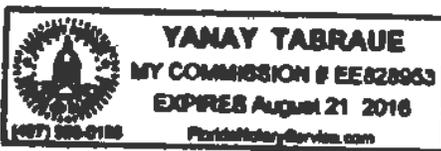
sign [Signature]  
print JOE NATOLI  
Address 1252 MEMORIAL DR  
SUITE 230 ASHE  
CORAL GABLES, FL

OWNER(S):

sign \_\_\_\_\_  
print \_\_\_\_\_  
Address \_\_\_\_\_

STATE OF FLORIDA  
COUNTY OF MIAMI-DADE

The foregoing instrument was acknowledged before me this 8 day of July, 2013, by Joe Natoli, who is personally known to me or who has produced \_\_\_\_\_ as identification and who did take an oath.



NOTARY PUBLIC  
Sign [Signature]  
Print \_\_\_\_\_  
State of Florida at Large (Seal)  
My Commission Expires \_\_\_\_\_

THIS INSTRUMENT PREPARED BY:

John T. Joyner  
DERM-ENVIRONMENTAL RESOURCES MANAGEMENT  
701 NW 1<sup>st</sup> Court, SUITE 500  
MIAMI, FLORIDA 33136

## Natural Forest Community (NFC) Management Plan

**Property Folio(s):** 30-5926-000-0060, 30-5925-000-0015 and 30-5925-000-0025

**Property Addresses:** 12500 SW 152 Street and 15657 SW 127 Avenue

**NFC Permit No.:** NFC2012-012

**Date:** July 2013

### **Executive Summary:**

The subject property (folios 30-5926-000-0060, 30-5925-000-0015 and 30-5925-000-0025) is part of the former four square mile Richmond Naval Air Station property. Specifically, the property owner controls forested and non-forested areas including areas to be managed and preserved, which total 39.64 acres of Natural Forest Community (NFC) Pine Rockland and 3.72 acres of Natural Forest Community (NFC) Hammock as confirmed in the field by RER staff in late 2011 and the subject of a binding letter dated 10/17/2011.

With the assistance and support of the Miami-Dade County RER Forested Resources program, a management plan has been developed for the perpetual management of 39.64 acres of NFC Pine Rockland and 3.72 acres of NFC Hardwood Hammock. This plan includes controlled burns, physical exotic plant removal and chemical follow up treatments to ensure the health of these unique habitats in perpetuity, while at the same time taking into account safety and health concerns of nearby property and residents. Additionally, monitoring will occur to track the biological health of the on-site NFC preserves and make further recommendations to the management regimen as part of a dynamic adaptive management strategy.

### **Introduction:**

The property owner has requested approval (Z2006-0129) for a Commercial and Residential project, on 137.89 acres of the former UM South Campus Property. Included in the development proposal are roadways, the surface water management system, 39.64 acres of NFC Pine Rockland Habitat preserves and 3.72 acres of native NFC Hardwood Hammock preserve. This plan also takes into account the past unauthorized clearing of 6.6 acres of Natural Forest Community. The following details the Management and Monitoring Activities to preserve and protect the natural areas in accordance with Chapter 24 of the Code of Miami-Dade County.

### **Area History:**

The Coral Reef Commons site (f/k/a University of Miami South Campus) is a small part of the former Richmond Naval Air Station (RNAS), which used to, and to an extent still does, contain some of the most significant upland natural areas remaining in Miami-Dade County. The four square mile area included 853 acres of unique Pine Rockland Forest. Additionally, the 34 acres of finger glade habitats in Richmond represent nearly all of the remaining habitat type in Dade County. Two federally-endangered plant species occur in the fire-maintained pine Rocklands of Richmond. The Deltoid Spurge (*Chamaesyce deltoidea*) is most commonly associated with limestone outcroppings throughout Richmond. The Tiny Polygala (*Polygala smallii*) is extremely rare, and is found at sandy

pockets in limited areas of Richmond. Exotic Pest plants, particularly Burma Reed (*Neyraudia reynaudiana*) and Brazilian Pepper (*Schinus terebinthifolius*) are increasingly common on previously impacted parcels, parcels adjacent to development and along the edges of the pinelands.

In 1964, the University of Miami leased a portion of the RNAS. UM designated 350 acres for a horticultural farm and established the Tropical Foods Research Center in what is now the southeastern portion of MetroZoo. In addition to these activities, a portion of the subject property was utilized for biomedical research; this area was included in the NFC application to be authorized as after-the-fact impacts.

Today, Miami MetroZoo and the Gold Coast Railroad Museum both occupy portions of the former RNAS, and border the southern and eastern boundary of the Coral Reef Commons project.

### **Habitat Descriptions:**

#### **A. Physiography**

Miami-Dade County's pine rockland forests and hardwood hammocks are associated with a geologic formation called the Miami Rock Ridge. This Pleistocene topographic feature, composed of exposed or partially exposed oolitic limestone bedrock extends for approximately 70 miles between northeastern Miami-Dade County and the Mahogany Hammock region of Everglades National Park. The Miami Rock Ridge averages nine feet and is no more than 25 feet in elevation and varies between 4 and 10 miles in width (Davis 1943; USDA 1947). The surface of the rock ridge is irregular with frequent pinnacle rock and solution hole formations. Numerous transverse drainages exist where ancient tidal waters eroded portions of the oolite shoal. These transverse drainages, underlaid by marl soils, contained freshwater graminoid wetland vegetation before drainage and divided the rock ridge into a series of islands which were historically covered by pine rockland forest. Miami-Dade County's pine rocklands occupied approximately 180,000 acres in presettlement times (U.S.D. A. 1947).

#### **B. Flora**

Miami Rock Ridge was historically dominated by southern slash pine (*Pinus elliottii* var. *densa*) forests. Miami-Dade County's pine rockland forests are further characterized by a diverse understory of herbs, graminoids, palms and other woody plant species. Its floral composition can be attributed to its proximity to the tropics, peninsular connection to the temperate zone and the unique isolated nature of the underlying limestone substrate. Endemic plant species, that is species that occur only in a limited geographic region, are an important part of the pine rockland flora. In total over 55 endemic taxa occur in southern Florida pinelands. Hardwood hammocks are also present on the Miami-Rock Ridge in areas where lack of fire has allowed the succession to this plant community.

### **Management Plan Goals:**

The overall goal of this management plan is to ensure the preservation of the property's pine rockland and hardwood communities and the rare plants that they contain. This requires the ongoing removal and control of exotic plant species and monitoring to track vegetation changes and effectiveness of treatment. Periodic controlled burns within pine rocklands are necessary in order to achieve optimal preservation and maintenance of this community.

The main objective of the NFC Pine Rockland and NFC Hardwood Hammock management plan is to maintain the NFC preserve areas with less than 3% exotic vegetation cover, in perpetuity, as required by the NFC Covenant referenced below.

### **Pine Rockland Goals:**

Over the last 20-30 years, as residential and commercial developments have expanded to surround the subject property, the fire regimen has been reduced or eliminated, and the vegetation structure has become altered. Once the Coral Reef Commons project is constructed, we anticipate that further restrictions will be placed upon the fire programs. Before additional restrictions to controlled burns are in place, a controlled burn shall be performed in with FFS coordination and in accordance with the initial controlled burning timelines stated below. All controlled burns shall be followed up with management appropriate exotic plant control follow up, including but not limited to, the herbicide treatment of re-sprouting Burma Reed (*Neyraudia reynaudiana*).

The diligent application of this management plan will ensure the long term health of the ecosystem as well as provide appropriate native habitat for wildlife.

- Reduce fuel load
- Maintain fire breaks (outside of preserves)
- Reduce the amount of incendiary fires
- Ensure a mosaic of vegetation cover
- Eliminate exotic and prohibited vegetation (less than 3% after management events).
- Control native hardwood plants
- Preserve maintain State and Federally listed plants and their habitats
- Monitor the results of the management activities yearly
- Provide wildlife habitat

### **Hardwood Hammock Goals:**

The on-site hardwood hammock habitat, located at the northern boundary of the site along SW 152<sup>nd</sup> Street, has become increasingly impacted by exotic vegetation, including exotic grasses such as Cane Grass (*Neyraudia sp.*) and Brazilian Pepper

(*Schinus terebinthifolius*). However, the area still contains remnant hardwood hammock trees, shrubs and grasses. As part of the habitat management plan for the property, the following is proposed to meet the requirement of less than 3% exotic vegetation and the preservation of State and Federally listed plants:

- Eliminate exotic and prohibited vegetation (less than 3% after management events).
- Preserve maintain State and Federally listed plants and their habitats
- Monitor the results of the management activities yearly
- Provide wildlife habitat

### **Required Initial Management Plan Activities**

The property owner shall complete the following activities subsequent to the execution of the NFC covenant referenced below and prior to any development of the property:

#### **Pine rockland: Initial Controlled Burn**

Within 60 (sixty) days following the final and non-appealable approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129, but, in no event, later than two hundred seventy (270) days following the execution of the NFC covenant associated with this management plan and prior to site development, the property owner shall coordinate with FFS to perform a controlled burn of the pine rockland preserves. The property owner, in conjunction with FFS, shall use its reasonable efforts to perform a licensed and permitted Controlled Burn within one and a half (1.5) years of the execution of the NFC covenant. The property owner shall notify RER of any planned Controlled Burns prior to any Controlled Burning event. Commencing two hundred seventy (270) days following the execution of the NFC covenant associated with NFC permit NFC2012-012, the property owner shall submit monthly reports on the status of the coordination with FFS and the Controlled Burn (“Reporting Obligation”). Said Reporting Obligation shall cease either (i) upon completion of a Controlled Burn throughout all portions of the pine rockland, or (ii) a determination by RER, after consultation with the property owner and FFS, that a Controlled Burn is not reasonably feasible, and the completion of an exotic plant eradication event throughout the entire pine rockland.

#### **Hardwood Hammock: Initial Exotic Control**

Within sixty (60) days following the final and non-appealable approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129, but, in no event, later than two hundred seventy (270) days following the execution of the NFC

covenant associated with NFC permit NFC2012-012, the property owner shall initiate an intensive exotic plant eradication event (utilizing chemical and manual removal) over the hardwood hammock areas to be preserved, in order to achieve a less than 3% exotic plant cover ("Hardwood Hammock Eradication Event"). The property owner shall notify RER in writing of its commencement and shall complete the Hardwood Hammock Eradication Event within six (months) of commencing said work. This time-frame may be extended by the Director of RER upon the showing of a good faith effort by the property owner to timely complete the Hardwood Hammock Eradication Event.

#### **Pine Rockland: Initial Exotic Control**

Within the sooner of ninety (90) days of (i) completion of a Controlled Burn of the pine rockland or (ii) a determination by RER, after consultation with the property owner and FFS, that a Controlled Burn is not reasonably feasible (which determination shall not occur sooner than 240 days following the execution of the NFC covenant associated with NFC permit NFC2012-012), the property owner shall initiate an intensive exotic plant eradication event (utilizing chemical and manual removal) over the pine rockland to be preserved, in order to achieve a less than 3% exotic plant cover ("Pine Rockland Eradication Event"). The property owner shall notify RER in writing of its commencement and shall complete the Pine Rockland Eradication Event within six (months) of commencing said work. This time-frame may be extended by the Director of RER upon the showing of a good faith effort by the property owner to timely complete the Pine Rockland Eradication Event.

#### **Required Management Plan Activities:**

##### **Pine Rockland:**

- Perform a controlled burns throughout all pine rockland preserve areas every three (3) to seven (7) years.
- Annually remove and chemically treat all exotic plants. This shall be performed by a certified applicator, with the first treatment occurring in accordance with the Initial Exotic Management timelines stated above, then yearly (at a minimum) thereafter.
- Hand remove and herbicide treat of native hardwoods (except State-listed species) on a yearly basis, at a minimum.
- Monitoring reports tracking elimination of exotic and prohibited vegetation and re-growth of native vegetation shall be submitted to Miami-Dade County on a yearly basis (see monitoring program below).

### **Hammock:**

- **Manual removal and chemical treatment of all exotic plants by a certified applicator, with the first treatment occurring in accordance with the Initial Exotic Management timelines stated above, then yearly (at a minimum) thereafter.**
- **Native vegetation plantings if necessary in areas where remaining native plants cover 10% or less of the treatment area. All proposed plant material shall be approved by RER prior to installation.**
- **Monitor reports tracking elimination of exotic and prohibited vegetation and re-growth of native vegetation shall be submitted to Miami-Dade County on a yearly basis (see monitoring program below).**

### **Controlled Burns:**

Controlled burns should occur approximately every three (3) to seven (7) years. To lessen fuel loading, chemical or manual removal of excess fuels may be required prior to performing a controlled burn. Additionally, within 60 (sixty) days following the final and non-appealable approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129, but, in no event, later than two hundred seventy (270) days following the execution of the NFC covenant associated with this management plan and prior to site development, the property owner shall coordinate with FFS to perform a controlled burn of the pine rockland preserves. The property owner, in conjunction with FFS, shall use its reasonable efforts to perform a licensed and permitted Controlled Burn within one and a half (1.5) years of the execution of the NFC covenant. The property owner shall notify RER of any planned Controlled Burns prior to any Controlled Burning event. Commencing two hundred seventy (270) days following the execution of the NFC covenant associated with NFC permit NFC2012-012, the property owner shall submit monthly reports on the status of the coordination with FFS and the Controlled Burn ("Reporting Obligation"). Said Reporting Obligation shall cease either (i) upon completion of a Controlled Burn throughout all portions of the pine rockland, or (ii) a determination by RER, after consultation with the property owner and FFS, that a Controlled Burn is not reasonably feasible, and the completion of an exotic plant eradication event throughout the entire pine rockland.

### **Chemical Treatment/ Manual Removal:**

Due to the close proximity of residential housing, it is recommended that chemical treatment (with approved herbicide) be utilized to control exotic vegetation on the site. All treatments should be performed by a licensed contractor utilizing proven methods,

including hand removal where necessary. The use of heavy machinery within the NFC preserve areas is prohibited.

Hand removal shall be necessary in areas containing heavy *Neyraudia sp.*, as application of chemicals may result in non-target destruction native species. Excessive and obvious non-target destruction of native plant species shall constitute of violation of Section 24-49 of the Code of Miami-Dade County.

### **Monitoring Program:**

In order to ensure the success of the management plan, the following monitoring program shall be implemented, dependent on the type of management to occur.

**Monitoring Stations:** As shown on the \_\_\_\_\_, the NFC preserves are broken up into four distinct areas (East 1 & 2 and West 1 & 2). Each approximately ten acre parcel should have two monitoring areas, each with a set photo station with a 100' transect. An initial monitoring report, to be submitted to RER within 1 (one) year of the execution of the covenant, will set these stations. Monitoring stations should be marked with a fire-proof indicator, and GPS coordinates should be included in the initial report. Additionally, any communities of Deltoid Spurge (*Chamaesyce deltoidea*) or Tiny Polygala (*Polygala smallii*) noted during field inspections should be marked with GPS Coordinates and re-inspected during subsequent monitoring events.

**Monitoring Report Submittals:** Subsequent to the submittal of the initial report the property owner shall submit reports on a yearly basis.

### **NFC Covenant:**

As required by Chapter 24 of the Code of Miami-Dade County, an NFC covenant shall be executed and be recorded prior to the approval of any NFC removal on the subject property. This management plan details the how the NFC shall be managed and shall also be recorded along with the NFC covenant. The property owner agrees to abide by all conditions of the covenant, the NFC Removal Permit (NFC2012-012) and this management plan.

### **Conclusion:**

Implementation of the items in this report will serve to ensure compliance with the NFC Removal Permit issued by Miami-Dade RER and ensure the perpetual vitality and protection of this unique habitat. \_\_\_\_\_

**EXHIBIT A**

**Folio:** 30-5926-000-0060

**Address:** 12500 SW 152 ST

**Legal Description:** 25-26 55 39  
BEG 35FTS OF NW COR SEC 25 TH  
E1461.35FT S1400FT W144.39FT  
N 84 DEG W 971.04FT W234.77FT  
N 59 DEG W 49.73FT W20.78FT S 58  
DEG W 36.57FT N 81 DEG W  
446.62FT S1020.51FT N 58 DEG W  
1095.51FT W8.35FT S2.13FT W40FT  
NELY NLY NWLY A/D 149.45FT N 51  
DEG W 372.16FT E15.55FT N92.18FT  
S 51 DEG E 79.18FT N1164.24FT  
E1654.93FT TO POB  
& LESS PORT OF NE1/2 OF SEC 26  
DESC AS FOLLOWS COMM NE1/2 COR OF  
NW1/4 OF SEC 25 TH S 02 DEG E  
1435FT S 87 DEG W 1334.39FT S 16  
DEG W 1097.40FT S 19 DEG W  
326.90FT N 58 DEG W 554.90FT  
N 31 DEG E 12.58FT N 58 DEG W  
284.32FT NWLY AD 397.80FT S 80  
DEG W 295.73FT FOR POB CONT  
S 80 DEG W 41.49FT N 58 DEG W  
973.96FT NWLY AD 173.16FT S 38  
DEG N 40FT N 01 DEG E 2.13FT  
N 88 DEG E 8.35FT S 58 DEG E  
1095.51 FT N 01 DEG W 150.41FT  
TO POB& LESS PORT OF NE1/2 OF SEC  
26 DESC AS FOLLOWS COMM AT NE1/2  
COR OF NW1/4 OF SEC 25 TH S 02  
DEG E 1435FT S 87 DEG W 1334.39FT  
S 16 DEG W 1097.40FT S 19 DEG W  
326.90FT N 58 DEG W 554.90FT  
N 31 DEG E 12.58FT N 58 DEG W  
284.33FT NWLY AD 397.80FT S 80  
DEG W 337.22FT N 58 DEG W  
284.33FT NWLY AD 397.80FT S 80  
DEG W 337.22FT N 58 DEG W  
973.96FT NWLY AD 173.61FT N 38  
DEG E 30FT N 51 DEG W 309.24FT

N 01 DEG W 475.84FT FOR POB CONT  
N 01 DEG W 436.30FT N 88 DEG E 130FT  
N 01 DEG W 200FT S 88 DEG E 200FT  
S 01 DEG E 688.03FT N 51 DEG E  
87.05FT TO POB  
OR 11339-435 1281 4

Folio: 30-5925-000-0015

Address: 15657 SW 127<sup>th</sup> Avenue

Legal Description: 25 26 55 39 23.87 AC MA  
PORT OF E1/2 OF SEC 26 & W1/2 OF  
SEC 25 DESC BEG 1435.03FTS &  
1334.40FTWLY OF NE COR OF NW1/4  
OF SEC 25 CONT S 87 DEG W  
219.92FT S 16 DEG W 986.03FT S 6  
DEG W 493.28FT N 84 DEG W  
851.37FT N 31 DEG E 454.45FT NWLY  
A/D 408.39FT NELY-NLY-NWLY A/D  
745.39FT NELY-NWLY A/D 138.22FT  
N 2 DEG W 36.64FT S 88 DEG E  
10.06FT S 59 DEG 49.73FT S 88 E  
284.77FT S 84 DEG E 971.04FT TO  
POB & LESS PORT DESC AS COMM NE  
COR OF NW1/4 OF SEC 25 TH S 0  
DEG E 1435FT S 87 DEG W 1334.39FT  
S 16 DEG W 1097.40FT S 18 DEG W  
326.90FT N 58 DEG W 136.28FT FOR  
POB TH N 58 DEG W 418.62FT N 31  
DEG E 12.58FT N 58 DEG W 284.32FT  
NWLY AD 382.77FT SWLY AD 67.61FT  
NELY AD 408.39FT TH S 31 DEG W  
454.45FT S 84 DEG E 851.31FT N 06  
DEG E 156.48FT M/L TO POB  
F/A/U 30-5925-000-0010  
OR 17841-2169 1097 3

Folio: 30-5925-000-0025

Address: Vicinity of SW 127<sup>th</sup> Avenue and SW 156<sup>th</sup> Street

Legal Description

25 55 36 6.23 AC M/L  
BEG 1435FTS & 1334.39FTW OF NE  
COR OF NW 1/4 TH S 16 DEG W  
1097.40FT S 19 DEG W 326.90FT  
N 58 DEG W 136.28FT N 06 DEG E  
336.80FT N 16 DEG E 986.03FT  
N 87 DEG E 219.92FT TO POB  
F/A/U 30-5925-000-0010  
OR 24121 - 4014 1205 6  
OR 24121 - 4014 1205 00

EXHIBIT B

**MIAMI-DADE COUNTY**  
**DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES**  
**NATURAL RESOURCES DIVISION**  
**NATURAL RESOURCES PLANNING SECTION**

**701 NW 1<sup>st</sup> Court**  
**5th Floor**  
**Miami, Florida 33136-3912**  
**372-6864**

After-the-Fact  
**NATURAL FOREST COMMUNITY**  
**REMOVAL PERMIT NUMBER 2012-012**

**DATE ISSUED:** *July 15, 2013*

**PERMITTEE'S NAME:** University of Miami Real Estate Development

**PERMITTEE'S ADDRESS:** 1535 Levante Avenue, Coral Gables, Florida 33146

**PHONE NUMBER:** (305) 284-3051

**CONTRACTOR:** RAM Realty Services, Bob Skinner

**CONTRACTOR'S ADDRESS:** 4801 PGA Boulevard, Palm Beach Gardens, Florida 33418

**PHONE NUMBER:** (561) 282-4605

**LOCATION OF THE**  
**APPROVED WORK:** Vicinity SW 152<sup>nd</sup> Street and SW 124<sup>th</sup> Avenue, Miami, Florida.

**FOLIO(s):** 30-5926-000-0060, 30-5925-000-0015 and 0025

**NFC SITE CODE:** P-391

**RER PROJECT MANAGER:** Tim Joyner

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**THIS PERMIT MUST BE POSTED ON-SITE AT ALL TIMES DURING SITE  
CLEARING/EARTH WORK AS WELL AS VEGETATION REMOVAL AND DURING  
CONSTRUCTION**

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PERMIT FOR NATURAL FOREST COMMUNITY REMOVAL  
MIAMI-DADE COUNTY  
REGULATORY AND ECONOMIC RESOURCES  
NATURAL RESOURCES DIVISION  
NATURAL RESOURCES PLANNING SECTION  
APPROVED WORK

After-the-Fact approval is hereby granted for the removal of 287,496 square feet (6.6 acres) of Natural Forest Community (NFC) pine rockland. Approval is also granted for the removal of 139,392 square feet (3.2 acres) of Natural Forest Community (NFC) pine rockland in accordance with the site sketch entitled "Proposed NFC Area Impacts", prepared by Schwebke-Shiskin and associates, Inc., and dated June 22, 2012. Any additional clearing, including the establishment of firebreaks or fence lines shall require a separate permit from RER. This permit grants the authorization to remove 19.8% of the 49.44-acre pine rockland/hardwood hammock Natural Forest Community. The permittee acknowledges that further subdivision of this property must be approved by RER and that future applications to remove Natural Forest Community may be denied. Permittee agrees to adhere to all conditions of the restrictive covenant entitled "Covenant Running With The Land of University Of Miami Real Estate Department", dated July 8, 2013.

This permit also authorizes the removal of exotic plant species from within ~~the pine~~ rockland and hardwood hammock. Any additional clearing shall require a separate permit from RER. All work must be done by hand (i.e. chainsaw); machinery is not permitted within the natural forest community.

**ALL WORK SHALL ALSO BE IN ACCORDANCE WITH THE CONDITIONS CONTAINED HEREIN. THE PERMITTEE IS RESPONSIBLE FOR COMPLIANCE OF ALL CONTRACTORS AND SUBCONTRACTORS WITH THE CONDITIONS AND LIMITATIONS OF THIS PERMIT. EXCEPT AS AUTHORIZED BY THIS PERMIT, ANY PROTECTED TREE AND/OR PROTECTED NATURAL FOREST COMMUNITY UNDERSTORY VEGETATION THAT IS REMOVED OR EFFECTIVELY DESTROYED SHALL CONSTITUTE A VIOLATION OF SECTION 24-49 OF THE CODE OF MIAMI-DADE COUNTY AND WILL BE PURSUED AS SUCH. IN ADDITION, ANY NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT WILL SUBJECT THE PERMITTEE AND RESPONSIBLE CONTRACTORS OR INDIVIDUALS TO THE PENALTY PROVISIONS OF SECTIONS 24-55, 24-56, 24-57, AND 8CC OF THE CODE OF MIAMI-DADE COUNTY.**

CONDITIONS

1. No site clearing work shall occur prior to the execution of a covenant running with the land in favor of Miami-Dade County that preserves 43.36 acres of NFC and prior to the issuance of the Building Permit. The covenant running with the land in favor of Miami-Dade County and approved by RER (copy attached) shall be executed prior to the issuance of this permit and recorded with the Clerk's Office within ten days of the date of approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129 and prior to any work being performed.
2. Within sixty (60) days following the final and non-appealable approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129, but, in no event, later than two hundred seventy (270) days following the execution of the NFC covenant associated with NFC permit NFC2012-012, the property owner shall coordinate with the Florida Forest Service (FFS) to perform a controlled burn of the pine rockland preserves ("Controlled Burn"). The property owner, in conjunction with FFS, shall use its reasonable efforts to perform a licensed and permitted Controlled

Burn within one and a half (1.5) years of the execution of the NFC covenant. The property owner shall notify RER of any planned Controlled Burns prior to any Controlled Burning event. Commencing two hundred seventy (270) days following the execution of the NFC covenant associated with NFC permit NFC2012-012, the property owner shall submit monthly reports on the status of the coordination with FFS and the Controlled Burn ("Reporting Obligation"). Said Reporting Obligation shall cease either (i) upon completion of a Controlled Burn throughout all portions of the pine rockland, or (ii) a determination by RER, after consultation with the property owner and FFS, that a Controlled Burn is not reasonably feasible, and the completion of an exotic plant eradication event throughout the entire pine rockland.

3. Within sixty (60) days following the final and non-appealable approval of the Miami-Dade County zoning application referenced by RER hearing number Z2006-129, but, in no event, later than two hundred seventy (270) days following the execution of the NFC covenant associated with NFC permit NFC2012-012, the property owner shall initiate an intensive exotic plant eradication event (utilizing chemical and manual removal) over the hardwood hammock areas to be preserved, in order to achieve a less than 3% exotic plant cover ("Hardwood Hammock Eradication Event"). The property owner shall notify RER in writing of its commencement and shall complete the Hardwood Hammock Eradication Event within six (months) of commencing said work. This time-frame may be extended by the Director of RER upon the showing of a good faith effort by the property owner to timely complete the Hardwood Hammock Eradication Event.
4. Within the sooner of ninety (90) days of (i) completion of a Controlled Burn of the pine rockland or (ii) a determination by RER, after consultation with the property owner and FFS, that a Controlled Burn is not reasonably feasible (which determination shall not occur sooner than 240 days following the execution of the NFC covenant associated with NFC permit NFC2012-012), the property owner shall initiate an intensive exotic plant eradication event (utilizing chemical and manual removal) over the pine rockland to be preserved, in order to achieve a less than 3% exotic plant cover ("Pine Rockland Eradication Event"). The property owner shall notify RER in writing of its commencement and shall complete the Pine Rockland Eradication Event within six (months) of commencing said work. This timeframe may be extended by the Director of RER upon the showing of a good faith effort by the property owner to timely complete the Pine Rockland Eradication Event.
5. Prior to performing any work that would have the potential to impact underground utilities, the permittee and contractor shall verify the location of all underground and overhead utility lines and verify that no utilities will be damaged by the work. Contact Sunshine 811 One-Call at 811 or on the web: <http://www.sunshine811.com> to locate underground utility lines. No clearing, excavation, earthwork, tree removal or planting shall commence until the permittee and contractor have verified that utilities will not be damaged by any work.
6. All trees and Natural Forest Community understory vegetation outside of those areas being developed are to remain and be protected by barriers throughout development. No work (including but not limited to land clearing or grading) may begin until RER has verified that all barriers are in place and RER authorization has been given for the commencement of construction (unless prior written approval is granted by RER). The permittee shall notify the RER project manager when the barriers are in place and schedule an inspection (two week's notice is required).
7. Protective barriers shall be constructed of wood, plastic, or metal and shall be a minimum of four (4) feet above ground level. Protective barriers shall be placed around areas designated as natural forest community preservation areas as shown on attached site plan. A copy of the site plans showing the location of barriers must remain on site attached to this permit.

8. Protective barriers must remain in place until development is completed and the Department has authorized their removal.
9. During all site work and construction, no soil, vehicles, heavy equipment (such as bulldozers or backhoes), fill, building materials, construction debris, or dead vegetation shall be placed, stored, or deposited within the areas of protective barriers.
10. There shall be no disruption of soil or rock formations and natural grade shall be maintained within protective barriers.
11. Only native or non-invasive exotic plant species approved by RER, may be planted on-site.
12. A minimum of fifteen days notice must be given prior to any clearing for the salvaging of native plant materials within the permitted area.
13. RER shall be notified 3 days prior to commencement of any clearing of the site.
14. Above ground as well as underground utility lines are prohibited in the preservation areas.
15. Fences and walls shall be constructed to avoid disturbance to any protected Natural Forest Community trees and understory.
16. There shall be no installation of any sprinklers or other irrigation systems within the forest preservation areas without the prior written consent of RER.
17. The remaining 43.36 acres of Natural Forest Community shall be protected and managed in accordance with the conditions of the restrictive covenant dated July 8, 2013.
18. The permittee agrees to create a Special Taxing District or similar mechanism to fund management of the 43.36-acre covenanted NFC. Until such time as a Special Taxing District or similar mechanism has been established, the permittee/property owner shall fund all work required to maintain the NFCs in accordance with the NFC Covenant and Management Plan referenced in this permit.
19. Per Section 24-49.9 of the Code of Miami-Dade County, all prohibited plant species shall be removed from the subject properties prior to development, and their sale, propagation, planting, importation or transportation is prohibited.
20. The subject properties shall be maintained in perpetuity on a quarterly basis to prevent the growth or accumulation of prohibited species including grass, weeds and non-native undergrowth.
21. Issuance of this permit does not relieve the permittee from the requirement to obtain and comply with all necessary approvals or permits from the local municipality, or any other government entity otherwise having independent jurisdiction relating to the authorizations contained herein.

### EXOTIC REMOVAL CONDITIONS FOR THE PRESERVATION AREA

1. All dead tree or exotic vegetation removal within the interior of the NFC must be done by hand only (i.e., chainsaws, handsaws). Any felled trees in the interior of the forest should be cut into pieces that can be carried outside of the interior of the natural forest community or left in place. Exotic plant material that is cut shall be removed from the NFC and disposed of properly.
2. There shall be no disruption of soil, rock formations, or any Natural Forest Community native vegetation including shrubs and groundcovers.
3. During all site work no soil, vehicles, or heavy equipment (such as bulldozers or backhoes), fill, building materials, construction debris, or dead vegetation (except dead trees) shall be placed, stored, or deposited within the NFC boundary.
4. Dead trees or snags, which do not pose a threat to persons or property, shall be left in place to provide wildlife habitat.
5. The use of herbicides to prevent regeneration of exotics species is encouraged. Herbicide application shall be in accordance with the product label directions. A copy of the Miami-Dade Park and Recreation's "Management Techniques for the Control of Exotic Plant Species in South Florida" is available upon request.

**FEES**

|                       |       |                       |                    |
|-----------------------|-------|-----------------------|--------------------|
| Need for Compliance   | \$320 | Application Fee:      | 4260 (ATF)         |
| Barrier               | \$35  | Total Inspection fees | \$555              |
| Utility Sighting      | \$    | No. of acres cleared  |                    |
| Preservation Area     |       | 6.6@ \$ 3200/acre     | \$21,120 ATF       |
| Location              | \$    | 3.2@ \$ 1600/acre     | \$5,120            |
| Landscape Plan Review | \$    |                       |                    |
| Landscape Field       |       |                       |                    |
| Inspection (Final)    | \$200 |                       |                    |
| Miscellaneous         | \$    |                       |                    |
|                       |       | <b>TOTAL FEES</b>     | <b>\$27,055.00</b> |
|                       |       | Paid:                 | \$230.00           |
|                       |       | Due:                  | \$26,825.00        |

**I HAVE READ THE SPECIAL CONDITIONS CONTAINED IN THIS PERMIT AND FULLY UNDERSTAND THEM. IN SIGNING THIS PERMIT, I ACKNOWLEDGE THAT FAILURE TO COMPLY WITH ALL CONDITIONS OF THIS PERMIT MAY RESULT IN PERMIT REVOCATION, BOND FORFEITURE, WITHHOLDING OF MY CERTIFICATE OF OCCUPANCY, AND ENFORCEMENT ACTION AGAINST ME BY PERA. I ASSUME FULL RESPONSIBILITY FOR THE ACTIONS OF ALL MY EMPLOYEES, AGENTS, AND PERSONS UNDER DIRECT OR INDIRECT CONTRACTUAL OBLIGATION TO ME WITH RESPECT TO COMPLIANCE WITH THE CONDITIONS AND LIMITATIONS CONTAINED WITHIN THIS PERMIT.**

  
 \_\_\_\_\_  
 Signature of Owner/ Authorized  
 Representative/ Owner's Agent

July 8, 2013  
 \_\_\_\_\_  
 Date Signed

JOE NATOLI  
 \_\_\_\_\_  
 Print Name

SR VP FOR BUSINESS &  
 \_\_\_\_\_  
 Title FINANCE

**THIS PERMIT IS NOT VALID UNLESS SIGNED BY THE DIRECTOR OF PERA OR THE DIRECTOR'S DESIGNATED REPRESENTATIVE.**

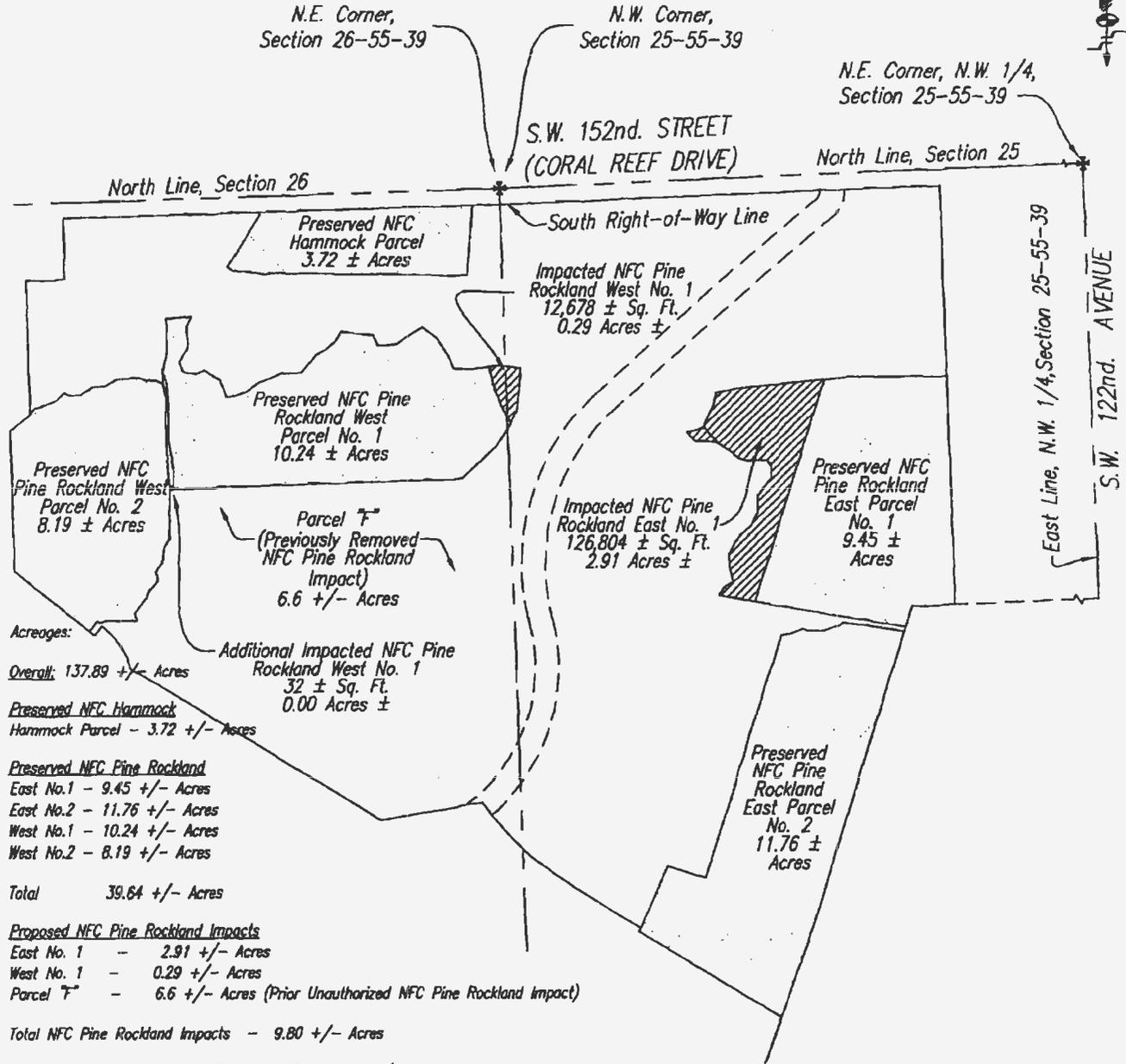
  
 \_\_\_\_\_  
 RER Director of Designee

July 15, 2013  
 \_\_\_\_\_  
 Date Signed

SKETCH TO ACCOMPANY LEGAL DESCRIPTION

PROPOSED NFC AREA IMPACTS

Scale: 1"=500'



**Acreages:**  
**Overall:** 137.89 +/- Acres  
**Preserved NFC Hammock**  
 Hammock Parcel - 3.72 +/- Acres  
**Preserved NFC Pine Rockland**  
 East No.1 - 9.45 +/- Acres  
 East No.2 - 11.76 +/- Acres  
 West No.1 - 10.24 +/- Acres  
 West No.2 - 8.19 +/- Acres  
**Total** 39.64 +/- Acres  
**Proposed NFC Pine Rockland Impacts**  
 East No. 1 - 2.91 +/- Acres  
 West No. 1 - 0.29 +/- Acres  
 Parcel T - 6.6 +/- Acres (Prior Unauthorized NFC Pine Rockland Impact)  
**Total NFC Pine Rockland Impacts** - 9.80 +/- Acres  
**Total NFC Pine Rockland** - 39.64 + 9.80 = 49.44 +/- Acres  
**Total Preserved NFC Area** - 43.36 +/- Acres  
 NFC - denotes NATURAL FOREST COMMUNITY  
 NOTE: Prepared For: RAM REALTY SERVICES

09/14/12 - Revised To Add Preserved Hammock  
 09/12/12 - Revised To Add Additional Impacted NFC West No.1

*Schwelke-Shiskin & Associates, Inc.* (LB-87)  
 LAND SURVEYORS • ENGINEERS • LAND PLANNERS

3240 CORPORATE WAY, MIRAMAR, FLORIDA 33025 TEL: BROWARD: (954) 435-7010 FAX: (954) 435-0285

THIS IS NOT A "LAND SURVEY."  
 ORDER NO.: 199230  
 DATE: June 22, 2012  
 SHEET 1 OF 1 SHEET(S) F.B.: N.A.

PREPARED UNDER MY SUPERVISION  
 STATE OF  
 MARK STEVEN JOHNSON SECY-TREAS.  
 FLORIDA PROF. LAND SURVEYOR NO. 4775

## **APPENDIX C**

### **Confidentiality and Access Agreements**

## CONFIDENTIALITY AND ACCESS AGREEMENT

This CONFIDENTIALITY AND ACCESS AGREEMENT ("Agreement") is made and entered into as of 18 day of June 2014 by and between RAM DEVELOPMENT COMPANY, a Florida corporation, c/o Ram Realty Services, 4801 PGA Boulevard, Palm Beach Gardens, Florida 33418, Attn: Hugo Pacanins, Vice President of Development, [hpacanins@ramrealestate.com](mailto:hpacanins@ramrealestate.com); and Karen D. Geller, General Counsel, [kgeller@ramrealestate.com](mailto:kgeller@ramrealestate.com); facsimile: 561.282.4806 ("Purchaser") and The Institute For Regional Conservation, 22601 SW 152<sup>nd</sup> Ave, Miami, Fl. Attn: (Sarah Martin) email: [martin@regionalconservation.org](mailto:martin@regionalconservation.org) facsimile: \_\_\_\_\_ ("Contractor").

### RECITALS:

A. WHEREAS, Purchaser has entered into a Purchase and Sale Agreement dated August 1, 2011, as amended (collectively, the "P&S Agreement"), by and between University of Miami, as seller ("Seller") and Purchaser, as purchaser, to purchase the real property located in Miami-Dade County, Florida, and more particularly described in Exhibit "A" a/k/a University of Miami Land Purchase (the "Property"); and

B. WHEREAS, Contractor desires (i) access to the Property to rescue endangered species in all areas except for NFC Preserve areas of the Property (the "Work"), and Purchaser agrees, subject to receipt of Seller's Consent (as hereinafter defined), to allow such access and to provide such information on the terms and conditions set forth herein;

NOW, THEREFORE, with respect to the foregoing recitals, the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Purchaser and Contractor agree as follows:

### AGREEMENT

1. CONSENT OF SELLER. Contractor acknowledges that the prior written consent of Seller is required for (i) Contractor to have access to the Property to perform the Work, and (ii) to receive the Information, as defined below, from Purchaser (collectively, the "Seller's Consent"). Until such time as Seller's Consent is obtained by Purchaser, Contractor shall have no right to perform the Work or receive the Information. In the event Purchaser is unable to obtain Seller's Consent, this Agreement shall automatically terminate.
2. MAINTENANCE OF THE PROPERTY. During performance of the Work, Contractor shall keep that portion of the Property where the Work is being performed in a well-kept condition subject, however, to the actual Work being performed, and Contractor shall restore said portion of the Property to its original condition when the Work is completed.

3. **CONFIDENTIALITY.** As a condition to Purchaser's agreement to furnish and/or disclose such Information to the Contractor for its review and inspection, the Contractor agrees to be bound by the terms set forth in this Agreement. "Information" shall include all documents, and other written or oral information, as well as diskettes and other forms of electronically transmitted data, furnished to the Contractor, or its officers, directors, employees, agents, subcontractors or representatives (collectively "Representatives") by Purchaser relating to the Property, as well as written memoranda, notes, analyses, reports, compilations, or studies prepared by or for the Contractor (in whatever form of medium) that contain, or are derived from, such information provided by Purchaser or the Inspection Work, as defined below.
4. **USE OF INFORMATION.** The Contractor agrees that it will use the Information exclusively for the purpose of performing the Work and not for any other purpose whatsoever. The Contractor further agrees that it will not disclose any Information or use it to the detriment of Seller or Purchaser or any of their affiliates; provided, however, that the Contractor may disclose Information (i) to any Representatives of the Contractor who need to know such Information for the purpose of performing the Work, provided that such Representative shall keep all information confidential pursuant to the terms hereof, it being understood and agreed that the Contractor shall be fully responsible for any disclosures by such person, and (ii) as required by law. Notwithstanding the foregoing, the confidentiality provisions of this Agreement will not apply to such portions of the Information that (a) are or become generally available to the public through no action by Contractor or any of its Representatives, (b) are or become available to Contractor or any of its Representatives on a non-confidential basis from a source other than the provision of the Information herein, or (c) were independently developed by Contractor or any of its representatives without reference to the Information provided hereunder.
5. **RELIANCE.** The Contractor agrees that all written Information will be returned to Purchaser promptly upon Purchaser's request. The Contractor acknowledges and agrees that neither Purchaser nor any other person has made or is authorized to make any representations or warranties whatsoever, including, without limitation, any representations as to the accuracy or completeness of any Information provided hereunder and that no such person will have any liability relating to the Information or for any errors therein or omissions therefrom. The Contractor further agrees that it is not entitled to rely on the accuracy or completeness of the Information and that it will be entitled to rely solely on those representations and warranties, if any, made by Purchaser to the Contractor in the definitive written documentation for a Transaction, subject to such limitations and restrictions as may be specified herein.
6. **EQUITABLE RELIEF.** The Contractor acknowledges that significant portions of the Information are proprietary in nature and that Purchaser would suffer significant and irreparable harm in the event of the misuse or disclosure of the Information. Without affecting any other rights or remedies that either party may have, the Contractor acknowledges and agrees that Purchaser shall be entitled to seek the remedies of injunction, specific performance and other equitable relief for any breach, threatened breach or anticipatory breach of the provisions of this Agreement by the Contractor or its Representatives. The Contractor agrees that it will not communicate with any other party

interested in purchasing or leasing the Property without the prior written consent of Purchaser.

7. **ACCESS.** Upon receipt of written notice from Purchaser that Purchaser has received Seller's Consent, Contractor, at its sole cost and expense, shall be entitled during Purchaser's business hours and after no less than forty-eight (48) hours' prior notice to Purchaser, to perform the Work. Purchaser and Seller shall have the right to have a representative present during any such entry.
8. **INSURANCE.** Prior to access to the Property, Contractor must deliver a certificate of insurance to Seller and Purchaser evidencing that Contractor, its Representatives and its subcontractors, have in place (and Contractor, its Representatives and its subcontractors shall maintain during the pendency of this Agreement) commercial general liability insurance with limits of at least Two Million Dollars (\$2,000,000) for bodily or personal injury or death covering any accident arising in connection with the presence of Contractor, its Representatives and its subcontractors on the Property, which insurance shall (A) name as additional insureds thereunder Seller, Purchaser and such other parties holding insurable interests as Seller and Purchaser may designate and (B) be written by a reputable insurance company having a rating of at least "A+;VII" by Best's Rating Guide (or a comparable rating by a successor rating service), and (C) otherwise be subject to Seller's and Purchaser's prior approval.
9. **INDEMNITY.** Contractor, at its sole cost and expense, and to the fullest extent permitted by law, hereby agrees to and shall indemnify, defend, protect and hold harmless Seller, Purchaser, Purchaser's management company, Purchaser's lender, and Seller's and Purchaser's respective partners, directors, officers, members, agents and employees, from and against any and all loss, damage, cause of action, cost, claim, expense, mechanic's lien, materialmen's lien and reasonable attorney's fees, actually incurred by any of the indemnified parties or affecting the Property to the extent arising out of the performance of the Work by Contractor and/or its Representatives and subcontractors.
10. **ATTORNEYS' FEES.** In the event of any litigation between the parties hereto with respect to any rights or obligations hereunder, the unsuccessful party to any such litigation shall pay to the successful party therein all costs and expenses, including but not limited to court costs and reasonable attorney's fees incurred therein by such successful party, which costs, expenses and reasonable attorney's fees shall be included in, and as a part of, any judgment rendered or settlement in such litigation.
11. **BINDING EFFECT.** The provisions of this Agreement shall be binding upon and inure to the benefit of the heirs, representatives, successors and permitted assigns of the parties hereto.
12. **ENTIRE AGREEMENT.** This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter of this Agreement and may not be amended or terminated except by a writing executed by both parties to this Agreement.

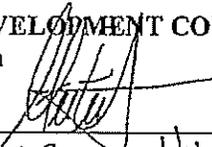
13. **WAIVER.** Neither Party shall be deemed to have waived any term or provision of this Agreement unless such waiver shall be in writing. The waiver of a term or provision of this Agreement by a Party on one occasion shall not constitute a continuing waiver thereof or a waiver as to other terms or provisions hereof.
14. **SEVERABILITY.** The provisions of this Agreement shall be severable, and if any of them is held to be invalid or unenforceable for any reason, such provision shall be modified to the extent necessary to cure such invalidity. The invalidity or unenforceability of one provision shall not affect any other provision of this Agreement.
15. **GOVERNING LAW.** This Agreement and any disputes arising hereunder or in connection herewith shall be governed by the laws of the state in which the property is located, without regard to choice of law principles.
16. **COUNTERPARTS.** This Agreement may be executed in any number of original counterparts. Any such counterpart, when executed, shall constitute an original of this Agreement, and all such counterparts together shall constitute one and the same Agreement. A "pdf" of this Agreement shall constitute an original.
17. **LICENSE.** This Agreement shall be considered a license revocable by Purchaser at any time. Subject to receipt of Seller's Consent, Purchaser does hereby grant Contractor, and Contractor hereby accepts upon the terms herein stated, a non-exclusive, revocable license for ingress and egress over and upon the Property to perform the Work in accordance with this Agreement.
18. **NOTICE.** All notices required by this Agreement shall be hand-delivered to the other party, emailed, mailed by registered or certified mail (postage prepaid), return receipt requested, or delivered by an overnight courier service, to the address set forth above, or to such other address as the parties may hereafter specify in writing or sent by facsimile. Any such notice shall be considered delivered (a) on the date of hand delivery, (b) on the first day after the date of deposit with an overnight courier, (c) on the date upon which the return receipt is signed or delivery is refused or the notice is designated by the postal authorities as nondeliverable, as the case may be, if mailed by certified mail, or (d) on the sent date, provided sent before 5:00 pm EST, if delivered by email or facsimile telecommunication. If sent by email or facsimile after 5:00 pm EST, the received date shall be the next business day. By giving proper notice as required herein, either party may change its address hereunder.

(SIGNATURE PAGE FOLLOWS)

IN WITNESS WHEREOF, this Agreement has been duly executed on the day first above written.

**PURCHASER:**

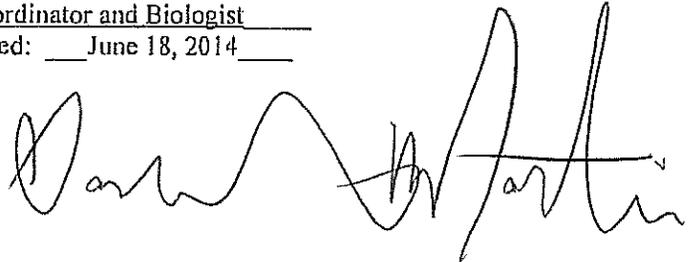
**RAM DEVELOPMENT COMPANY**, a Florida corporation

By:   
Print Name: JP Hugo (RAM)  
Title: \_\_\_\_\_  
Dated: 06/23, 2014

**CONTRACTOR:**

NAME

By: The Institute For Regional Conservation  
Print Name: Sarah Martin  
Title: IRC Pine Rockland Initiative Program  
Coordinator and Biologist  
Dated: June 18, 2014



MIAMI DADE CONSERVATION  
+ RECREATION  
200 MIAMI  
• FRANK RIDGLEY  
• CAMOLINA SEBASTIAO  
• DUSTIN SMITH

## CONFIDENTIALITY AND ACCESS AGREEMENT

This CONFIDENTIALITY AND ACCESS AGREEMENT (“**Agreement**”) is made and entered into as of 20 day of June 2014 by and between RAM DEVELOPMENT COMPANY, a Florida corporation, c/o Ram Realty Services, 4801 PGA Boulevard, Palm Beach Gardens, Florida 33418, Attn: Hugo Pacanins, Vice President of Development, [hpacanins@ramrealestate.com](mailto:hpacanins@ramrealestate.com); and Karen D. Geller, General Counsel, [kgeller@ramrealestate.com](mailto:kgeller@ramrealestate.com); facsimile: 561.282.4806 (“**Purchaser**”) and Zoo Miami 12400 SW 152<sup>nd</sup> Street Miami, FL 33177. Frank Ridgley email: [frid@miamidade.gov](mailto:frid@miamidade.gov) facsimile: 305-378-6381 (“**Contractor**”).

### RECITALS:

A. WHEREAS, Purchaser has entered into a Purchase and Sale Agreement dated August 1, 2011, as amended (collectively, the “**P&S Agreement**”), by and between University of Miami, as seller (“**Seller**”) and Purchaser, as purchaser, to purchase the real property located in Miami-Dade County, Florida, and more particularly described in Exhibit “A” a/k/a University of Miami Land Purchase (the “**Property**”); and

B. WHEREAS, Contractor desires (i) access to the Property to rescue endangered species in all areas except for NFC Preserve areas of the Property (the “**Work**”), and Purchaser agrees, subject to receipt of Seller’s Consent (as hereinafter defined), to allow such access and to provide such information on the terms and conditions set forth herein;

NOW, THEREFORE, with respect to the foregoing recitals, the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Purchaser and Contractor agree as follows:

### AGREEMENT

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9. **INDEMNITY**. Contractor, at its sole cost and expense, and to the fullest extent permitted by law, hereby agrees to and shall indemnify, defend, protect and hold harmless Seller, Purchaser, Purchaser's management company, Purchaser's lender, and Seller's and Purchaser's respective partners, directors, officers, members, agents and employees, from and against any and all loss, damage, cause of action, cost, claim, expense, mechanic's lien, materialmen's lien and reasonable attorney's fees, actually incurred by any of the indemnified parties or affecting the Property to the extent arising out of the performance of the Work by Contractor and/or its Representatives and subcontractors.
10. **ATTORNEYS' FEES**. In the event of any litigation between the parties hereto with respect to any rights or obligations hereunder, the unsuccessful party to any such litigation shall pay to the successful party therein all costs and expenses, including but not limited to court costs and reasonable attorney's fees incurred therein by such successful party, which costs, expenses and reasonable attorney's fees shall be included in, and as a part of, any judgment rendered or settlement in such litigation.
11. **BINDING EFFECT**. The provisions of this Agreement shall be binding upon and inure to the benefit of the heirs, representatives, successors and permitted assigns of the parties hereto.
12. **ENTIRE AGREEMENT**. This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter of this Agreement and may not be amended or terminated except by a writing executed by both parties to this Agreement.

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(SIGNATURE PAGE FOLLOWS)



## CONFIDENTIALITY AND ACCESS AGREEMENT

This CONFIDENTIALITY AND ACCESS AGREEMENT ("**Agreement**") is made and entered into as of 20<sup>th</sup> day of June 2014 by and between RAM DEVELOPMENT COMPANY, a Florida corporation, c/o Ram Realty Services, 4801 PGA Boulevard, Palm Beach Gardens, Florida 33418, Attn: Hugo Pacanins, Vice President of Development, [hpacanins@ramrealestate.com](mailto:hpacanins@ramrealestate.com); and Karen D. Geller, General Counsel, [kgeller@ramrealestate.com](mailto:kgeller@ramrealestate.com); facsimile: 561.282.4806 ("**Purchaser**") and Fairchild Tropical Botanic Garden, 10901 Old Cutler Road Miami, Fl. 33156 Attn: Carl E Lewis, Director email: [clewis@fairchildgarden.org](mailto:clewis@fairchildgarden.org) facsimile: 305.740.2003 ("**Contractor**").

### RECITALS:

A. WHEREAS, Purchaser has entered into a Purchase and Sale Agreement dated August 1, 2011, as amended (collectively, the "**P&S Agreement**"), by and between University of Miami, as seller ("**Seller**") and Purchaser, as purchaser, to purchase the real property located in Miami-Dade County, Florida, and more particularly described in Exhibit "A" a/k/a University of Miami Land Purchase (the "**Property**"); and

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6. **EQUITABLE RELIEF.** The Contractor acknowledges that significant portions of the Information are proprietary in nature and that Purchaser would suffer significant and irreparable harm in the event of the misuse or disclosure of the Information. Without affecting any other rights or remedies that either party may have, the Contractor acknowledges and agrees that Purchaser shall be entitled to seek the remedies of injunction, specific performance and other equitable relief for any breach, threatened breach or anticipatory breach of the provisions of this Agreement by the Contractor or its Representatives. The Contractor agrees that it will not communicate with any other party

interested in purchasing or leasing the Property without the prior written consent of Purchaser.

7. **ACCESS.** Upon receipt of written notice from Purchaser that Purchaser has received Seller's Consent, Contractor, at its sole cost and expense, shall be entitled during Purchaser's business hours and after no less than forty-eight (48) hours' prior notice to Purchaser, to perform the Work. Purchaser and Seller shall have the right to have a representative present during any such entry.
8. **INSURANCE.** Prior to access to the Property, Contractor must deliver a certificate of insurance to Seller and Purchaser evidencing that Contractor, its Representatives and its subcontractors, have in place (and Contractor, its Representatives and its subcontractors shall maintain during the pendency of this Agreement) commercial general liability insurance with limits of at least Two Million Dollars (\$2,000,000) for bodily or personal injury or death covering any accident arising in connection with the presence of Contractor, its Representatives and its subcontractors on the Property, which insurance shall (A) name as additional insureds thereunder Seller, Purchaser and such other parties holding insurable interests as Seller and Purchaser may designate and (B) be written by a reputable insurance company having a rating of at least "A+:VII" by Best's Rating Guide (or a comparable rating by a successor rating service), and (C) otherwise be subject to Seller's and Purchaser's prior approval.
9. **INDEMNITY.** Contractor, at its sole cost and expense, and to the fullest extent permitted by law, hereby agrees to and shall indemnify, defend, protect and hold harmless Seller, Purchaser, Purchaser's management company, Purchaser's lender, and Seller's and Purchaser's respective partners, directors, officers, members, agents and employees, from and against any and all loss, damage, cause of action, cost, claim, expense, mechanic's lien, materialmen's lien and reasonable attorney's fees, actually incurred by any of the indemnified parties or affecting the Property to the extent arising out of the performance of the Work by Contractor and/or its Representatives and subcontractors.
10. **ATTORNEYS' FEES.** In the event of any litigation between the parties hereto with respect to any rights or obligations hereunder, the unsuccessful party to any such litigation shall pay to the successful party therein all costs and expenses, including but not limited to court costs and reasonable attorney's fees incurred therein by such successful party, which costs, expenses and reasonable attorney's fees shall be included in, and as a part of, any judgment rendered or settlement in such litigation.
11. **BINDING EFFECT.** The provisions of this Agreement shall be binding upon and inure to the benefit of the heirs, representatives, successors and permitted assigns of the parties hereto.
12. **ENTIRE AGREEMENT.** This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter of this Agreement and may not be amended or terminated except by a writing executed by both parties to this Agreement.

13. **WAIVER.** Neither Party shall be deemed to have waived any term or provision of this Agreement unless such waiver shall be in writing. The waiver of a term or provision of this Agreement by a Party on one occasion shall not constitute a continuing waiver thereof or a waiver as to other terms or provisions hereof.
14. **SEVERABILITY.** The provisions of this Agreement shall be severable, and if any of them is held to be invalid or unenforceable for any reason, such provision shall be modified to the extent necessary to cure such invalidity. The invalidity or unenforceability of one provision shall not affect any other provision of this Agreement.
15. **GOVERNING LAW.** This Agreement and any disputes arising hereunder or in connection herewith shall be governed by the laws of the state in which the property is located, without regard to choice of law principles.
16. **COUNTERPARTS.** This Agreement may be executed in any number of original counterparts. Any such counterpart, when executed, shall constitute an original of this Agreement, and all such counterparts together shall constitute one and the same Agreement. A "pdf" of this Agreement shall constitute an original.
17. **LICENSE.** This Agreement shall be considered a license revocable by Purchaser at any time. Subject to receipt of Seller's Consent, Purchaser does hereby grant Contractor, and Contractor hereby accepts upon the terms herein stated, a non-exclusive, revocable license for ingress and egress over and upon the Property to perform the Work in accordance with this Agreement.
18. **NOTICE.** All notices required by this Agreement shall be hand-delivered to the other party, emailed, mailed by registered or certified mail (postage prepaid), return receipt requested, or delivered by an overnight courier service, to the address set forth above, or to such other address as the parties may hereafter specify in writing or sent by facsimile. Any such notice shall be considered delivered (a) on the date of hand delivery, (b) on the first day after the date of deposit with an overnight courier, (c) on the date upon which the return receipt is signed or delivery is refused or the notice is designated by the postal authorities as nondeliverable, as the case may be, if mailed by certified mail, or (d) on the sent date, provided sent before 5:00 pm EST, if delivered by email or facsimile telecommunication. If sent by email or facsimile after 5:00 pm EST, the received date shall be the next business day. By giving proper notice as required herein, either party may change its address hereunder.

**(SIGNATURE PAGE FOLLOWS)**

IN WITNESS WHEREOF, this Agreement has been duly executed on the day first above written.

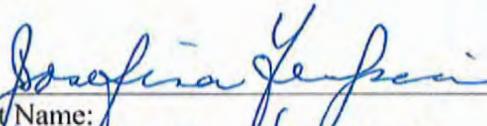
**PURCHASER:**

**RAM DEVELOPMENT COMPANY**, a Florida corporation

By:   
Print Name: VP HUGO PAGAN  
Title: VP  
Dated: 6/24, 2014

**CONTRACTOR:**

**NAME**

By:   
Print Name: JOSEFINA HESPICA  
Title: CEO  
Dated: 6/20/14

**APPENDIX D**

**Coral Reef Commons Rare Plant and Floristic Inventory and  
Assessment Report (Woodmansee 2014)**

# **Coral Reef Commons Rare Plant and Floristic Inventory and Assessment**



December 12, 2014

Steven W. Woodmansee

Pro Native Consulting

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Miami, FL, 33173

[steve@pronative.com](mailto:steve@pronative.com)

Report Submitted to Johnson Engineering Inc.,

P.O. Box 1550, Fort Myers, FL 33902-1550

## **Introduction**

In September 2014 Pro Native Consulting was contracted with by Johnson Engineering to conduct a floristic inventory and a search for select plants listed by the US Fish and Wildlife Service at the Coral Reef Commons site in Miami-Dade County, FL. Coral Reef Commons consists of over 100 acres and is located south of SW 152nd Street (Coral Reef Drive) at SW 127th Avenue. Much of the acreage consists of pine rockland habitat, a plant community listed as globally critically imperiled by the Florida Natural Areas Inventory.

## **Site Overview**

Coral Reef Commons consists of both natural areas and urban interface. Natural Areas are of varying degrees of disturbance, and the urban interface consists of buildings, roads, landscaped areas, and improved lawn. It borders Coral Reef Drive on the north, property owned by the Department of Homeland Security on the west and south, and borders Miami Zoo on the east. The Coral Reef Commons site is part of what is known as the Richmond Pine Rockland tract, an area of fairly contiguous pine rockland known to be the largest tract of pine rockland in Miami-Dade County outside of Everglades National Park.

Within Coral Reef Commons, four parcels possess the Natural Forest Community (NFC) designation. A conservation easement designation by Miami-Dade County where the private land owner manages the parcel of land as a natural area. (see Map 1 on next page). The remaining parcels are proposed for development.

Historical land use consisted of being used in the 1940's by the U.S. Air Force as part of a former blimp base that occurred throughout most of the Richmond Pine Rockland Tract. During this time, some of the property was likely cleared for some buildings and roads. Afterward, the land ownership was transferred to the University of Miami, who used the property for medical research. While the University of Miami managed the property, more buildings were installed, and some of the land was further cleared, however much of the pine rockland habitat remained intact. There is little evidence that the habitat was managed during this time period, and much of the area became altered over time by the countywide artificial lowering of the water table, lack of fire, and exotic pest plant infestation. In the mid 2000's, the property was rezoned by the Miami-Dade County Commission for Residential and Commercial use. In 2014 the property was purchased by RAM Realty, who plan to use some of the property for Residential and Commercial use, while also maintaining and managing conservation easements on site. Prior to surveys and by the date of this report, management consisting of exotic pest plant removal of some of the NFC areas by the current land owners, especially the hammock portion of the site has already taken place. Some natural areas within the site are in worse shape than others and will be discussed later on in the report. To date, no new development has occurred.

Map 1: Coral Reef Commons Study Area



Map created by: C. van der Heiden for Pro Native Consulting

Map date: 10/30/2014

## Methods

Recommended guidelines for conducting a botanical inventory of Coral Reef Commons was provided by the US Fish and Wildlife Service through Johnson Engineering. These methods were adhered to and are provided in Appendix A.

### Historical Data Search

Historic floristic data was sought before conducting a floristic inventory and rare plant search. Fairchild Tropical Botanic Garden Center for Plant Conservation (Fairchild) staff were contacted, and data on rare plants outlined in Appendix A were provided. These data consisted of shapefiles from rare plant surveys conducted by Miami Dade Department of Environmental Resources, which contained maps of two federally endangered plant species: Tiny Polygala (*Polygala smallii*) and Deltoid Spurge (*Chamaesyce deltoidea* ssp. *deltoidea*). In addition, Fairchild provided printed map data on an area where Tiny Polygala was rescued on non NFC property located on site, as well as a track log on areas they searched for plants to rescue. Florida Natural Areas Inventory was contacted, and possessed no further data specific to the site. Herbarium label and species record data reported from Gann et al. (2002) was gathered. A plant list for the property was used from Bradley et al. (2000).

### Rare Plant Inventory Methods

Maps of previous data will be uploaded onto a submeter accurate GPS device and printed and brought into the field. Field searches for all USFWS target species were conducted at all times of the day by Steven W. Woodmansee and Craig van der Heiden on September 26-27, 2014, October 10, 2014. Additional field searches were conducted by Woodmansee on September 28, 2014 and November 4, 2014. All searches were conducted on foot in all parcels of Coral Reef Commons. Attempts were made to seek out the historical populations of the listed species. Subsequently, surveys were conducted in habitats most likely to contain those species provided by the US Fish and Wildlife Service (Table 1 and also listed in Appendix A).

When a target species was encountered, botanists walked a spiral followed from the origin until a population was defined. The population was then mapped using ArcPad software. Number of individuals, fruiting/flowering (phenology), habitat, health of plants and habitat, and associated plant taxa were recorded. Each species/habitat combination was photographed using a digital camera.

**Table 1: Federally Listed and Candidate Plants Miami-Dade Pine Rocklands**

| Scientific Name                                            | Common Name                  | USFWS Status             |
|------------------------------------------------------------|------------------------------|--------------------------|
| <i>Polygala smalii</i>                                     | Tiny Polygala                | Endangered               |
| <i>Chamaesyce deltoidea</i> ssp. <i>deltoidea</i>          | Deltoid Spurge               | Endangered               |
| <i>Linum carteri</i> var. <i>carteri</i>                   | Carter's Small-flowered Flax | Proposed Endangered w/CH |
| <i>Brickellia mosieri</i>                                  | Florida Brickellbush         | Proposed Endangered w/CH |
| <i>Galactia smallii</i>                                    | Small's Milkpea              | Endangered               |
| <i>Amorpha crenulata</i>                                   | Crenulate Leadplant          | Endangered               |
| <i>Linum arenicola</i>                                     | Sand Flax                    | Candidate                |
| <i>Argythamnia blodgettii</i>                              | Blodgett's Silverbush        | Candidate                |
| <i>Digitaria pauciflora</i>                                | Florida Pineland Crabgrass   | Candidate                |
| <i>Dalea carthagenensis</i> var. <i>floridana</i>          | Florida Prairie Clover       | Candidate                |
| <i>Sideroxylon reclinatum</i> ssp. <i>austrofloridense</i> | Everglades Bully             | Candidate                |

#### Floristic Inventory Methods

A plant list of previous data was created and brought into the field. Field searches for all vascular plant species were conducted by Steven W. Woodmansee on the same dates as the rare plant searches. Plant taxonomy follows Wunderlin & Hansen's (2011) "*Guide to the Vascular Plants of Florida Third Edition*". Plants were recorded for all habitats and disturbed areas on the site. Transects were conducted throughout the site, at five meter intervals. Observers, date, plant species, and habitats were recorded on data sheets. The botanist is proficient in identifying species utilizing vegetative field characteristics. For any species encountered which were unknown, a specimen was collected and identified using plant key and herbarium reference material. No State Endangered or Commercially Exploited species specimens were collected.

#### Habitat Delineation Methods

For the entire site, habitat boundaries were made using a combination of a handheld GPS device and using notes combined with aerial imagery maps. Final habitat boundaries were refined in the office using ARCGIS software.

### **Results**

#### Rare Plant Inventory

Two species of federally listed vascular plants were found and mapped at Coral Reef Commons: Tiny Polygala (*Polygala smalii*) and Deltoid Spurge (*Chamaesyce deltoidea* ssp. *deltoidea*) (Map 1).

Tiny Polygala (*Polygala smallii*)

Tiny Polygala was encountered in two areas of pine rockland at Coral Reef Commons. The largest population was found within the westernmost NFC and contains 100 plants. Seedlings as well as flowering and fruiting adult plants were observed (Map 2; Figures 1-2)

A second smaller population of nine (9) plants was found within pine rockland slated to be developed. This population was also encountered during a plant rescue attempt in June 2014 by staff at Fairchild Tropical Botanic Garden and three plants were removed at that time. Seedlings as well as flowering and fruiting adult plants were observed.

The habitat for both populations is fairly healthy pine rockland with some Burmареed (*Neyraudia reynaudiana*). The smaller, non NFC, population was in an area with little pine canopy (Figure 3). Plants grow in sandy soil in and around open sunny patches of land in the pine rockland, sometimes under fronds of Saw palmetto (*Serenoa repens*). Additional plants recorded in association with (<1m distance) Tiny Polygala include: Roughhair witchgrass (*Dichantheium strigosum* var. *glabrescens*), Shiny blueberry (*Vaccinium myrsinites*), Prostrate false buttonweed (*Spermacoce prostrata*), Wild pennyroyal (*Piloblephis rigida*), Gopherapple (*Licania michauxii*), Running oak (*Quercus pumila*), Rabbitbells (*Crotalaria rotundifolia*), Lacy brakenfern (*Pteridium aquilinum* var. *caudatum*), Pineland golden trumpet (*Angadenia berteroi*), Poisonwood (*Metopium toxiferum*), and Burma Reed (*Neyraudia reynaudiana*).



Figure 1: Tiny Polygala (*Polygala smallii*) adult at Coral Reef Commons



Figure 2: Tiny polygala (*Polygala smallii*) at Coral Reef Commons



Figure 3: Habitat surrounding Tiny Polygala (*Polygala smallii*) in the non NFC population at Coral Reef Commons



Deltoid Spurge (*Chamaesyce deltoidea* ssp. *deltoidea*)

Several populations of Deltoid spurge were found in pine rockland within three NFC parcels at Coral Reef Commons. 613 plants were observed and mapped (Map 3; Figures 4-5). Young plants fruiting and flowering were observed. No plants were observed on non-NFC lands.

The habitat at Coral Reef Commons for the populations of Deltoid spurge is fairly healthy pine rockland with some Burmared (*Neyraudia reynaudiana*). Plants grow on oolitic limestone, or oolitic limestone rock outcrops surrounded by sandy soil, in and around open sunny patches of land in the pine rockland. In some areas, Deltoid spurge persisted in partial shade. Plants recorded in association with (<1m distance) Deltoid Spurge include: South Florida slash pine (*Pinus elliottii* var. *densa*), Saw palmetto (*Serenoa repens*), Roughhair witchgrass (*Dichanthelium strigosum* var. *glabrescens*), Wire bluestem (*Schizachyrium gracile*), Winged sumac (*Rhus copallinum*), Elliott's lovegrass (*Eragrostis elliottii*), Blue paspalum (*Paspalum cespitosum*), Pineland golden trumpet (*Angadenia berteroi*), and Burma Reed.



Figure 4: Deltoid Spurge (*Chamaesyce deltoidea* ssp. *deltoidea*) at Coral Reef Commons



Figure 5: Pine Rockland Habitat of Deltoid spurge (*Chamaesyce deltoidea* ssp. *deltoidea*) at Coral Reef Commons



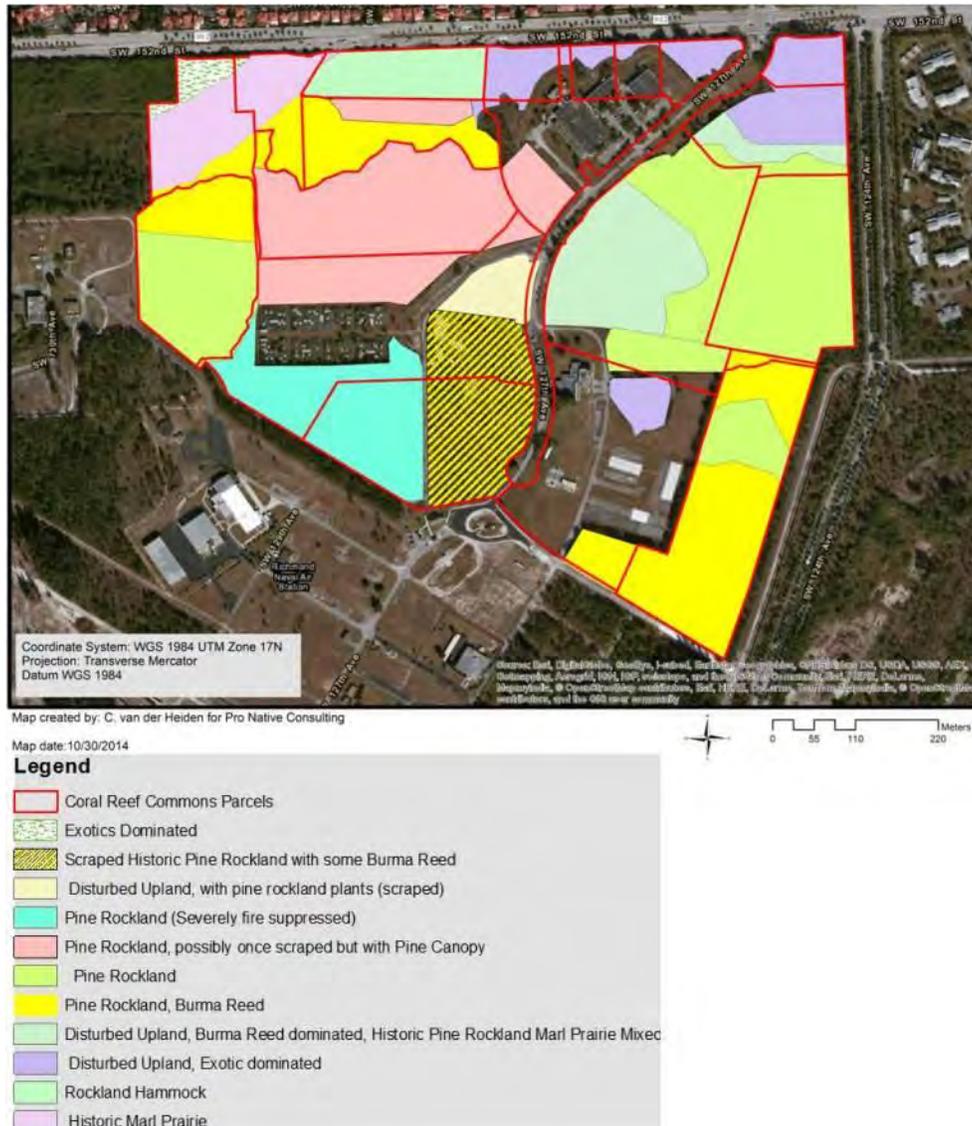
### Floristic Inventory

A list of vascular plants recorded at Coral Reef Commons is provided in Appendix B at the end of this report. The list contains Date of initial observation, Scientific Name, Common Name, Plant Group, Plant Family, Reference, Native Status, and habitats. Most all species from Bradley et al. (2000) were recorded in 2014. Those which were not observed are in Appendix B, and are in bold with the Date record left blank.

## Habitats

There are four main types of vegetation communities at Coral Reef Commons, with several subtype categories for Disturbed Upland and Pine Rockland (Map 4).

Map 4: Habitats at Coral Reef Commons



## Historic Marl Prairie

A band of remnant marl prairie occurs along the northwest portion of Coral Reef Commons. Some marl soil remains here, and some plants typical of this community still occur such as Muhlygrass (*Muhlenbergia capillaris*) and Sawgrass (*Cladium jamaicense*) (Figure 6). However, due to the artificial lowering of the water table, and lack of hydrological flow, this habitat has been succeeding to being occupied by upland species such as Quailberry (*Crossopetalum ilicifolium*)

Coral Reef Commons Floristic Inventory and Rare Plant Assessment, Woodmansee, 2014

which do not tolerate periods of standing water. Much of it is dominated by Burma Reed (*Neyraudia reynaudiana*) and Shoebuttan Ardisia (*Ardisia elliptica*) (Figure 7).

Figure 6: Historic Marl Prairie with Muhlygrass (*Muhlenbergia capillaris*) and Sawgrass (*Cladium jamaicense*) at Coral Reef Commons



Figure 7 Historic Marl Prairie dominated by exotic pest plants Burma Reed (*Neyraudia reynaudiana*) and Shoebutton Ardisia (*Ardisia elliptica*) at Coral Reef Commons



#### Rockland Hammock

"Rockland Hammock" occurs within the northernmost NFC that borders SW 152nd Street (Coral Reef Drive) (Figure 8). This area was cleared of exotic pest plants prior to inventorying. A spring may have occurred here at one time, as there is evidence of hydrological flow, since much of the oolitic limestone has been carved by water. Historically, it may have been a more open habitat, or it may have been analogous to Bayhead type swamps. Currently there is little to no evidence that it possesses standing water except for possibly the briefest period. A few species typical of wetter areas still persist in lower elevations of this habitat such as Giant leatherfern (*Acrostichum danaefolium*), Cocoplum (*Chrysobalanus icaco*), Swamp bay (*Persea palustris*) and Long strapfern (*Campyloneurum phyllitidis*) (Figure 9). Otherwise it is dominated by forest trees such as Virginia live oak (*Quercus virginiana*), Strangler fig (*Ficus aurea*), Gumbo limbo (*Bursera simaruba*), and Dahoon Holly (*Ilex cassine*).

Figure 8: Rockland Hammock at Coral Reef Commons (Recently cleared of exotic pest plants)



Figure 9: Giant leatherfern (*Acrostichum danaeifolium*) indicating historic water flow within the Rockland Hammock at Coral Reef Commons



## Pine Rockland

The pine rockland at Coral Reef Commons has undergone various disturbances overtime. All areas have some degree of fire suppression. Some areas that appear as empty mowed lawn, actually contain a significant number of pine rockland herb and grass species, with patches that are dominated by native vegetation (Figure 10). Some areas appear to have been scraped at one time, however the pine canopy was not disturbed (Figure 11). Some areas have a healthy shrub understory, containing saw palmetto, but possess little to no pine canopy (Figure 12). All the pine rockland has Burma Reed to some extent, and some areas contain over 50% areal coverage (Figure 13). Other than the Rockland Hammock at the site, all NFC's on site consist of pine rockland habitat.

Figure 10: Scraped Pine Rockland at Coral Reef Commons



Figure 11: Possibly once scraped Pine Rockland with Southern Slash Pine (*Pinus elliottii* var *densa*) canopy at Coral Reef Commons. (Note the absence of saw palmetto, which is an indicator of physical disturbance)



Figure 12: Open Canopy Pine Rockland at Coral Reef Commons



Figure 13: Burma Reed (*Neyraudia reynaudiana*) infested pine rockland (areal coverage > 50%)



#### Disturbed Upland

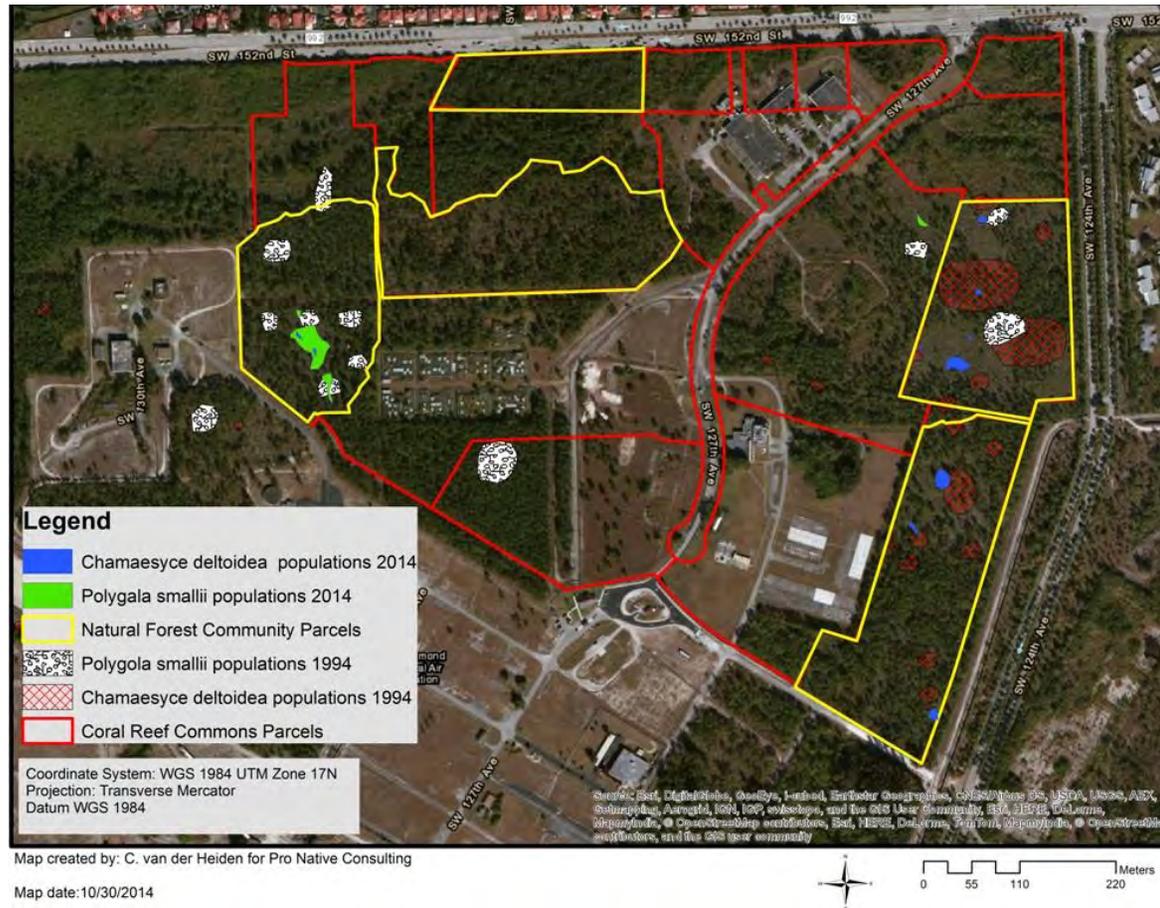
Disturbed Upland is found in various forms, but in almost all cases these are areas that have been mechanically disturbed to some degree. Some areas around the buildings possess ornamental landscaping and introduced lawn. These areas possess no coloring on Map 4. Other areas have had soil disturbance, and became dominated by non-native plant species. A small portion in the northwest corner is an area wholly dominated by exotic plants such as Brazilian-pepper (*Schinus terebinthifolius*) and Shoebuttton Ardisia (*Ardisia elliptica*).

#### **Discussion & Recommendations**

The Natural Area at Coral Reef Commons is significant since it contains a large portion of the globally imperiled ecosystem Pine Rockland. Less than 1.5% of this plant community remains in Miami-Dade County outside of Everglades National Park.

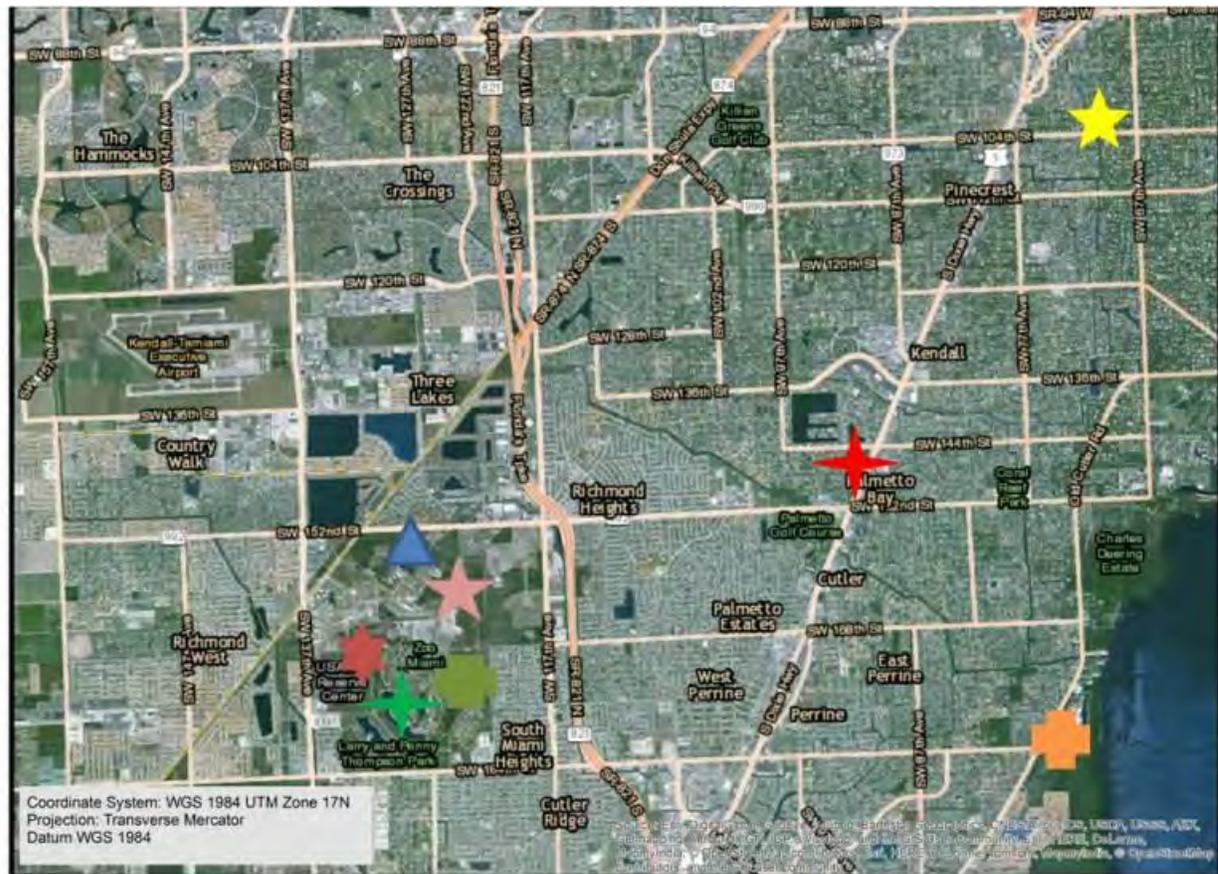
It is apparent that populations of both Tiny Polygala (*Polygala smallii*) and Deltoid Spurge (*Chamaesyce deltoidea* ssp. *deltoidea*) were at one time more abundant at Coral Reef Commons. Both species were mapped on site by Miami-Dade County Department of Environmental Resources in 1994 (Map 5). Populations of both rare species have either shrunk or migrated over time. There is also evidence that these two plant species remain in the seed bank until optimal conditions present themselves to germinate. So, it is possible that they may still occur in the seed bank in some areas where they were historically located (personal communication, Suzanne Kennedy). However, some areas of Coral Reef Commons outside the NFC parcels have fallen into such poor condition, that restoration of these areas may not be feasible. That being said, there are areas, such as the pine rockland containing Tiny Polygala is outside the NFC boundary which could be restored.

Map 5: Historic vs. Current Populations of Tiny Polygala (*Polygala smallii*) and Deltoid Spurge (*Chamaesyce deltoidea*) at Coral Reef Commons



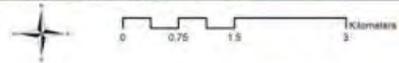
Map 6 contains the locations of the closest occurring natural populations of other USFWS plant species surveyed for at Coral Reef Commons. It is likely that most of the other species have never occurred, or no longer occur vegetatively at Coral Reef Commons. Were any to still be present on site, they could occur in the seed bank. The most likely candidates to remain in the seed bank are those that occur nearby in other tracts within the Richmond Pine Rockland Complex. Below is some reasoning for each species as to why they do not occur or were not discovered at Coral Reef Commons.

Map 6: Locations of closest occurring natural populations of other USFWS plant species surveyed for at Coral Reef Commons



Map created by: C. van der Heiden for Pro Native Consulting

Map date: 10/30/2014



- ▲ RAM Property
- ★ *Amorpha herbacea* var. *crenulata*
- ★ *Argythamnia blodgettii*
- ★ *Brickellia mosieri*
- ★ *Dalea carthagenensis* var. *floridana*
- ★ *Linum arenicola*
- ★ *Linum carteri* var. *carteri*
- ★ *Sideroxylon reclinatum* ssp. *austrofloridense*

One species, the woody shrub Everglades Bully (*Sideroxylon reclinatum* ssp. *astrofloridense*) may have once occurred at Coral Reef Commons. Recline Florida Bully (*Sideroxylon reclinatum* ssp. *reclinatum*) was reported by Bradley et al. (2006), and it is possible that this was a misidentification of Everglades Bully, which is more common in Miami-Dade County. Despite searches, neither were found. It likely occurred near the historic marl prairie or rockland hammock portions of the site. It is recommended that Everglades Bully be considered for introduction to the NFC portion of the site which contains rockland hammock.

Florida Brickell bush (*Brickellia mosieri*) is a perennial forb that senesces during the dry season. This species typically occupies sandy pine rockland, and may still reside in the seed bank. With appropriate management, it might reappear above ground in the pine rockland portions of the site.

Blodgett's silver bush (*Argythamnia blodgettii*) is a short lived perennial evergreen forb that typically is found on the edges of rockland hammock and pine rockland. No "true" hammock occurs at Coral Reef Commons, however it could pop up with appropriate management.

Sand flax (*Linum arenicola*) is a small annual forb which can occupy pine rockland, but more typically occupies fire breaks and scraped areas adjacent to pine rockland. Despite some of the literature, It reproduces year round (personal communication with Craig van der Heiden). It is a small wildflower which can easily go unnoticed, or confused with the more common wildflower Pitted stripeseed (*Piriqueta caroliniana*), which greatly resembles Sand flax, and is abundant at Coral Reef Commons. Knowing this, determined searches were made in the appropriate areas to no avail.

Florida prairie clover (*Dalea carthagenensis* var. *floridana*) is a shortlived subshrub which typically grows along the edges of pine rockland and hammock, as well as coastal strand. It is unlikely that Florida prairie clover ever occurred at Coral Reef Commons given that it has not been recorded anywhere within the Richmond Pine Rockland Complex, and that its closest natural population is four and a half(4.5) miles to the east southeast.

Crenulate leadplant (*Amorpha herbacea* var. *crenulata*) is a perennial subshrub which senesces in the dry season. It historically had a very limited range, mainly from the Miami River south to possibly SW 168th Street. The closest natural population of Crenulate leadplant occurs in Pinecrest, roughly five (5) miles to the northeast of Coral Reef Commons. It likely never occurred on the site. Crenulate leadplant has been planted nearby within the Richmond Pine Rockland Complex

Carter's small-flowered flax (*Linum carteri* var. *carteri*) a small annual forb which can occupy pine rockland, but more typically occupies fire breaks and scraped areas adjacent to pine rockland. It reproduces year round. It is a small wildflower which can easily go unnoticed, or confused with the more common wildflower Pitted stripeseed (*Piriqueta caroliniana*), which greatly resembles Carter's small-flowered flax, and is abundant at Coral Reef Commons. Knowing this, determined

searches were made in the appropriate areas to no avail. The closest natural population occurs at a county owned natural area roughly three (3) miles to the east. Never reported for the Richmond Pine Rockland Complex, it is possible that Carter's small-flowered flax has never occurred at Coral Reef Commons.

It is recommended that before any land alteration commences, that management of the NFC parcels begin. This includes both Fire & exotics management and possibly pine thinning. All management should take into account the presence of listed species. Initial control burns will be easier to implement before people occupy the area. Listed species should be searched for several weeks after fire management. Care should be maintained to not harm these populations during restoration activities. After restoration activities, populations of USFWS species should be searched and mapped.

Proposed development activities will inevitably impact the natural area at Coral Reef Commons. It is good that portions of the site are placed into a conservation easement, and these NFC's contain the majority of the USFWS plants on the site. It is important that management activities including the use of fire be a component of the long term management of these conservation easements. It should be assessed whether any additional healthy pine rockland can be incorporated into one of the existing NFC's.

## **References**

Bradley, K.A., S.W. Woodmansee, and G.D. Gann, 2000. Floristic Survey and Rare Species Assessment of the Non-County Owned Properties In the Richmond Pine Rocklands. Report Submitted to Miami-Dade County Department of Resources Management. The Institute For Regional Conservation, Miami, FL.

Gann, G.D., K.A. Bradley, and S.W. Woodmansee. 2002. Rare Plants of South Florida: Their History, Conservation, and Restoration. Institute for Regional Conservation. Miami, Florida.

Wunderlin, R.P. and B.F. Hansen. 2011. Guide to the Vascular Plants of Florida, Third Edition. University Presses of Florida. Gainesville, FL.

## APPENDIX A

### GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES FOR FEDERALLY LISTED, PROPOSED, AND CANDIDATE PLANTS

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed, and candidate plants, and describes minimum standards for reporting results. The U.S. Fish and Wildlife Service (Service) will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed, or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigators should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitats. If access to reference populations is not available, investigators should study specimens from local herbaria.
3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.
4. Report results of botanical field inventories that include the following:
  - a. Surveyor names, survey dates and survey methodologies.
  - b. A description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of

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environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.

- c. A map or aerial photographs of project locations showing scale, orientation, project boundaries, parcel size, and map quadrangle name.
- d. A representative list of all vascular plants occurring on the project site for each habitat type.
- e. Current and historic land uses of the habitats and degree of site alteration.

- f. Presence of target species off site on adjacent parcels, if known.
- g. An assessment of the biological significance or ecological quality of the project site in a local and regional context.

5. If target species are found, report the results, including the following:

- a. A map or aerial photographs showing federally listed, proposed, and candidate species distribution as they relate to the proposed project.
- b. If target species are associated with wetlands, describe the direction and integrity of flow of hydrology. If target species are affected by adjacent off-site hydrological influences, describe these factors.
- c. Describe target species phenology and microhabitat, and an estimate of the number of individuals of each target species per unit area. Identify areas of high, medium and low density of target species over the project site, and provide acres or square feet of occupied habitat of target species. Investigators should provide color slides or photos of target species or representative habitats to support information or descriptions contained in reports.
- d. The degree of impacts of the proposed project as it relates to occupied and potential unoccupied habitat.

6. Document findings of target species by completing field report and submit to: Dave

Bender, U.S. Fish and Wildlife Service, South Florida Ecological Services Office, 1339

20th Street, Vero Beach, FL 32960; also submit report to the Florida Natural Areas Coral Reef Commons Floristic Inventory and Rare Plant Assessment, Woodmansee, 2014

Inventory, 1018 Thomasville Road, Suite 200-C, Tallahassee, Florida 32303.

7. Report as an addendum to the original survey any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than 3 years from the current date of project proposal submission will likely need additional surveys.
  
9. Adverse conditions may prevent investigators from determining presence or identifying some target species in potential habitats of target species. Disease, drought, or herbivory may preclude the presence or identification of target species in any year. Additional botanical inventories in subsequent years may be required if adverse conditions occur in potential habitats.

# Federally Listed and Candidate Plants

## Miami-Dade Pine Rocklands

### Documented on RAM parcel

|                |                                                          |            |
|----------------|----------------------------------------------------------|------------|
| Tiny polygala  | ( <i>Polygala smallii</i> )                              | Endangered |
| Deltoid spurge | ( <i>Chamaesyce deltoidea</i><br><i>ssp. deltoidea</i> ) | Endangered |

### Proposed Critical Habitat located on RAM parcel

|                              |                                              |                          |
|------------------------------|----------------------------------------------|--------------------------|
| Carter's small-flowered flax | ( <i>Linum carteri</i> var. <i>carteri</i> ) | Proposed Endangered w/CH |
| Florida Brickell bush        | ( <i>Brickelia mosieri</i> )                 | Proposed Endangered w/CH |

### Documented in adjacent parcels (may occur on RAM parcel)

|                      |                              |            |
|----------------------|------------------------------|------------|
| Small's milkpea      | ( <i>Galactia smallii</i> )  | Endangered |
| Crenulate lead-plant | ( <i>Amorpha crenulata</i> ) | Endangered |

|                            |                                                                 |           |
|----------------------------|-----------------------------------------------------------------|-----------|
| Sand flax                  | <i>(Linum arenicola)</i>                                        | Candidate |
| Blodgett's silver bush     | <i>(Argythamnia blodgettii)</i>                                 | Candidate |
| Florida pineland crabgrass | <i>(Digitaria pauciflora)</i>                                   | Candidate |
| Florida prairie clover     | <i>(Dalea carthagenensis var. floridana)</i>                    | Candidate |
| Everglades bully           | <i>(Sideroxylon reclinatum</i><br><i>ssp. austrofloridense)</i> | Candidate |

APPENDIX B

Vascular Plants of Coral Reef Commons excluding the University of Miami Site, Miami-Dade County, Florida

| Date<br>(if blank, not recorded in 2014) | Group        | Family          | Scientific Name          | Common Name          | Reference | Native Status | Pine Rockland | Disturbed Upland | Historic Marl Prairie | Rockland Hammock |
|------------------------------------------|--------------|-----------------|--------------------------|----------------------|-----------|---------------|---------------|------------------|-----------------------|------------------|
| 9/26/2014                                | Monocot      | Cyperaceae      | Abildgaardia ovata       | Flatspike sedge      | i         | N             |               | x                | x                     |                  |
| 9/28/2014                                | Dicot        | Fabaceae        | Abrus precatorius        | Rosary-pea           | *         | E             |               | x                |                       |                  |
| 9/26/2014                                | Dicot        | Fabaceae        | Acacia auriculiformis    | Earleaf acacia       | i         | E             | x             | x                |                       |                  |
|                                          | <b>Dicot</b> | <b>Fabaceae</b> | <b>Acacia farnesiana</b> | <b>Sweet acacia</b>  | <b>i</b>  | <b>N</b>      |               |                  |                       |                  |
| 9/26/2014                                | Dicot        | Euphorbiaceae   | Acalypha chamaedrifolia  | Three-seeded mercury | i         | N             | x             | x                |                       |                  |
| 9/26/2014                                | Dicot        | Apocynaceae     | Aclepias tuberosa        | Butterflyweed        | i         | N             | x             |                  |                       |                  |
| 10/10/2014                               | Pteridophyte | Pteridaceae     | Acrostichum danaeifolium | Giant leatherfern    | i         | N             |               |                  |                       | x                |
| 9/26/2014                                | Dicot        | Fabaceae        | Aeschynomene viscidula   | Sticky joint-vetch   | i         | N             | x             | x                |                       |                  |
| 9/26/2014                                | Dicot        | Orobanchaceae   | Agalinis fasciculata     | Beach false foxglove | i         | N             | x             | x                |                       |                  |
| 9/26/2014                                | Monocot      | Agavaceae       | Agave sisalana           | Century plant        | *         | E             |               | x                |                       |                  |
| 9/26/2014                                | Dicot        | Asteraceae      | Ageratum conyzoides      | Tropical whiteweed   | *         | E             | x             | x                |                       |                  |
| 9/26/2014                                | Dicot        | Asteraceae      | Ageratum houstonianum    | Bluemink             | *         | E             |               | x                |                       |                  |
| 9/27/2014                                | Dicot        | Apocynaceae     | Alstonia macrophylla     | Deviltree            | i         | E             | x             | x                |                       | x                |
| 9/26/2014                                | Dicot        | Fabaceae        | Alysicarpus vaginalis    | White moneywort      | i         | E             | x             | x                |                       |                  |

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|            |              |                      |                                       |                           |          |          |   |   |   |   |
|------------|--------------|----------------------|---------------------------------------|---------------------------|----------|----------|---|---|---|---|
|            | <b>Dicot</b> | <b>Amaranthaceae</b> | <b>Amaranthus viridis</b>             | <b>Slender amaranth</b>   | <b>i</b> | <b>E</b> |   |   |   |   |
| 9/26/2014  | Dicot        | Asteraceae           | Ambrosia artemisiifolia               | Common ragweed            | i        | N        |   | x |   |   |
|            | <b>Dicot</b> | <b>Vitaceae</b>      | <b>Ampelopsis arborea</b>             | <b>Peppervine</b>         | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/26/2014  | Monocot      | Poaceae              | Andropogon glomeratus var. pumilus    | Common bushy bluestem     | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot      | Poaceae              | Andropogon longiberbis                | Hairy bluestem            | i        | N        | x |   |   |   |
| 9/26/2014  | Monocot      | Poaceae              | Andropogon ternarius                  | Splitbeard bluestem       | i        | N        | x |   | x |   |
| 9/27/2014  | Monocot      | Poaceae              | Andropogon tracyi                     | Tracy's bluestem          | *        | N        |   | x |   |   |
| 9/26/2014  | Monocot      | Poaceae              | Andropogon virginicus                 | Broomsedge bluestem       | *        | N        |   | x | x |   |
| 9/26/2014  | Pteridophyte | Schizaceae           | Anemia adiantifolia                   | Pine fern                 | i        | N        | x | x | x | x |
| 9/26/2014  | Dicot        | Apocynaceae          | Angadenia berteroi                    | Pineland golden trumpet   | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot        | Myrsinaceae          | Ardisia elliptica                     | Shoe-button               | i        | N        | x | x | x | x |
| 9/26/2014  | Monocot      | Poaceae              | Aristida beyrichiana                  | Southern wiregrass        | i        | N        | x |   |   |   |
| 9/26/2014  | Monocot      | Poaceae              | Aristida purpurascens var. tenuispica | Hillsborough threeawn     | i        | N        | x | x | x |   |
|            | <b>Dicot</b> | <b>Apocynaceae</b>   | <b>Asclepias viridis</b>              | <b>Green antelopehorn</b> | <b>i</b> | <b>N</b> |   |   |   |   |
| 10/10/2014 | Dicot        | Acanthaceae          | Asystasia gangetica                   | Chinese violet            | *        | A        |   | x |   |   |
| 10/10/2014 | Monocot      | Poaceae              | Axonopus furcatus                     | Big carpetgrass           | *        | N        | x |   |   |   |
| 9/26/2014  | Dicot        | Malvaceae            | Ayenia euphrasiifolia                 | Eyebright ayenia          | i        | N        | x | x | x |   |
| 10/10/2014 | Dicot        | Asteraceae           | Baccharis glomeruliflora              | Silverling                | i        | N        |   |   | x |   |
|            | <b>Dicot</b> | <b>Asteraceae</b>    | <b>Baccharis halimifolia</b>          | <b>Groundsel tree</b>     | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/28/2014  | Dicot        | Fabaceae             | Bauhinia xblakeana                    | Hong Kong orchidtree      | *        | CE       |   | x |   |   |
| 9/26/2014  | Dicot        | Asteraceae           | Bidens alba var. radiata              | Spanish needles           | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot      | Orchidaceae          | Bletia purpurea                       | Pinepink                  | *        | N        |   |   | x |   |
| 9/28/2014  | Monocot      | Poaceae              | Bothriochloa pertusa                  | Pitted beardgrass         | i        | E        |   | x |   |   |

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|------------|--------------|----------------------|-------------------------------------|-------------------------------|----------|----------|---|---|---|---|
| 9/26/2014  | Dicot        | Orobanchaceae        | Buchnera americana                  | American bluehearts           | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot      | Cyperaceae           | Bulbostylis ciliatifolia            | Densetuft hairsedge           | i        | N        | x |   |   |   |
| 9/26/2014  | Dicot        | Burseraceae          | Bursera simaruba                    | Gumbo Limbo                   | i        | N        | x | x |   | x |
| 9/26/2014  | Dicot        | Malpighiaceae        | Byrsonima lucida                    | Locustberry                   | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot        | Lamiaceae            | Callicarpa americanum               | American beautyberry          | i        | N        | x | x |   | x |
| 10/10/2014 | Pteridophyte | Polypodiaceae        | Campyloneurum phyllitidis           | Long strap fern               | *        | N        |   |   |   | x |
| 9/28/2014  | Dicot        | Fabaceae             | Canavalia brasiliensis              | Brazilian jackbean            | i        | N        |   | x |   | x |
| 11/4/2014  | Dicot        | Lamiaceae            | Cantinoa mutabilis                  | Tropical bushmint             | *        | E        |   |   | x |   |
| 9/27/2014  | Dicot        | Caricaceae           | Carica papaya                       | Papaya                        | *        | N        |   |   |   | x |
| 9/26/2014  | Dicot        | Lauraceae            | Cassytha filiformis                 | Lovevine                      | i        | N        | x | x | x |   |
| 9/27/2014  | Dicot        | Casurainaceae        | Casuarina equisetifolia             | Australian pine               | i        | E        | x | x | x |   |
| 11/4/2014  | Dicot        | Apocynaceae          | Catharanthus roseus                 | Madagascar periwinkle         | i        | E        |   | x |   |   |
| 9/26/2014  | Monocot      | Poaceae              | Cenchrus gracillimus                | Slender sandbur               | i        | N        | x |   |   |   |
| 9/26/2014  | Monocot      | Poaceae              | Cenchrus spinifex                   | Coastal sandbur               | *        | N        | x | x |   |   |
| 9/26/2014  | Dicot        | Fabaceae             | Centrosema virginianum              | Spurred butterfly-pea         | i        | N        | x | x |   |   |
|            | <b>Dicot</b> | <b>Rubiaceae</b>     | <b>Cephalanthus occidentalis</b>    | <b>Common buttonbush</b>      | <b>i</b> | <b>N</b> |   |   |   |   |
|            | <b>Dicot</b> | <b>Solanaceae</b>    | <b>Cestrum diurnum</b>              | <b>Dayflowering jessamine</b> | <b>i</b> | <b>E</b> |   |   |   |   |
| 9/26/2014  | Dicot        | Fabaceae             | Chamaecrista deeringiana            | Deering partridge-pea         | i        | N        | x | x |   |   |
| 9/28/2014  | Dicot        | Fabaceae             | Chamaecrista nictitans ssp. aspera  | Hairy partridge-pea           | i        | N        |   | x | x |   |
| 9/26/2014  | Dicot        | Euphorbiaceae        | Chamaesyce blodgettii               | Limestone sandmat             | *        |          |   | x |   |   |
| 9/26/2014  | Dicot        | Euphorbiaceae        | Chamaesyce conferta                 | Everglades sandmat            | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot        | Euphorbiaceae        | Chamaesyce deltoidea ssp. deltoidea | Wedge sandmat                 | i        | N        | x |   |   |   |
|            | <b>Dicot</b> | <b>Euphorbiaceae</b> | <b>Chamaesyce hirta</b>             | <b>Hairy spurge</b>           | <b>i</b> | <b>N</b> |   |   |   |   |

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|            |         |                  |                                 |                         |   |    |   |   |   |   |
|------------|---------|------------------|---------------------------------|-------------------------|---|----|---|---|---|---|
| 9/26/2014  | Dicot   | Euphorbiaceae    | Chamaesyce hypericifolia        | Eyebane                 | i | N  |   | x | x |   |
| 9/28/2014  | Dicot   | Euphorbiaceae    | Chamaesyce lasiocarpa           | Roadside sandmat        | i | E  |   | x |   |   |
| 9/26/2014  | Dicot   | Euphorbiaceae    | Chamaesyce mendezii             | Mendez's sandmat        | i | N  |   | x |   |   |
| 9/28/2014  | Dicot   | Euphorbiaceae    | Chamaesyce ophthalmica          | Florida hammock sandmat | * | N  |   | x |   |   |
| 9/26/2014  | Dicot   | Asteraceae       | Chaptalia albicans              | White sunbonnets        | i | N  | x | x | x | x |
| 9/27/2014  | Dicot   | Rubiaceae        | Chiococca alba                  | Hammock snowberry       | i | N  |   |   | x | x |
| 9/26/2014  | Dicot   | Rubiaceae        | Chiococca parvifolia            | Pineland snowberry      | i | N  | x | x | x |   |
| 9/26/2014  | Dicot   | Asteraceae       | Chromolaena odorata             | Jack-In-The-Bush        | i | N  | x | x | x | x |
| 9/26/2014  | Dicot   | Chrysobalanaceae | Chrysobalanus icaco             | Coco-plum               | i | N  | x | x |   | x |
| 9/27/2014  | Dicot   | Asteraceae       | Cirsium horridulum              | Purple thistle          | i | N  | x | x | x |   |
| 9/28/2014  | Dicot   | Vitaceae         | Cissus verticillata             | Possum-grape            | * | N  |   | x |   |   |
| 10/10/2014 | Monocot | Cyperaceae       | Cladium jamaicense              | Sawgrass                | i | N  |   |   | x | x |
| 9/28/2014  | Dicot   | Clusiaceae       | Clusia rosea                    | Pitchapple              | * | E* | x | x |   | x |
| 9/26/2014  | Dicot   | Euphorbiaceae    | Cnidioscolus stimulosus         | Tread-softly            | i | N  | x | x |   |   |
| 9/27/2014  | Dicot   | Polygonaceae     | Coccoloba diversifolia          | Pigeonplum              | * | N  | x |   |   |   |
| 9/26/2014  | Dicot   | Polygonaceae     | Coccoloba uvifera               | Seagrape                | i | E* | x |   |   |   |
| 9/26/2014  | Monocot | Arecaceae        | Coccothrinax argentata          | Silver palm             | i | N  | x | x | x |   |
| 9/27/2014  | Monocot | Commelinaceae    | Commelina diffusa var. gigas    | Climbing dayflower      | * | E  |   | x |   |   |
| 9/26/2014  | Monocot | Commelinaceae    | Commelina erecta                | Whitemouth dayflower    | i | N  | x |   |   |   |
| 10/10/2014 | Dicot   | Asteraceae       | Conoclinium coelestinum         | Blue mistflower         | * | N  |   |   | x |   |
| 9/27/2014  | Dicot   | Asteraceae       | Conyza canadensis               | Canadian horseweed      | i | N  | x | x |   |   |
| 9/26/2014  | Dicot   | Celastraceae     | Crossopetalum ilicifolium       | Quailberry              | i | N  | x | x | x |   |
| 11/4/2014  | Dicot   | Fabaceae         | Crotalaria pallida var. obovata | Smooth rattlebox        | i | E  | x |   |   |   |
| 9/26/2014  | Dicot   | Fabaceae         | Crotalaria pumila               | Low rattlebox           | i | N  | x | x |   |   |
| 9/26/2014  | Dicot   | Fabaceae         | Crotalaria rotundifolia         | Rabbitbells             | i | N  | x | x |   | x |

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|            |                |                   |                                          |                              |          |          |   |   |   |  |
|------------|----------------|-------------------|------------------------------------------|------------------------------|----------|----------|---|---|---|--|
| 9/26/2014  | Dicot          | Fabaceae          | Crotalaria spectabilis                   | Showy rattlebox              | i        | E        |   | x |   |  |
| 9/26/2014  | Dicot          | Euphorbiaceae     | Croton glandulosus                       | Vente conmigo                | i        | N        | x | x | x |  |
| 9/26/2014  | Dicot          | Euphorbiaceae     | Croton linearis                          | Pineland croton              | i        | N        | x | x | x |  |
| 9/26/2014  | Dicot          | Apocynaceae       | Cynanchum blodgettii                     | Blodgett's swallowwort       | i        | N        | x | x | x |  |
|            | <b>Monocot</b> | <b>Poaceae</b>    | <b>Cynodon dactylon</b>                  | <b>Bermuda grass</b>         | <b>i</b> | <b>E</b> |   |   |   |  |
|            | <b>Monocot</b> | <b>Cyperaceae</b> | <b>Cyperus compressus</b>                | <b>Poorland flatsedge</b>    | <b>i</b> | <b>N</b> |   |   |   |  |
| 9/26/2014  | Monocot        | Cyperaceae        | Cyperus croceus                          | Baldwin's flatsedge          | i        | N        | x | x |   |  |
|            | <b>Monocot</b> | <b>Cyperaceae</b> | <b>Cyperus filiculmis</b>                | <b>Wiry flatsedge</b>        | <b>i</b> | <b>N</b> |   |   |   |  |
|            | <b>Monocot</b> | <b>Cyperaceae</b> | <b>Cyperus ligularis</b>                 | <b>Swamp flatsedge</b>       | <b>i</b> | <b>N</b> |   |   |   |  |
| 9/26/2014  | Monocot        | Orchidaceae       | Cyrtopodium flavum                       | Parana cowhorn orchid        | *        | E        | x | x | x |  |
| 9/27/2014  | Monocot        | Poaceae           | Dactyloctenium aegyptium                 | Crow's-foot grass            | i        | E        |   | x |   |  |
| 9/26/2014  | Dicot          | Fabaceae          | Dalbergia sissoo                         | Indian rosewood              | i        | N        | x | x |   |  |
| 9/26/2014  | Dicot          | Fabaceae          | Dalea carnea var. carnea                 | Whitetassels                 | i        | N        | x |   |   |  |
| 9/27/2014  | Dicot          | Fabaceae          | Delonix regia                            | Royal poinciana              | *        | E        |   | x |   |  |
| 9/26/2014  | Dicot          | Fabaceae          | Desmodium triflorum                      | Threeflower ticktrefoil      | i        | E        | x | x |   |  |
| 9/26/2014  | Dicot          | Fabaceae          | Desmodium marilandicum                   | Smooth ticktrefoil           | i        | N        | x |   |   |  |
| 9/26/2014  | Dicot          | Fabaceae          | Desmodium incanum                        | Beggar's-ticks               | i        | E        | x | x |   |  |
| 9/27/2014  | Dicot          | Fabaceae          | Desmodium tortuosum                      | Dixie ticktrefoil            | i        | E        |   | x |   |  |
| 9/26/2014  | Monocot        | Poaceae           | Dichanthelium aciculare                  | Needleleaf witch grass       | i        | N        | x | x |   |  |
| 10/10/2014 | Monocot        | Poaceae           | Dichanthelium dichotomum                 | Cypress witch grass          | *        | N        | x |   |   |  |
|            | <b>Monocot</b> | <b>Poaceae</b>    | <b>Dichanthelium erectifolium</b>        | <b>Erectleaf witch grass</b> | <b>i</b> | <b>N</b> |   |   |   |  |
| 9/26/2014  | Monocot        | Poaceae           | Dichanthelium ovale                      | Eggleaf witch grass          | i        | N        | x | x |   |  |
| 9/26/2014  | Monocot        | Poaceae           | Dichanthelium strigosum var. glabrescens | Roughhair witch grass        | i        | N        | x |   |   |  |
|            | <b>Monocot</b> | <b>Poaceae</b>    | <b>Digitaria ciliaris</b>                | <b>Southern crabgrass</b>    | <b>i</b> | <b>N</b> |   |   |   |  |

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|            |                |                   |                                                |                                   |          |          |   |   |   |   |
|------------|----------------|-------------------|------------------------------------------------|-----------------------------------|----------|----------|---|---|---|---|
|            | <b>Monocot</b> | <b>Poaceae</b>    | <b>Digitaria filiformis var. dolichophylla</b> | <b>Caribbean crabgrass</b>        | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Dicot          | Rubiaceae         | Diodea teres                                   | Rough buttonweed                  | i        | E        | x | x |   |   |
| 9/26/2014  | Dicot          | Acanthaceae       | Dyschoriste angusta                            | Rockland twinflower               | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot          | Apocynaceae       | Echites umbellata                              | Devil's potato                    | i        | N        | x | x | x |   |
|            | <b>Monocot</b> | <b>Poaceae</b>    | <b>Eleusine indica</b>                         | <b>Goosegrass</b>                 | <b>i</b> | <b>E</b> |   |   |   |   |
| 9/26/2014  | Dicot          | Asteraceae        | Emilia fosbergii                               | Red tassleflower                  | i        | E        | x | x | x |   |
|            | <b>Monocot</b> | <b>Poaceae</b>    | <b>Eragrostis ciliaris</b>                     | <b>Gophertail lovegrass</b>       | <b>i</b> | <b>E</b> |   |   |   |   |
| 9/26/2014  | Monocot        | Poaceae           | Eragrostis elliottii                           | Elliott's lovegrass               | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot        | Poaceae           | Eremochloa ophiuroides                         | Centipede grass                   | i        | E        |   | x |   |   |
| 9/27/2014  | Dicot          | Myrtaceae         | Eugenia uniflora                               | Surinam cherry                    | *        | E        |   |   |   | x |
| 11/4/2014  | Monocot        | Orchidaceae       | Eulophia graminea                              |                                   | *        | E        |   | x |   |   |
| 9/28/2014  | Dicot          | Asteraceae        | Eupatorium capillifolium                       | Dog-fennel                        | i        | N        |   | x | x |   |
|            | <b>Dicot</b>   | <b>Asteraceae</b> | <b>Eupatorium serotinum</b>                    | <b>Lateflowering thoroughwort</b> | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/26/2014  | Dicot          | Euphorbiaceae     | Euphorbia polyphylla                           | Pineland euphorbia                | i        | N        | x | x |   |   |
| 9/26/2014  | Monocot        | Poaceae           | Eustachys petraea                              | Common finger grass               | i        | N        | x | x | x |   |
| 9/27/2014  | Dicot          | Convolvulaceae    | Evolvulus sericeus                             | Silver dwarf morningglory         | i        | N        | x |   | x |   |
| 9/27/2014  | Dicot          | Moraceae          | Ficus aurea                                    | Strangler fig                     | *        | N        |   | x | x | x |
| 9/28/2014  | Dicot          | Moraceae          | Ficus benjamina                                | Weeping fig                       | *        | CE       |   | x |   |   |
| 9/26/2014  | Dicot          | Moraceae          | Ficus citrifolia                               | Shortleaf fig                     | i        | N        | x | x | x | x |
| 9/28/2014  | Dicot          | Moraceae          | Ficus drupacea                                 | Mysore fig                        | *        | CE       |   | x |   |   |
| 9/26/2014  | Monocot        | Cyperaceae        | Fimbristylis cymosa                            | Hurricane sedge                   | i        | N        |   | x |   |   |
| 9/27/2014  | Dicot          | Salicaceae        | Flacourtia indica                              | Governor's plum                   | i        | E        | x | x |   |   |
| 9/26/2014  | Dicot          | Asteraceae        | Flaveria linearis                              | Narrowleaf yellowtops             | i        | N        | x | x | x |   |
| 10/10/2014 | Dicot          | Oleaceae          | Forestiera segregata                           | Florida swamp privet              | *        | N        | x |   | x |   |

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|------------|----------------|-----------------------|-----------------------------------|------------------------------------|----------|----------|---|---|---|---|
| 9/26/2014  | Dicot          | Fabaceae              | Galactia pinetorum                | Pineland milkpea                   | i        | N        | x | x |   |   |
| 9/27/2014  | Dicot          | Fabaceae              | Galactia volubilis                | Eastern milkpea                    | i        | N        |   | x | x |   |
|            | <b>Dicot</b>   | <b>Rubiaceae</b>      | <b>Galium hispidulum</b>          | <b>Coastal bedstraw</b>            | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Dicot          | Onagraceae            | Gaura angustifolia                | Southern beeblossum                | *        | N        |   | x |   |   |
| 9/26/2014  | Dicot          | Rubiaceae             | Guettarda scabra                  | Rough velvetseed                   | i        | N        | x | x |   |   |
| 9/28/2014  | Monocot        | Orchidaceae           | Habenaria quinqueseta             | Longhorn false reinorchid          | *        | N        | x |   |   |   |
| 9/27/2014  | Dicot          | Boraginaceae          | Heliotropium polyphyllum          | Pineland heliotrope                | i        | N        |   | x | x |   |
| 9/27/2014  | Dicot          | Asteraceae            | Hieracium megacephalon            | Coastal Plain hawkweed             | i        | N        | x |   |   |   |
|            | <b>Monocot</b> | <b>Amaryllidaceae</b> | <b>Hymenocallis palmeri</b>       | <b>Alligatorlily</b>               | <b>i</b> | <b>N</b> |   |   |   |   |
| 10/10/2014 | Dicot          | Clusiaceae            | Hypericum hypericoides            | St. Andrew's-cross                 | *        | N        |   |   | x |   |
|            | <b>Monocot</b> | <b>Hypoxidaceae</b>   | <b>Hypoxis sessilis</b>           | <b>Glossyseed yellow stargrass</b> | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Dicot          | Aquifoliaceae         | Ilex cassine                      | Dahoon holly                       | *        | N        |   |   | x | x |
| 11/4/2014  | Monocot        | Poaceae               | Imperata brasiliensis             | Brazilian satintail                | *        | N        | x |   |   |   |
| 9/27/2014  | Dicot          | Fabaceae              | Indigofera miniata var. floridana | Florida coastal indigo             | i        | N        |   | x |   |   |
| 9/27/2014  | Dicot          | Fabaceae              | Indigofera spicata                | Creeping indigo                    | i        | E        |   | x |   |   |
|            | <b>Dicot</b>   | <b>Fabaceae</b>       | <b>Indigofera suffruticosa</b>    | <b>Shrub indigo</b>                | <b>i</b> | <b>E</b> |   |   |   |   |
| 9/27/2014  | Dicot          | Convolvulaceae        | Ipomoea hederifolia               | Scarletcreeper                     | *        | N        |   | x |   |   |
| 9/28/2014  | Dicot          | Convolvulaceae        | Ipomoea indica                    | Oceanblue morning glory            | *        | N        |   | x |   |   |
| 9/27/2014  | Dicot          | Convolvulaceae        | Ipomoea microdactyla              | Man-in-the-ground                  | i        | N        |   | x |   |   |
|            | <b>Dicot</b>   | <b>Convolvulaceae</b> | <b>Ipomoea tenuissima</b>         | <b>Rockland morning glory</b>      | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/28/2014  | Dicot          | Convolvulaceae        | Ipomoea triloba                   | Littlebell                         | *        | E        |   | x |   |   |
| 9/28/2014  | Dicot          | Rubiaceae             | Ixora coccinea                    | Scarlet jungleflame                | *        | CE       |   | x |   |   |
| 9/26/2014  | Dicot          | Convolvulaceae        | Jacquemontia curtisii             | Pineland clustervine               | i        | N        | x | x | x |   |
| 9/28/2014  | Dicot          | Crassulaceae          | Kalanchoe daigremontiana          | Devil's backbone                   | *        | E        |   | x |   |   |

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|------------|---------|------------------|----------------------------------------|---------------------------|---|----|---|---|---|---|
| 9/28/2014  | Dicot   | Bignoniaceae     | Kigelia africana                       | Sausagetree               | * | CE |   | x |   |   |
| 9/26/2014  | Dicot   | Verbenaceae      | Lantana camara                         | Shrubverbena              | i | E  | x | x |   |   |
| 9/26/2014  | Dicot   | Verbenaceae      | Lantana depressa var. depressa         | Pineland shrubverbena     | i | N  | x | x |   |   |
| 9/26/2014  | Dicot   | Verbenaceae      | Lantana involucrata                    | Wild-sage                 | i | N  | x | x | x |   |
| 10/10/2014 | Dicot   | Cistaceae        | Lechea sessiliflora                    | Pineland pinweed          | i | N  | x |   |   |   |
| 9/27/2014  | Dicot   | Fabaceae         | Leucaena leucocephala                  | White leadtrees           | i | E  |   | x | x |   |
| 9/27/2014  | Dicot   | Asteraceae       | Liatris gracilis                       | Slender gayfeather        | i | N  | x |   |   |   |
| 9/26/2014  | Dicot   | Asteraceae       | Liatris tenuifolia var. tenuifolia     | Shortleaf gayfeather      | i | N  | x |   |   |   |
| 9/26/2014  | Dicot   | Chrysobalanaceae | Licania michauxii                      | Gopher apple              | i | N  | x | x |   |   |
| 9/28/2014  | Monocot | Ruscaceae        | Liriope muscari                        | Big blue lilyturf         | * | CE |   | x |   |   |
| 11/4/2014  | Dicot   | Ericaceae        | Lyonia fruticosa                       | Coastal Plain staggerbush | i | N  | x |   |   |   |
| 9/28/2014  | Dicot   | Fabaceae         | Lysiloma latisiliquum                  | Wild-tamarind             | i | N  | x | x |   |   |
| 9/26/2014  | Dicot   | Fabaceae         | Macroptilium lathyroides               | Wild-bean                 | i | E  |   | x |   |   |
| 9/28/2014  | Dicot   | Plantaginaceae   | Mecardonia acuminata ssp. peninsularis | Axillflower               | i | N  |   | x | x |   |
| 9/27/2014  | Dicot   | Fabaceae         | Medicago lupulina                      | Black medic               | * | E  |   |   |   | x |
| 9/27/2014  | Dicot   | Myrtaceae        | Melaleuca quinquenervia                | Cajeput tree              | * | E  |   | x |   |   |
| 9/26/2014  | Dicot   | Asteraceae       | Melanthera parvifolia                  | Black anthers             | * | N  | x | x |   |   |
| 9/26/2014  | Monocot | Poaceae          | Melinis repens                         | Rose Natalgrass           | i | E  | x | x |   |   |
| 9/27/2014  | Dicot   | Cucurbitaceae    | Melothria pendula                      | Creeping cucumber         | * | N  |   |   |   | x |
| 9/26/2014  | Dicot   | Convolvulaceae   | Merremia dissecta                      | Baby woodrose             | i | N  | x | x |   |   |
| 9/27/2014  | Dicot   | Convolvulaceae   | Merremia tuberosa                      | Yellow-morningglory       | * | E  |   | x |   |   |
| 9/26/2014  | Dicot   | Anacardiaceae    | Metopium toxiferum                     | Poisonwood                | i | N  | x | x | x | x |

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|------------|----------------|------------------------|------------------------------|--------------------------|----------|----------|---|---|---|---|
| 10/10/2014 | Dicot          | Asteraceae             | Mikania scandens             | Climbing hempweed        | i        | N        |   |   |   | x |
| 9/27/2014  | Dicot          | Cucurbitaceae          | Momordica charantia          | Wild balsam-pear         | i        | N        |   |   |   | x |
| 9/26/2014  | Dicot          | Rubiaceae              | Morinda royoc                | Yellowroot               | i        | N        | x | x | x | x |
| 9/26/2014  | Dicot          | Myrtaceae              | Mosiera longipes             | Longstalked-stopper      | i        | N        | x | x |   |   |
| 9/27/2014  | Monocot        | Poaceae                | Muhlenbergia capillaris      | Muhlygrass               | i        | N        | x | x | x |   |
| 9/28/2014  | Monocot        | Musaceae               | Musa xparadisiaca            | Common banana            | i        | CE       |   | x |   |   |
| 9/26/2014  | Dicot          | Myricaceae             | Myrica cerifera              | Wax myrtle               | i        | N        | x | x | x | x |
| 9/26/2014  | Dicot          | Myrsinaceae            | Myrsine cubana               | Myrsine                  | i        | N        | x | x | x | x |
|            | <b>Dicot</b>   | <b>Hydrophyllaceae</b> | <b>Nama jamaicense</b>       | <b>Jamaicanweed</b>      | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Pteridophyte   | Nephrolepidaceae       | Nephrolepis exaltata         | Wild Boston fern         | i        | N        |   |   |   | x |
| 9/27/2014  | Pteridophyte   | Nephrolepidaceae       | Nephrolepis multiflora       | Asian sword fern         | i        | E        |   | x | x | x |
| 9/28/2014  | Dicot          | Fabaceae               | Neptunia pubescens           | Tropical-puff            | i        | N        |   | x |   |   |
| 9/26/2014  | Monocot        | Poaceae                | Neyraudia reynaudiana        | Burma reed               | i        | E        | x | x |   |   |
| 9/27/2014  | Monocot        | Orchidaceae            | Oeceoclades maculata         | Monk orchid              | i        | E        |   |   |   | x |
| 9/26/2014  | Dicot          | Cactaceae              | Opuntia humifusa             | Pricklypear              | i        | N        | x |   |   |   |
|            | <b>Dicot</b>   | <b>Oxalidaceae</b>     | <b>Oxalis corniculata</b>    | <b>Lady's-sorrel</b>     | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/28/2014  | Monocot        | Poaceae                | Panicum maximum              | Guinea grass             | *        | E        |   | x |   |   |
|            | <b>Monocot</b> | <b>Poaceae</b>         | <b>Panicum virgatum</b>      | <b>Switch grass</b>      | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Dicot          | Vitaceae               | Parthenocissus quinquefolia  | Virginia-creeper         | i        | N        | x | x |   | x |
| 9/26/2014  | Monocot        | Poaceae                | Paspalum caespitosum         | Blue paspalum            | i        | N        | x | x | x |   |
|            | <b>Monocot</b> | <b>Poaceae</b>         | <b>Paspalum monostachyum</b> | <b>Gulfdune paspalum</b> | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Monocot        | Poaceae                | Paspalum notatum             | Bahia grass              | i        | E        |   | x |   |   |
| 9/26/2014  | Dicot          | Passifloraceae         | Passiflora suberosa          | Corksystem passionflower | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot          | Asteraceae             | Pectis glaucescens           | Tea-blinkum              | i        | N        | x | x |   |   |
|            | <b>Monocot</b> | <b>Poaceae</b>         | <b>Pennisetum purpureum</b>  | <b>Napier grass</b>      | <b>i</b> | <b>E</b> |   |   |   |   |

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|            | <b>Dicot</b> | <b>Apocynaceae</b> | <b>Pentalinon luteum</b>                  | <b>Wild allamanda</b>           | <b>i</b> | <b>N</b> |   |   |   |   |
|------------|--------------|--------------------|-------------------------------------------|---------------------------------|----------|----------|---|---|---|---|
| 9/27/2014  | Dicot        | Lauraceae          | Persea palustris                          | Swamp bay                       | i        | N        |   |   | x | x |
| 9/28/2014  | Monocot      | Araceae            | Philodendron bipinnatifidum               | Tree philodendron               | *        | CE       |   | x |   |   |
| 9/26/2014  | Pteridophyte | Polypodiaceae      | Phlebodium aureum                         | Golden polypody                 | i        | N        | x |   | x | x |
| 9/26/2014  | Dicot        | Verbenaceae        | Phyla nodiflora                           | Frog fruit                      | i        | N        | x | x |   |   |
| 9/26/2014  | Dicot        | Phyllanthaceae     | Phyllanthus caroliniensis ssp. saxicola   | Rock Carolina leafflower        | i        | N        |   |   | x |   |
| 9/26/2014  | Dicot        | Phyllanthaceae     | Phyllanthus pentaphyllus var. floridanus  | Florida five-petaled leafflower | i        | N        | x | x | x |   |
| 10/10/2014 | Dicot        | Solanaceae         | Physalis angustifolia                     | Coastal groundcherry            | *        | N        |   | x |   |   |
| 9/26/2014  | Dicot        | Solanaceae         | Physalis walteri                          | Walter's groundcherry           | i        | N        | x | x | x |   |
| 9/27/2014  | Dicot        | Phytolaccaceae     | Phytolacca americana                      | American pokeweed               | *        | N        |   |   |   | x |
| 9/26/2014  | Dicot        | Urticaceae         | Pilea microphylla                         | Artillery plant                 | *        | N        |   | x |   |   |
| 9/27/2014  | Dicot        | Lamiaceae          | Piloblephis rigida                        | Wild pennyroyal                 | i        | N        | x |   |   |   |
| 9/26/2014  | Gymnosperm   | Pinaceae           | Pinus elliottii                           | Slash pine                      | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot        | Turneraceae        | Piriqueta caroliniana                     | Pitted stripeseed               | i        | N        | x | x |   |   |
| 9/26/2014  | Dicot        | Asteraceae         | Pityopsis graminifolia                    | Narrowleaf silkgrass            | i        | N        | x | x | x |   |
| 10/10/2014 | Pteridophyte | Polypodiaceae      | Platyterium bifurcatum                    | Staghorn fern                   | *        | E        |   |   |   | x |
| 9/27/2014  | Pteridophyte | Polypodiaceae      | Pleopeltis polypodioides var. michauxiana | Resurrection fern               | i        | N        | x |   |   | x |
| 10/10/2014 | Dicot        | Asteraceae         | Pluchea baccharis                         | Rosy camphorweed                | i        | N        |   |   | x |   |
| 9/26/2014  | Dicot        | Asteraceae         | Pluchea caroliniana                       | Cure-for-all                    | i        | N        | x | x | x | x |
| 9/28/2014  | Dicot        | Apocynaceae        | Plumeria obtusa                           | Frangipanni                     | *        | CE       |   | x |   |   |
| 9/26/2014  | Dicot        | Euphorbiaceae      | Poinsettia cyathophora                    | Paintedleaf                     | i        | N        | x | x | x | x |
| 9/26/2014  | Dicot        | Euphorbiaceae      | Poinsettia heterophylla                   | Fiddler's spurge                | i        | N        |   | x |   |   |

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|------------|--------------|----------------------|-----------------------------------|------------------------|----------|----------|---|---|---|---|
| 9/26/2014  | Dicot        | Polygalaceae         | Polygala grandiflora              | Candyweed              | i        | N        | x | x | x |   |
| 9/27/2014  | Dicot        | Polygalaceae         | Polygala smallii                  | Small's milkwort       | ii       | N        | x |   |   |   |
| 9/26/2014  | Dicot        | Tetrachondraceae     | Polypremum procumbens             | Rustweed               | i        | N        | x | x |   |   |
|            | <b>Dicot</b> | <b>Portulacaceae</b> | <b>Portulaca oleracea</b>         | <b>Little hogweed</b>  | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/27/2014  | Dicot        | Myrtaceae            | Psidium guajava                   | Guava                  | *        | E        |   |   |   | x |
| 9/26/2014  | Pteridophyte | Psilotaceae          | Psilotum nudum                    | Whisk-fern             | i        | N        | x |   |   |   |
| 10/10/2014 | Dicot        | Rubiaceae            | Psychotria nervosa                | Shiny leaf wildcoffee  | *        | N        | x |   |   | x |
| 10/10/2014 | Dicot        | Rubiaceae            | Psychotria sulzneri               | Dull leaf wildcoffee   | i        | N        |   |   |   | x |
| 9/26/2014  | Pteridophyte | Dennstaedtiaceae     | Pteridium aquilinum var. caudatum | Lacy braken fern       | i        | N        | x | x |   |   |
| 9/26/2014  | Pteridophyte | Pteridaceae          | Pteris bahamensis                 | Bahama ladderbrake     | i        | N        | x | x | x |   |
| 9/26/2014  | Pteridophyte | Pteridaceae          | Pteris vittata                    | China brake            | i        | E        |   | x | x | x |
| 9/28/2014  | Pteridophyte | Pteridaceae          | Pteris xdelchampsii               | Delchamp's ladderbrake | *        | N        |   | x | x |   |
| 11/4/2014  | Dicot        | Asteraceae           | Pterocaulon pycnostachyum         | Blackroot              | i        | N        | x |   |   |   |
| 9/27/2014  | Monocot      | Arecaceae            | Ptychosperma elegans              | Solitaire palm         | *        | E        |   |   |   | x |
| 9/26/2014  | Dicot        | Fagaceae             | Quercus minima                    | Dwarf live oak         | i        | N        | x | x |   |   |
| 9/26/2014  | Dicot        | Fagaceae             | Quercus pumila                    | Running oak            | i        | N        | x | x |   |   |
| 9/26/2014  | Dicot        | Fagaceae             | Quercus virginiana                | Virginia live oak      | i        | N        | x | x |   | x |
| 9/26/2014  | Dicot        | Rubiaceae            | Randia aculeata                   | White Indigoberry      | i        | N        | x | x | x |   |
| 9/26/2014  | Dicot        | Anacardiaceae        | Rhus copallinum                   | Winged sumac           | i        | N        | x | x |   | x |
| 9/26/2014  | Dicot        | Fabaceae             | Rhynchosia cinerea                | Brownhair snoutbean    | i        | N        | x |   |   |   |
| 9/26/2014  | Dicot        | Fabaceae             | Rhynchosia minima                 | Least snoutbean        | i        | N        | x | x |   |   |
| 9/26/2014  | Dicot        | Fabaceae             | Rhynchosia reniformis             | Dollarleaf             | i        | N        | x | x |   |   |
| 9/26/2014  | Monocot      | Cyperaceae           | Rhynchospora colorata             | Starrush whitetop      | i        | N        |   | x | x |   |
| 9/27/2014  | Monocot      | Cyperaceae           | Rhynchospora divergens            | Spreading beaksedge    | i        | N        |   | x | x |   |

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|------------|----------------|--------------------|-----------------------------------------------|---------------------------------|----------|----------|---|---|---|---|
| 9/26/2014  | Monocot        | Cyperaceae         | Rhynchospora floridensis                      | Florida whitetop                | i        | N        | x | x |   |   |
| 9/26/2014  | Monocot        | Cyperaceae         | Rhynchospora grayi                            | Gray's beaksedge                | i        | N        | x |   |   |   |
| 10/10/2014 | Dicot          | Rubiaceae          | Richardia brasiliensis                        | Tropical Mexican clover         | *        | E        | x |   |   |   |
| 9/27/2014  | Dicot          | Rubiaceae          | Richardia grandiflora                         | Largeflower Mexican clover      | i        | E        | x | x |   |   |
| 10/10/2014 | Dicot          | Euphorbiaceae      | Ricinus communis                              | Castorbean                      | *        | E        |   |   |   | x |
| 9/28/2014  | Dicot          | Acanthaceae        | Ruellia blechum                               | Browne's wild petunia           | *        | E        |   | x |   |   |
|            | <b>Dicot</b>   | <b>Acanthaceae</b> | <b>Ruellia ciliatiflora</b>                   | <b>Hairyflower wild petunia</b> | <b>i</b> | <b>E</b> |   |   |   |   |
| 9/26/2014  | Dicot          | Acanthaceae        | Ruellia succulenta                            | Thickleaf wild petunia          | i        | N        | x | x |   |   |
| 9/26/2014  | Monocot        | Arecaceae          | Sabal palmetto                                | Cabbage palm                    | i        | N        | x | x | x | x |
|            | <b>Monocot</b> | <b>Poaceae</b>     | <b>Saccharum giganteum</b>                    | <b>Sugarcane plume grass</b>    | <b>i</b> | <b>N</b> |   |   |   |   |
| 9/26/2014  | Dicot          | Asteraceae         | Sachsia polycephala                           | Bahama sachsia                  | i        | N        | x | x |   |   |
| 9/27/2014  | Dicot          | Primulaceae        | Samolus ebracteatus                           | Water pimpernel                 | i        | N        |   | x | x |   |
| 9/26/2014  | Dicot          | Araliaceae         | Schefflera actinophylla                       | Australian umbrellatree         | i        | E        | x | x |   |   |
| 9/28/2014  | Dicot          | Araliaceae         | Schefflera arboricola                         | Dwarf umbrellatree              | *        | E        |   | x |   |   |
| 9/26/2014  | Dicot          | Anacardiaceae      | Schinus terebinthifolius                      | Brazilian pepper                | i        | E        | x | x | x | x |
| 9/26/2014  | Monocot        | Poaceae            | Schizachyrium gracile                         | Wire bluestem                   | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot        | Poaceae            | Schizachyrium rhizomatum                      | Rhizomatous bluestem            | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot        | Poaceae            | Schizachyrium sanguineum                      | Crimson bluestem                | i        | N        | x | x | x |   |
| 9/26/2014  | Monocot        | Cyperaceae         | Scleria ciliata var. ciliata                  | Fringed nutrush                 | i        | N        | x | x |   |   |
| 10/10/2014 | Dicot          | Fabaceae           | Senna obtusifolia                             | Sicklepod                       | *        | N        |   |   |   | x |
| 9/26/2014  | Monocot        | Arecaceae          | Serenoa repens                                | Saw palmetto                    | i        | N        | x |   |   |   |
| 9/26/2014  | Monocot        | Poaceae            | Setaria parviflora                            | Knotroot foxtail                | i        | N        |   | x |   |   |
| 9/26/2014  | Dicot          | Malvaceae          | Sida acuta                                    | Common fanpetals                | i        | N        | x | x |   |   |
|            | <b>Dicot</b>   | <b>Sapotaceae</b>  | <b>Sideroxylon reclinatum ssp. reclinatum</b> | <b>Recline Florida bully</b>    | <b>i</b> | <b>N</b> |   |   |   |   |

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|           |                |                    |                                     |                                  |           |          |   |   |   |   |
|-----------|----------------|--------------------|-------------------------------------|----------------------------------|-----------|----------|---|---|---|---|
| 9/26/2014 | Dicot          | Sapotaceae         | Sideroxylon salicifolium            | Willow-bustic                    | i         | N        | x | x | x | x |
| 9/26/2014 | Dicot          | Simaroubaceae      | Simarouba glauca                    | Paradisetree                     | *         | N        | x |   |   |   |
| 9/26/2014 | Monocot        | Smilacaceae        | Smilax auriculata                   | Earleaf greenbrier               | i         | N        | x | x | x | x |
| 9/27/2014 | Monocot        | Smilacaceae        | Smilax bona-nox                     | Saw greenbrier                   | i         | N        |   |   |   | x |
| 9/26/2014 | Monocot        | Smilacaceae        | Smilax havanensis                   | Havana greenbrier                | i         | N        | x | x |   |   |
|           | <b>Dicot</b>   | <b>Solanaceae</b>  | <b>Solanum americanum</b>           | <b>American nightshade</b>       | <b>i</b>  | <b>N</b> |   |   |   |   |
| 9/27/2014 | Dicot          | Asteraceae         | Solidago leavenworthii              | Giant goldenrod                  | i         | N        |   | x | x |   |
| 9/26/2014 | Dicot          | Asteraceae         | Solidago odora var. chapmanii       | Chapman's goldenrod              | i         | N        | x | x |   |   |
|           | <b>Dicot</b>   | <b>Asteraceae</b>  | <b>Solidago stricta</b>             | <b>Wand goldenrod</b>            | <b>i</b>  | <b>N</b> |   |   |   |   |
| 9/26/2014 | Monocot        | Poaceae            | Sorghastrum secundum                | Lopsided Indiangrass             | i         | N        | x | x |   |   |
| 9/26/2014 | Dicot          | Rubiaceae          | Spermacoce assurgens                | Woodland false buttonweed        | i         | N        | x | x | x | x |
| 9/26/2014 | Dicot          | Rubiaceae          | Spermacoce prostrata                | Prostrate false buttonweed       | i         | N        | x |   |   |   |
| 9/26/2014 | Dicot          | Rubiaceae          | Spermacoce terminalis               | Everglades Keys false buttonweed | i         | N        | x |   |   |   |
| 9/26/2014 | Dicot          | Rubiaceae          | Spermacoce verticillata             | Shrubby false buttonweed         | i         | E        | x | x | x |   |
| 9/27/2014 | Dicot          | Asteraceae         | Sphagneticola trilobata             | Creeping oxeye                   | i         | E        |   | x |   |   |
| 9/26/2014 | Dicot          | Loganiaceae        | Spigelia anthelmia                  | West Indian pinkroot             | i         | N        | x | x |   |   |
|           | <b>Monocot</b> | <b>Orchidaceae</b> | <b>Spiranthes torta</b>             | <b>Southern ladies tresses</b>   | <b>ii</b> | <b>N</b> |   |   |   |   |
| 9/26/2014 | Monocot        | Poaceae            | Sporobolus indicus var. pyramidalis | West Indian dropseed             | i         | E        |   | x |   |   |
| 9/26/2014 | Monocot        | Poaceae            | Sporobolus junceus                  | Pineywoods dropseed              | i         | N        | x |   |   |   |
| 9/26/2014 | Dicot          | Verbenaceae        | Stachytarpheta jamaicensis          | Blue porterweed                  | i         | N        |   | x |   |   |
| 9/26/2014 | Monocot        | Poaceae            | Stenotaphrum secundatum             | St. Augustine grass              | i         | E*       |   | x |   |   |
| 9/26/2014 | Dicot          | Euphorbiaceae      | Stillingia sylvatica                | Queensdelight                    | i         | N        | x | x |   |   |
| 9/26/2014 | Dicot          | Fabaceae           | Stylosanthes hamata                 | Pencilflower                     | i         | N        | x | x |   |   |

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|------------|--------------|------------------|------------------------------|-----------------------|---|----|---|---|---|---|
| 9/26/2014  | Dicot        | Meliaceae        | Swietenia mahagoni           | West Indian mahogany  | i | E* | x | x | x |   |
| 9/26/2014  | Dicot        | Asteraceae       | Symphyotrichum adnatum       | Clasping aster        | i | N  | x | x |   |   |
| 9/26/2014  | Dicot        | Asteraceae       | Symphyotrichum concolor      | Eastern silver aster  | i | N  | x |   |   |   |
| 9/28/2014  | Dicot        | Myrtaceae        | Syzygium cumini              | Jambolan-plum         | i | E  |   | x |   |   |
| 9/26/2014  | Dicot        | Fabaceae         | Tephrosia florida            | Florida hoarypea      | i | N  | x |   |   |   |
| 9/28/2014  | Dicot        | Combretaceae     | Terminalia catappa           | West Indian almond    | * | E  |   | x |   |   |
| 9/28/2014  | Dicot        | Combretaceae     | Terminalia muelleri          | Australian almond     | i | CE |   | x |   |   |
| 9/26/2014  | Dicot        | Melastomaceae    | Tetrazygia bicolor           | West Indian-lilac     | i | N  | x | x |   |   |
| 9/26/2014  | Pteridophyte | Thelypteridaceae | Thelypteris kunthii          | Southern shield fern  | i | N  | x | x |   | x |
| 9/26/2014  | Dicot        | Anacardiaceae    | Toxicodendron radicans       | Poison ivy            | i | N  | x | x |   | x |
| 9/28/2014  | Monocot      | Commelinaceae    | Tradescantia spathacea       | Oysterplant           | i | E  |   | x |   |   |
| 9/26/2014  | Dicot        | Euphorbiaceae    | Tragia saxicola              | Florida Keys noseburn | i | N  | x | x |   |   |
| 9/26/2014  | Dicot        | Euphorbiaceae    | Tragia urens                 | Wavyleaf noseburn     | i | N  | x |   |   |   |
| 9/28/2014  | Dicot        | Cannabaceae      | Trema lamarckiana            | West Indian trema     | * | N  |   | x |   |   |
| 9/26/2014  | Dicot        | Cannabaceae      | Trema micranthum             | Florida trema         | i | N  | x | x |   | x |
| 9/26/2014  | Dicot        | Asteraceae       | Tridax procumbens            | Brittleweed           | i | E  |   | x |   |   |
| 10/10/2014 | Dicot        | Turneraceae      | Turnera ulmifolia            | Yellow alder          | * | E  |   | x | x |   |
| 9/26/2014  | Dicot        | Ericaceae        | Vaccinium myrsinites         | Shiny blueberry       | i | N  | x |   |   |   |
| 9/27/2014  | Dicot        | Asteraceae       | Vernonia blodgettii          | Florida ironweed      | i | N  | x | x |   |   |
| 9/27/2014  | Dicot        | Vitaceae         | Vitis cinerea var. floridana | Florida grape         | i | N  |   | x |   | x |
| 9/27/2014  | Dicot        | Vitaceae         | Vitis rotundifolia           | Muscadine             | i | N  |   | x |   | x |
| 9/27/2014  | Pteridophyte | Vittariaceae     | Vittaria lineata             | Shoestring fern       | i | N  |   |   |   | x |
| 9/26/2014  | Dicot        | Malvaceae        | Waltheria indica             | Sleepy morning        | i | N  | x | x |   |   |
| 9/26/2014  | Monocot      | Agavaceae        | Yucca aloifolia              | Spanish bayonet       | * | E* |   | x |   |   |
| 9/26/2014  | Gymnosperm   | Zamiaceae        | Zamia integrifolia           | Coontie               | i | N  | x | x |   | x |

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|           |              |                      |                                                                                                                                                                                                                                                                                                                                                                                          |                       |          |          |  |   |  |  |
|-----------|--------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------|----------|--|---|--|--|
|           | <b>Dicot</b> | <b>Fabaceae</b>      | <b>Zornia bracteata</b>                                                                                                                                                                                                                                                                                                                                                                  | <b>Viperina</b>       | <b>i</b> | <b>N</b> |  |   |  |  |
| 9/26/2014 | Monocot      | Poaceae              | Zoysia tenuifolia                                                                                                                                                                                                                                                                                                                                                                        | Mascarene templegrass | i        | E        |  | x |  |  |
|           |              |                      |                                                                                                                                                                                                                                                                                                                                                                                          |                       |          |          |  |   |  |  |
|           |              |                      |                                                                                                                                                                                                                                                                                                                                                                                          |                       |          |          |  |   |  |  |
|           |              | <b>Native Status</b> |                                                                                                                                                                                                                                                                                                                                                                                          |                       |          |          |  |   |  |  |
|           |              | N =                  | Native to Florida                                                                                                                                                                                                                                                                                                                                                                        |                       |          |          |  |   |  |  |
|           |              | E =                  | Not Native to Florida                                                                                                                                                                                                                                                                                                                                                                    |                       |          |          |  |   |  |  |
|           |              | CE =                 | Cultivated Exotic                                                                                                                                                                                                                                                                                                                                                                        |                       |          |          |  |   |  |  |
|           |              | E* =                 | Native to Florida, not native to the site                                                                                                                                                                                                                                                                                                                                                |                       |          |          |  |   |  |  |
|           |              | <b>Reference</b>     |                                                                                                                                                                                                                                                                                                                                                                                          |                       |          |          |  |   |  |  |
|           |              | i =                  | Bradley, K.A., S.W. Woodmansee, and G.D. Gann, 2000. Floristic Survey and Rare Species Assessment of the Non-County Owned Properties In the Richmond Pine Rocklands. Report Submitted to Miami-Dade County Department of Resources Management. The Institute For Regional Conservation, Miami, FL.<br>NOTE: field data collected August 3-4, 2000 by Bradley, Woodmansee, and David Hall |                       |          |          |  |   |  |  |
|           |              | ii =                 | Possley observations June and July 2014                                                                                                                                                                                                                                                                                                                                                  |                       |          |          |  |   |  |  |
|           |              | * =                  | Newly recorded for the site                                                                                                                                                                                                                                                                                                                                                              |                       |          |          |  |   |  |  |

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**APPENDIX E**

**FTBG Plant Removal – On-site**

Plants from RAM Site

|                            |       |     |
|----------------------------|-------|-----|
| Angadenia berteroi         | (ST)  | 3   |
| Buchnera americana         |       | 2   |
| Byrsonima lucida           | (ST)  | 28  |
| Crossopetalum ilicifolium  | (ST)  | 8   |
| Croton linearis            |       | 102 |
| Guettarda scabra           |       | 1   |
| Jacquemontia curtisii      | (ST)  | 11  |
| Lantana depressa           | (SE)  | 4   |
| Licania michauxii          |       | 7   |
| Mosiera longipes           | (ST)  | 1   |
| Physalis walteri           |       | 1   |
| Pinus elliottii var. densa |       | 4   |
| Poinsettia pinetorum       | (SE)  | 1   |
| Quercus minima             |       | 4   |
| Randia aculeate            |       | 20  |
| Spiranthes torta           | (SE)  | 2   |
| Vaccinium myrsinites       |       | 3   |
| Zamia pumila               |       | 36  |
| Morinda rotoc              |       | 1   |
|                            | Total | 239 |

Here is an earlier species account from Fairchild:

Species Fairchild collected at Coral Reef Commons 6/27/14 (Some are not yet keyed out to species)

- Andropogon sp.
- Angadenia berteroi
- Bulbostylis ciliatifolia
- Crotalaria rotundifolia
- Croton linearis
- Dalea carnea
- Dichanthelium (mat forming)
- Dichanthelium aciculare
- Dyschoriste angusta
- Jacquemontia curtisii
- Lantana depressa
- Liatris tenuifolia
- Licania michauxii
- Myrsine cubana
- Paspalum sp.
- Pinus elliottii var. densa
- Rhynchospora grayi
- Ruellia succulenta
- Schizachyrium rhizomatum
- Spiranthes torta
- Zamia pumila

**Native plants FTBG removed from outside designated NFC at Coral Reef Commons on 6/27, 7/3, and 7/15 2014**

|       |                                 |                         |          | Red font indicates estimate |        |
|-------|---------------------------------|-------------------------|----------|-----------------------------|--------|
| Count | Scientific Name                 | Common Name             | # PLANTS | #CUTTINGS                   | #seeds |
| 1     | <i>Abildgaardia ovata</i>       | Flatspike sedge         | 13       |                             |        |
| 2     | <i>Acalypha chamaedrifolia</i>  | Bastard copperleaf      | 1        |                             |        |
| 3     | <i>Anemia adiantifolia</i>      | Pineland anemia         | 0        |                             |        |
| 4     | <i>Angadenia berteroi</i>       | Pineland allamanda      | 3        |                             |        |
| 5     | <i>Aristida purpurascens</i>    | Arrowfeather three awn  | 1        |                             |        |
| 6     | <i>Aster adnatus</i>            | Scale leaf aster        | 1        |                             |        |
| 7     | <i>Ayenia euphrasiifolia</i>    | Eyebright ayenia        | 12       |                             | 100    |
| 8     | <i>Bulbostylis ciliatifolia</i> | Densetuft hairsedge     | 12       |                             |        |
| 9     | <i>Byrsonima lucida</i>         | Locustberry             | 1        |                             |        |
| 10    | <i>Chaptalia albicans</i>       | White sunbonnets        | 1        |                             |        |
| 11    | <i>Cnidoscolus stimulosus</i>   | Tread softly            | 5        |                             |        |
| 12    | <i>Crotalaria rotundifolia</i>  | Rabbit bells            | 10       |                             |        |
| 13    | <i>Croton linearis</i>          | Pineland croton         | 31       | 100                         |        |
| 14    | <i>Cynanchum blodgettii</i>     | Blodgett's cynanchum    | 1        |                             |        |
| 15    | <i>Dalea carnea</i>             | White tassels           | 1        |                             |        |
| 16    | <i>Dichantherium</i> sp         | Unknown Witch grass     | 18       |                             |        |
| 17    | <i>Dichantherium aciculare</i>  | Narrow-leaf witch grass | 6        |                             |        |
| 18    | <i>Dyschoriste angusta</i>      | Rockland twinflower     | 1        |                             |        |
| 19    | <i>Euphorbia polyphylla</i>     | Pineland euphorbia      | 12       |                             |        |
| 20    | <i>Flaveria linearis</i>        | Tall yellowtop          | 1        |                             |        |

|    |                                          |                             |    |     |     |
|----|------------------------------------------|-----------------------------|----|-----|-----|
| 21 | <i>Jacquemontia curtissii</i>            | Pineland jacquemontia       | 18 | 20  |     |
| 22 | <i>Lantana depressa</i>                  | Pineland lantana            | 2  | 20  |     |
| 23 | <i>Liatris tenuifolia</i>                | Shortleaf gayfeather        | 12 |     |     |
| 24 | <i>Licania michauxii</i>                 | Gopher apple                |    | 150 |     |
| 25 | <i>Metopium toxiferum</i>                | Poisonwood                  | 1  |     |     |
| 26 | <i>Myrsine cubana</i>                    | Myrsine                     | 1  |     | 500 |
| 27 | <i>Opuntia humifusa</i>                  | Pineland prickly pear       | 2  |     |     |
| 28 | <i>Paspalum</i> sp                       | Unknown paspalum            | 2  |     |     |
| 29 | <i>Pasiflora suberosa</i>                | Corky stemmed passionflower | 1  |     |     |
| 30 | <i>Pectis glaucescens</i>                | Tea blinkum                 | 6  |     |     |
| 31 | <i>Piloblephis rigida</i>                | Wild pennyroyal             | 1  |     |     |
| 32 | <i>Pinus elliottii</i> var. <i>densa</i> | Southern slash pine         | 16 |     |     |
| 33 | <i>Polygala grandiflora</i>              | Candyweed                   | 1  |     |     |
| 34 | <i>Polygala smallii</i>                  | Tiny polygala               | 3  |     |     |
| 35 | <i>Quercus pumila</i>                    | Running oak                 |    | 9   |     |
| 36 | <i>Randia aculeata</i>                   | White indigoberry           | 1  |     |     |
| 37 | <i>Rhynchosia reniformis</i>             | Dollar leaf                 | 12 |     |     |
| 38 | <i>Rhynchospora grayi</i>                | Gray's beaksedge            | 5  |     |     |
| 39 | <i>Ruellia succulenta</i>                | Thickleaf wild petunia      | 1  |     |     |
| 40 | <i>Schizachyrium rhizomatum</i>          | Rhizomatous bluestem        | 36 |     |     |
| 41 | <i>Schizachyrium sanguineum</i>          | Crimson bluestem            | 3  |     |     |
| 42 | <i>Scleria ciliata</i>                   | Fringed nutrush             | 2  |     |     |
| 43 | <i>Spiranthes torta</i>                  | Southern ladies' tresses    | 10 |     |     |
| 44 | <i>Stachytarpheta jamaicense</i>         | Porterweed                  | 8  | 12  |     |

|    |                      |                   |    |    |  |
|----|----------------------|-------------------|----|----|--|
| 45 | Tephrosia florida    | Florida hoary pea | 2  |    |  |
| 46 | Vaccinium myrsinites | Shiny blueberry   | 1  | 25 |  |
| 47 | Zamia pumila         | Coontie           | 13 |    |  |

|                         |                                |                             |
|-------------------------|--------------------------------|-----------------------------|
| <b>291</b>              | <b>336</b>                     | <b>600</b>                  |
| <b>TOTAL<br/>PLANTS</b> | <b>EST. TOTAL<br/>CUTTINGS</b> | <b>EST. TOTAL<br/>SEEDS</b> |



**Legend**

-  NFC Preserve
-  Fairchild track - 6/27, 7/3, 7/15

**Most notable species (of ~48 collected)**

-  10 *Spiranthes tortu* (within polygons)
-  3 *Tiny Polygala*

