

INSTR # 1874762
OR BK 02063 PG 2048
RECORDED 09/23/2005 11:24:24 AM
MARSHA EWING
CLERK OF MARTIN COUNTY FLORIDA
RECORDED BY C Burkey

2005 AUG 25 AM 11:41
MARTIN COUNTY
CLERK OF CIRCUIT COURT
BY _____ D.C.

MARTIN COUNTY
COMMISSIONER RECORDS
MARTIN CO, FL

Prepared by
Martin County Growth Management Department
2401 SE Monterey Road
Stuart, FL 34996

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**BEFORE THE BOARD OF COUNTY COMMISSIONERS
MARTIN COUNTY, FLORIDA**

RESOLUTION NUMBER 05-7.23

**[REGARDING FINAL SITE PLAN APPROVAL
FOR THE ST. MICHAEL'S SOUTH CAMPUS, PHASE 1
WITH A CERTIFICATE OF PUBLIC FACILITIES RESERVATION]**

WHEREAS, this Board has made the following determinations of fact:

1. Hobe Sound Land Company, LLC, submitted an application for final site plan approval for the St. Michael's South Campus, Phase 1 project, located on lands legally described in Exhibit A, attached hereto.
2. The Development Review Committee considered such application at public meetings on March 3, 2005 and May 19, 2005, at which time the Committee recommended its approval of the final site plan for St. Michael's South Campus, Phase 1.
3. This Board considered such application at a public hearing on July 19, 2005.
4. At the public hearing, all interested parties were given an opportunity to be heard.

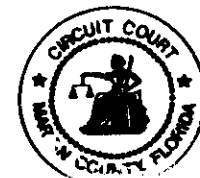
NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MARTIN COUNTY, FLORIDA, THAT:

A. The final site plan for the St. Michael's South Campus, Phase 1 project is approved. Development of the St. Michael's South Campus, Phase 1 project shall be in accordance with the approved final site plan, reduced and attached as Exhibit B and the Preserve Area Management Plan attached hereto as Exhibit C.

B. No permits for construction or development activity shall be issued until all required documents, plans and fees are received and approved as required by Section 10.9, Land Development Regulations Martin County Code.

C. Failure to submit the required documents, plans and fees as required by Section 10.9, Land Development Regulations, Martin County Code, shall render the final site plan approval null and void.

D. This final site plan is hereby determined to meet the requirements for a Certificate of Public Facilities Reservation as set forth in Section 5.32.D., Land Development Regulations, Martin County Code.



E. Permits must be obtained within one year of final site plan approval. Development of the entire project, including infrastructure, must be completed within two (2) years of final site plan approval. No rights to obtain development orders are herein conveyed beyond the two (2) year reservation period except as permitted in Section 5.32.D.8., Land Development Regulations, Martin County Code.

F. This resolution shall be recorded in the public records of Martin County. A copy of this resolution shall be forwarded to the applicant(s) by the Growth Management Department subsequent to recording.

DULY PASSED AND ADOPTED THIS 19TH DAY OF JULY 2005.

ATTEST:

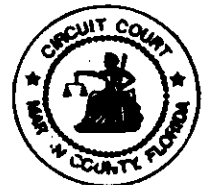
BOARD OF COUNTY COMMISSIONERS
MARTIN COUNTY, FLORIDA

BY: *Marsha Ewing*
MARSHA EWING, CLERK

BY: *Lee Webberman*
LEE WEBERMAN, CHAIRMAN

APPROVED AS TO FORM AND CORRECTNESS:

BY: *Krista A. Storey*
KRISTA A. STOREY
SENIOR ASSISTANT COUNTY ATTORNEY



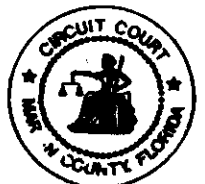
OR BK 02063 PG 2049

EXHIBIT "A"

PHASE-ONE ST. MICHAEL'S SCHOOL

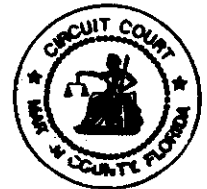
BEING A PARCEL OF LAND IN THE UNPLATTED PORTION OF THE GOMEZ GRANT, MARTIN COUNTY, FLORIDA. SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

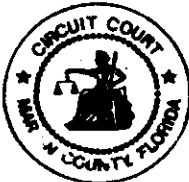
COMMENCE AT THE INTERSECTION OF THE SOUTH LINE OF GOVERNMENT LOT 1, SECTION 27, TOWNSHIP 39 SOUTH, RANGE 42 EAST AND THE SOUTHWESTERLY RIGHT-OF-WAY OF U.S. HIGHWAY NO.1 (STATE ROAD NO. 5), AS SHOWN ON THAT CERTAIN STATE ROAD DEPARTMENT RIGHT-OF-WAY MAP, PROJECT NO. 640-B, SECTION NO. 89010-2101; THENCE ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY OF U.S. HIGHWAY NO. 1 NORTH 56°25'58" WEST, A DISTANCE OF 1459.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE RIGHT HAVING A RADIUS OF 2964.93 FEET; THE CHORD OF WHICH BEARS NORTH 50°22'28" WEST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 12°07'01", A DISTANCE OF 627.03 FEET TO THE POINT OF BEGINNING; THENCE DEPARTING SAID RIGHT-OF-WAY SOUTH 38°16'54" WEST, A DISTANCE OF 99.61 FEET; THENCE SOUTH 46°39'12" EAST, A DISTANCE OF 50.21 FEET; THENCE SOUTH 43°00'49" WEST, A DISTANCE OF 84.63 FEET; TO THE BEGINNING OF A CURVE CONCAVE TO THE RIGHT HAVING A RADIUS OF 480.00 FEET; THE CHORD OF WHICH BEARS SOUTH 40°38'44" WEST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 56°50'28", A DISTANCE OF 476.19 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE RIGHT HAVING A RADIUS OF 1138.90 FEET; THE CHORD OF WHICH BEARS SOUTH 77°14'57" WEST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 16°21'53", A DISTANCE OF 325.29 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE LEFT HAVING A RADIUS OF 880.00 FEET; THE CHORD OF WHICH BEARS SOUTH 78°50'58" WEST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 13°10'05", A DISTANCE OF 202.25 FEET; THENCE SOUTH 25°57'07" WEST, A DISTANCE OF 51.02 FEET; THENCE SOUTH 70°07'39" WEST, A DISTANCE OF 112.24 FEET; THENCE NORTH 82°57'49" WEST, A DISTANCE OF 33.32 FEET; THENCE SOUTH 56°16'23" WEST, A DISTANCE OF 223.77 FEET; THENCE SOUTH 15°20'18" EAST, A DISTANCE OF 185.04 FEET; THENCE SOUTH 63°57'19" WEST, A DISTANCE OF 61.43 FEET; THENCE SOUTH 82°23'12" WEST, A DISTANCE OF 92.47 FEET; THENCE SOUTH 74°31'43" WEST, A DISTANCE OF 47.56 FEET; THENCE NORTH 71°35'45" WEST, A DISTANCE OF 67.98 FEET; THENCE NORTH 67°23'37" WEST, A DISTANCE OF 77.02 FEET; THENCE SOUTH 82°40'38" WEST, A DISTANCE OF 192.59 FEET; THENCE NORTH 89°34'35" WEST, A DISTANCE OF 78.20 FEET; THENCE SOUTH 66°00'35" WEST, A DISTANCE OF 77.40 FEET; THENCE SOUTH 11°35'06" WEST, A DISTANCE OF 84.99 FEET; THENCE SOUTH 09°02'21" EAST, A DISTANCE OF 107.34 FEET; THENCE SOUTH 26°35'48" EAST, A DISTANCE OF 82.22 FEET; THENCE SOUTH 49°51'41" EAST, A DISTANCE OF 49.36 FEET TO AN INTERSECTION WITH THE SOUTH LINE OF THE AFOREMENTIONED GOMEZ GRANT; THENCE SOUTH 66°02'57" WEST ALONG SAID SOUTH LINE, A DISTANCE OF 364.10 FEET; THENCE DEPARTING SAID SOUTH LINE NORTH 23°54'03" WEST, A DISTANCE OF 100.00 FEET; THENCE SOUTH 66°02'57" WEST, A DISTANCE OF 150.00 FEET; THENCE SOUTH 23°57'03" EAST, A DISTANCE OF 100.00 FEET TO AN INTERSECTION WITH THE SOUTH LINE OF THE GOMEZ GRANT; THENCE SOUTH 66°02'57" WEST ALONG SAID SOUTH LINE, A DISTANCE OF 1007.50 FEET TO AN INTERSECTION WITH THE EAST LINE OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN OFFICIAL RECORD BOOK 651, PAGE 1909; THENCE ALONG SAID EAST LINE NORTH 00°22'50" WEST, A DISTANCE OF 831.40 FEET; TO AN INTERSECTION WITH THE HIGH-WATER LINE OF BANNER LAKE; THENCE MEANDER SOUTHERLY, EASTERLY, NORTHERLY AND NORTHWESTERLY ALONG THE WATERS EDGE FOR A DISTANCE OF 1953 FEET, MORE OR LESS, TO A SOUTHERLY LINE OF BANNER LAKE CLUB AS DESCRIBED IN OFFICIAL RECORD BOOK 1051, PAGE 2224; THENCE ALONG SAID SOUTHERLY LINE NORTH 68°22'26" EAST, A DISTANCE OF 331.23 FEET; TO AN INTERSECTION WITH THE WESTERLY RIGHT-OF-WAY OF LAKE DRIVE AND THE



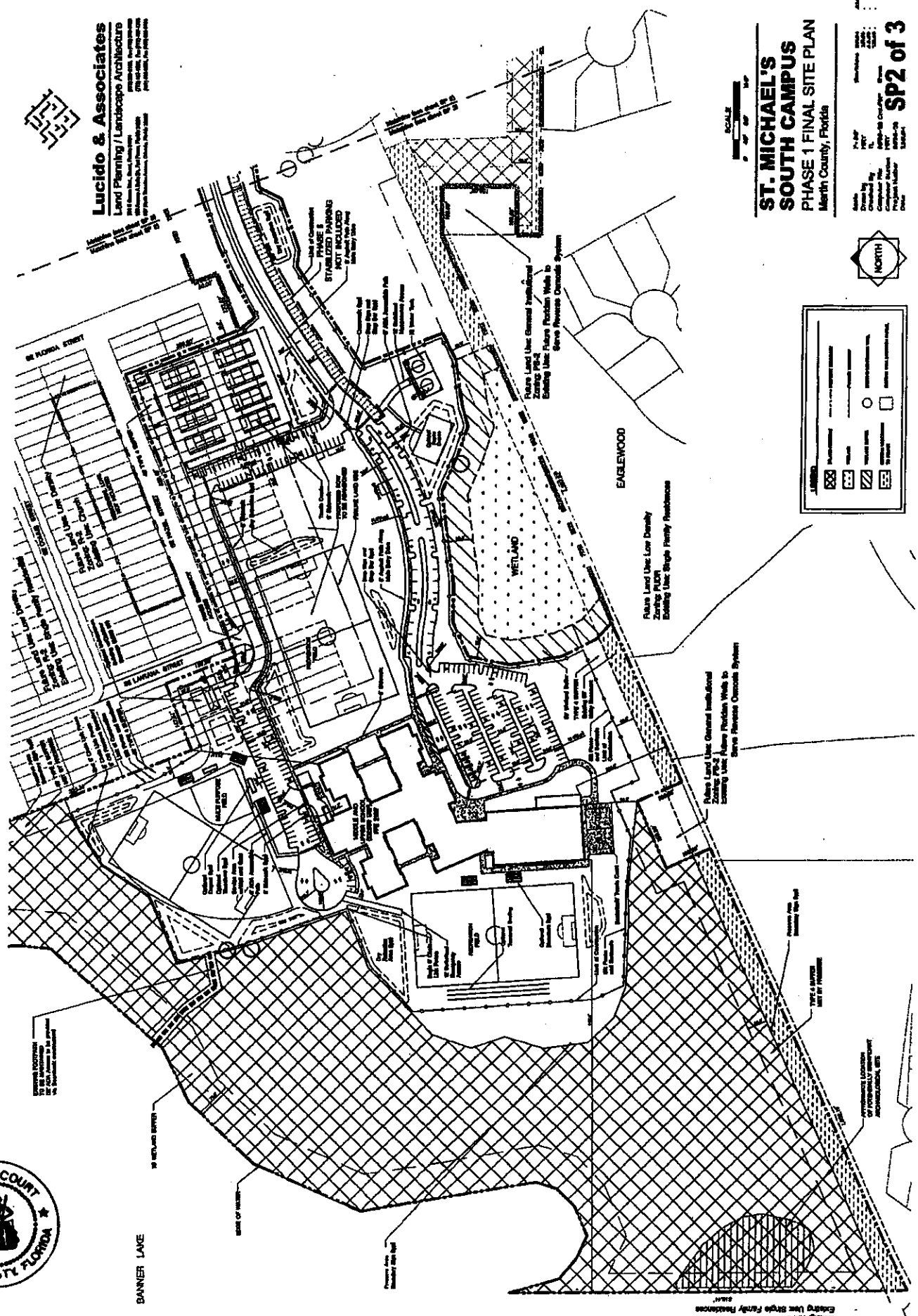
BEGINNING OF A CURVE CONCAVE TO THE RIGHT HAVING A RADIUS OF 1255.00 FEET; THE CHORD OF WHICH BEARS SOUTH 00°51'35" WEST; THENCE ALONG SAID WESTERLY RIGHT-OF-WAY AND THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 11°37'43", A DISTANCE OF 254.71 FEET TO A POINT ON THE WESTERLY LINE OF OLYMPIA PLAT NO. 4, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 2, PAGE 45 PUBLIC RECORDS OF PALM BEACH (NOW MARTIN) COUNTY, FLORIDA AND OLYMPIA PLAT NO. 3 ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 10, PAGE 17 PUBLIC RECORDS OF PALM BEACH (NOW MARTIN) COUNTY, FLORIDA; THENCE ALONG SAID LINE SOUTH 21°37'34" EAST, A DISTANCE OF 505.35 FEET; THENCE DEPARTING SAID LINE NORTH 68°15'18" EAST, A DISTANCE OF 150.00 FEET; THENCE SOUTH 21°37'34" EAST, A DISTANCE OF 150.00 FEET; THENCE NORTH 68°15'18" EAST, A DISTANCE OF 624.90 FEET; THENCE SOUTH 21°37'48" EAST, A DISTANCE OF 250.00 FEET TO AN INTERSECTION WITH THE SOUTHERLY LINE OF THE AFOREMENTIONED OLYMPIA PLAT NO.4; THENCE SOUTH 53°39'30" EAST, A DISTANCE OF 42.88 FEET; TO THE BEGINNING OF A CURVE CONCAVE TO THE RIGHT HAVING A RADIUS OF 1000.00 FEET; THE CHORD OF WHICH BEARS NORTH 71°54'10" EAST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 27°03'33", A DISTANCE OF 472.27 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE LEFT HAVING A RADIUS OF 1018.90 FEET; THE CHORD OF WHICH BEARS NORTH 77°14'59" EAST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 16°21'54", A DISTANCE OF 291.02 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE LEFT HAVING A RADIUS OF 360.00 FEET; THE CHORD OF WHICH BEARS NORTH 41°53'58" EAST; THENCE ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 54°20'05", A DISTANCE OF 341.39 FEET THENCE NORTH 14°43'58" EAST, A DISTANCE OF 112.85 FEET; THENCE NORTH 29°53'09" WEST, A DISTANCE OF 158.52 FEET; THENCE NORTH 22°46'22" EAST, A DISTANCE OF 151.13 FEET TO AN INTERSECTION WITH THE SOUTHWESTERLY RIGHT-OF-WAY OF U.S. HIGHWAY ONE AND THE BEGINNING OF A CURVE CONCAVE TO THE LEFT HAVING A RADIUS OF 2964.93 FEET; THE CHORD OF WHICH BEARS SOUTH 41°27'33" EAST; THENCE ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY AND THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 05°42'48", A DISTANCE OF 295.65 FEET THE POINT OF BEGINNING.

CONTAINING: 50.53 ACRES OF LAND, MORE OR LESS.





Lucido & Associates
 Land Planning / Landscape Architecture
 1111 S.W. 15th Avenue, Suite 200
 Ft. Lauderdale, Florida 33304
 Phone: (954) 561-1111
 Fax: (954) 561-1112



ST. MICHAEL'S SOUTH CAMPUS
 PHASE 1 FINAL SITE PLAN
 Martin County, Florida



Symbol	Description
[Cross-hatched box]	Future Land Use
[Dotted box]	Existing Use
[Wavy line box]	Wetland
[Diagonal line box]	Eaglewood
[Stippled box]	Banner Lake

SP2 of 3

Exhibit "C"

ST. MICHAELS CAMPUS AT HOBE SOUND MASTER SITE PLAN

Martin County, Florida

Preserve Area Management Plan

Revised January 2005

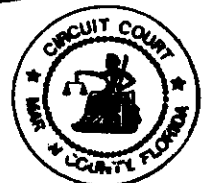


Prepared for:

Dr. James Cantwell
St. Michaels Independent School
1300 E. 10th Street
Stuart, Florida 34996
(772) 283-1222
FAX (772) 283-1913

Prepared by:

R.L. Weigt
Environmental Consultants, Inc.
8985 S.E. Bridge Road
Suite A
Hobe Sound, FL 33455
(772) 546-6255
FAX (772) 546-2316
E-Mail: rlw1@adelphia.net



MARTIN COUNTY, FLORIDA
PRESERVE AREA MANAGEMENT PLAN

For:

St. Michaels Campus at Hobe Sound

Ramm Development

U.S. Highway #1

Hobe Sound, Martin County, FL

Sections 27 and 28, Township 39S, Range 42E

Prepared by:

R.L. Weigt Environmental Consultants, Inc.

Approved by/Date : _____

A Preserve Area Management Plan (PAMP) is required of all applicants for development approval on sites which contain wetland or upland preserve areas, pursuant to provisions of Section 4.36.A.1 of the Martin County Land Development Regulations, Martin County Code.

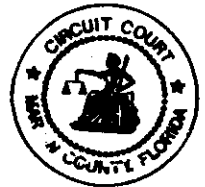
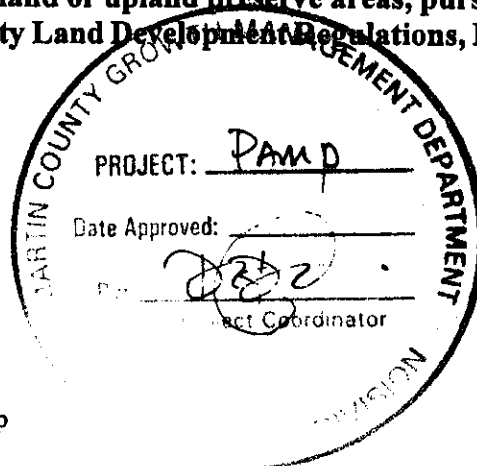
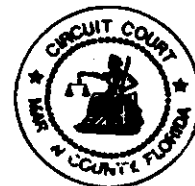


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OR BK 02063 PG 2057



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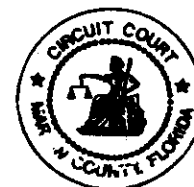
- 10.0 **MONITORING, REPORTING AND INSPECTIONS**
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MAPS

- Location Map*
- Gopher Tortoise Burrow Map*
- Scrub Jay Map*
- Protected Flora Location Map*
- Soils Map*
- 2000 Aerial Photograph*
- Wetland Location Map*
- Vegetation Map (FLUCCS)*
- Site Plan (Reduced copy - Not to Scale)*

T:/gmd/gme/Applications_Forms/NEW_Pamp

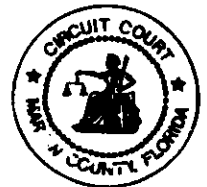


APPENDICES

Appendix A - Agency Coordination Letters

Appendix B - Preserve Area Boundary Signs

Appendix C - Proposed Monitoring Plan



1.0 GENERAL

The owner(s) of the lands to be preserved/maintained by this Preserve Area Management Plan (PAMP) and the developer(s) of St. Michaels Campus at Hobe Sound located at U.S. Highway #1, Hobe Sound, Martin County, Florida, their successors and assigns, and their environmental consultants and contractors, will implement and comply with all portions of this PAMP.

Compliance with the terms of this PAMP includes submittal of all Monthly Monitoring Reports on PAMP compliance throughout all phases of project construction and submittal of all Annual Monitoring Reports following completion of project construction, pursuant to Section 10.17 of the Martin County Land Development Regulations. The owner(s) of the lands to be preserved/maintained shall have ultimate responsibility for the submittal of all Monthly and Annual Monitoring Reports, according to the format and schedule requirements of Section 10 of this PAMP.

As noted in Section 9 of this PAMP, the Martin County Environmental Planning Administrator shall be notified in writing within thirty (30) days of transfer of ownership of any lands to be preserved/maintained under the terms of this PAMP. Failure to notify shall be considered as non-compliance with the terms of this PAMP.

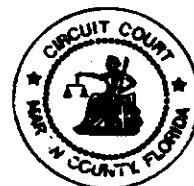
This PAMP will not be altered or amended by either Martin County or the owner/developer of St. Michaels Campus at Hobe Sound, except by an alteration or amendment agreed to by both the Martin County Environmental Planning Administrator and the owner/developer of St. Michaels Campus at Hobe Sound. Such alterations and amendments shall be inserted into the PAMP and the final revised document shall be recorded by the Martin County Clerk of Courts. The revised PAMP will be labeled with the appropriate O.R. Book and Page Number. Three copies of the revised document shall be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.

2.0 ENVIRONMENTAL ASSESSMENT

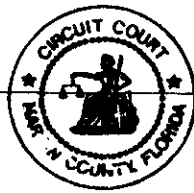
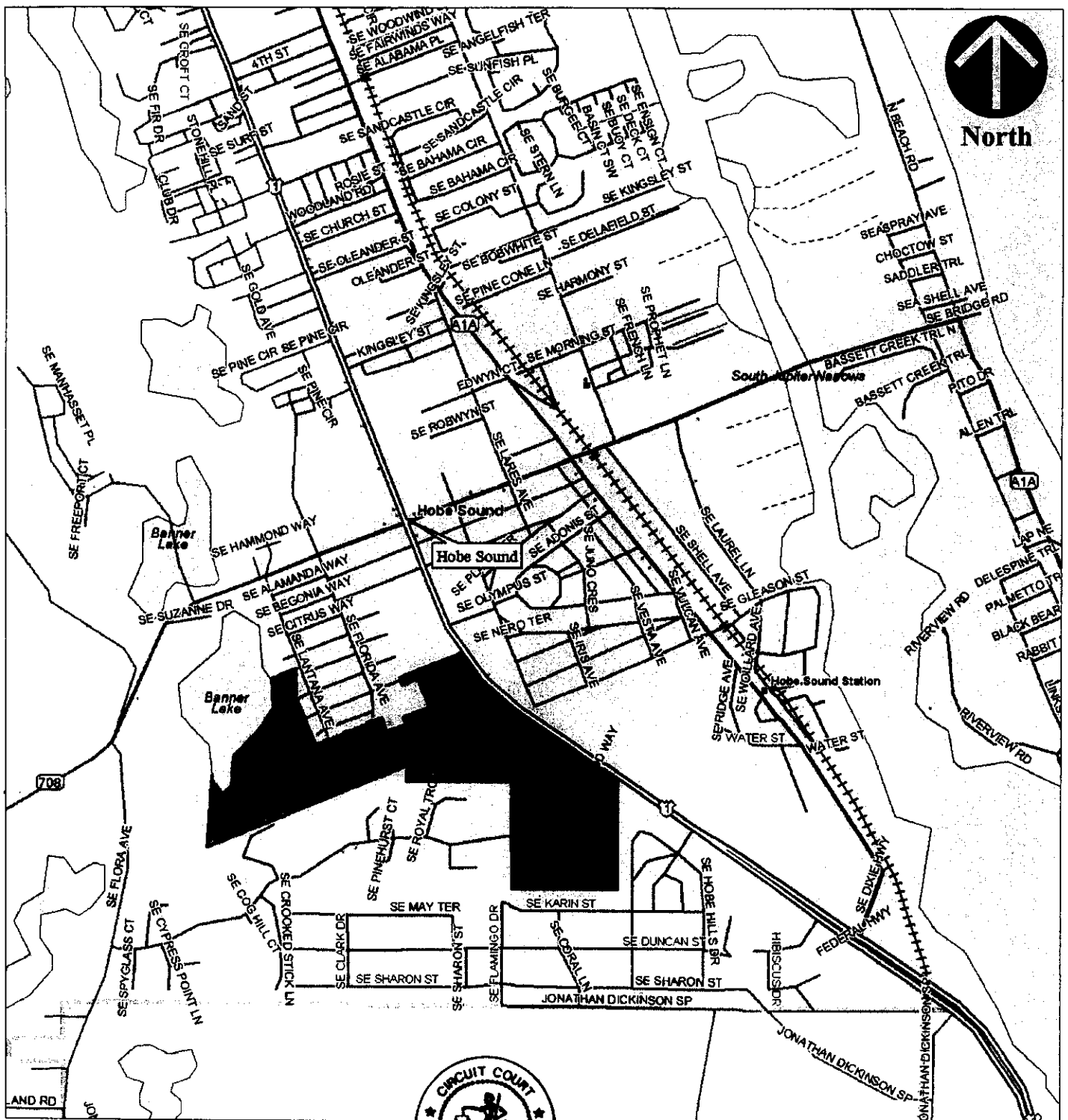
The Environmental Assessment includes maps and text which accurately depict the site's location, soils, wetlands, uplands, listed species, previous impacts, preserve area locations and boundaries, and any other significant environmental features.

A preliminary scientific environmental assessment of the St. Michaels Campus at Hobe Sound project site was conducted by R.L. Weigt Environmental Consultants, Inc. (RLW). The project site consists of approximately 137.00 acres of land located west of U.S. Highway #1 (US-1), south of Bridge Road, and north of Eaglewood Way (Figure 1). The site is located in Sections 27 and 28, Township 39S, Range 42E, Martin County, Florida.

The environmental assessment addressed the following environmental issues: protected species, wildlife, vegetative communities, wetlands, soils, and historical/archaeological sites. Field data was



RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.



SOURCE: DELORME STREET ATLAS, USA DELUXE.

LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	LOCATION.DWG	25 NOVEMBER 2003	1

**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
LOCATION MAP**

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlw1@adelphia.net

DR BK 02063 PG 2061

collected between 2 July and 29 August 1997, 15 through 19 July 2002, 22 and 23 July 2002, and 20 August through 3 September 2002. An updated gopher tortoise survey was conducted from 15 December 2003 through 16 January 2004. Following are the methodologies and results of the preliminary environmental assessment conducted at the project site.

2.01 Gopher Tortoise and Other Burrow Commensals

Biologists followed the survey protocol as recommended in *Ecology and Habitat Protection Needs of Gopher Tortoise (*Gopherus polyphemus*) Populations Found on Lands Slated for Large-scale Development in Florida*; Non-game Wildlife Program, Technical Report #5, Florida Game and Fresh Water Fish Commission (FGFWFC) [now known as the Florida Fish and Wildlife Conservation Commission (FFWCC)], Tallahassee, Florida, December 1987.

- Biologists conducted parallel transects 10 meters (\pm 32 feet) apart;
- Biologists conducted serpentine search patterns between the parallel transects;

A total of one-hundred sixty (160) gopher tortoise burrows were located by biologists during the updated gopher tortoise and commensal species survey (Figure 2). Eighty-seven (87) burrows were active and seventy-three (73) burrows were inactive.

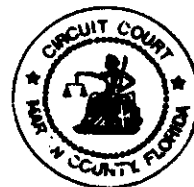
The gopher tortoise population for the project site was estimated using the following FFWCC formula:

$$\text{Est. \# gopher tortoises} = \text{\# active burrows} + \text{\# inactive burrows} \times 0.614$$

The 0.614 factor in the equation is based on data collected and evaluated by the FFWCC, and is specific for the South Florida area. The estimated gopher tortoise population for the project site is ninety-eight (98).

2.02 Gopher Tortoise Upper Respiratory Tract Disease

Upper Respiratory Tract Disease (URTD) is a highly contagious disease observed in some species of tortoises and other turtles. In gopher tortoises (*Gopherus Polyphemus*), one known causal agent is the bacterium, *mycoplasma agassizii*. URTD is transmitted by close contact between tortoises. Clinical Signs of URTD include nasal or ocular discharge, swollen eyelids, and conjunctivitis. Although clinical signs may appear 1-2 weeks post-exposure, it takes 6-8 weeks for an exposed gopher tortoise to develop an immune response detectable by current diagnostic tests. Exposure to URTD may not necessarily confer immunity; in fact, gopher tortoises exposed a second time may become ill more quickly than when initially exposed. A blood test, known as an enzyme-linked immunosorbent assay (ELISA), is currently the most effective, rapid, and inexpensive way to detect exposure to mycoplasma. However, the test indicates only whether a gopher tortoise has built up antibodies to the pathogen. Therefore, it cannot distinguish between asymptomatic carriers



THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.

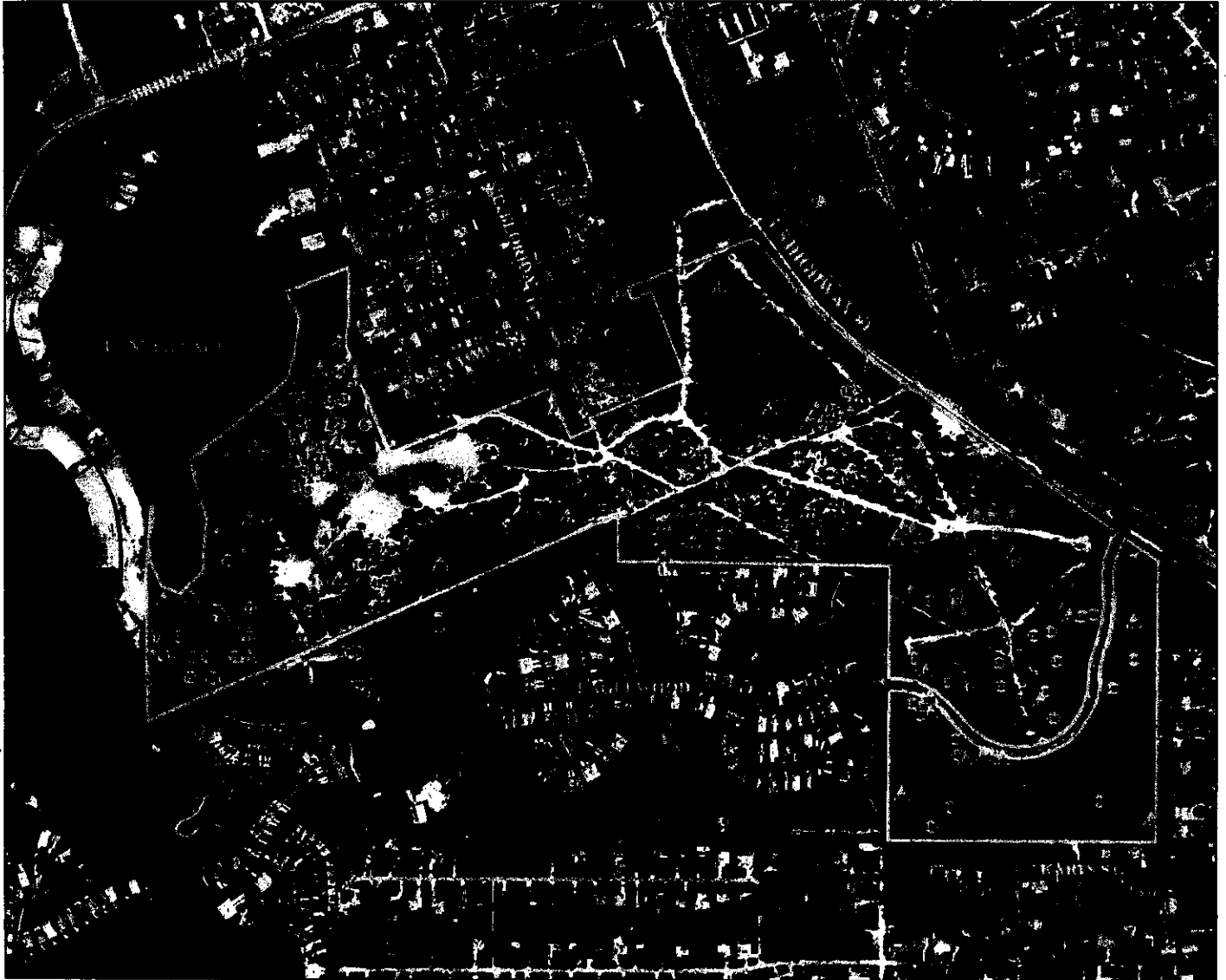
NOT A SURVEY



North



SCALE: 1" = 800'

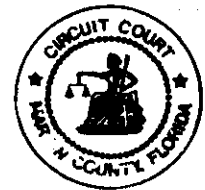


SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2000 AERIAL PHOTOGRAPH.

LEGEND

- △ - ACTIVE GOPHER TORTOISE BURROW (87)
- - INACTIVE GOPHER TORTOISE BURROW (73)

TOTAL GOPHER TORTOISE BURROWS = 160
 ESTIMATED POPULATION = 160 x 0.614 (TOTAL # BURROWS x 0.614) = 98



LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	BURROW-UPDATE.DWG	21 DECEMBER 2003	2

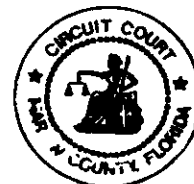
**ST. MICHAEL'S CAMPUS AT HOBE SOUND
 PRESERVE AREA MANAGEMENT PLAN
 GOPHER TORTOISE BURROW LOCATION MAP**

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(which pose a threat to healthy tortoises) and those individuals which have cleared the pathogen and are no longer infected. Hatchling tortoises, up to one year old, may test positive due to antibodies passed from a positive female to the hatchlings via the egg, but the pathogen itself is not transmitted through the egg.

Biologists followed blood sample collection and preparation protocol as recommended in *Collection and Preparation of Blood Samples from Gopher Tortoises for Determining Exposure to Mycoplasma*; as set forth in the new gopher tortoise relocation guidelines effective March 1, 2001, and approved by the Florida Fish and Wildlife Conservation Commission (FFWCC) on 31 January 2001.

- Blood samples for ELISA were collected by RLW biologist from the brachial vein of the gopher tortoises;
- Biologist used disposable exam gloves while handling each tortoise (a new pair for each tortoise);
- Prior to blood collecting, the skin was cleaned with alcohol poured onto a 1" x 1" sterile gauze;
- Blood was collected with a sterile 25-gauge needle on a sterile 1 ml or 3 ml syringe. A new needle and syringe were used for each gopher tortoise;
- Biologists collected 0.3 - 1 ml of blood from each gopher tortoise. After an appropriate amount of blood was obtained, the needle was withdrawn and a gauze pad was applied with direct pressure to the vein, to stop bleeding and prevent bruising;
- After collection of blood was complete, blood samples were transferred to a green-top, heparinized microtainer tube;
- Needles were removed from syringes prior to transferring the blood to the heparinized microtainer;
- Upon completion of blood transfer, the green-top was replaced and the tube was gently inverted several times to prevent clotting;
- Heparinized microtainers were placed in a cooler with an ice pack and returned to RLW's corporate office;
- Blood samples were centrifuged at RLW's office. Samples were spun for ten (10) minutes;
- The clear liquid at the top of the microtainers was drawn into a disposable sterile pipette and transferred to a cryotube;



- Cryotubes were labeled with the gopher tortoise identification number (e.g. GT #3), RLW's name, project name, and collection date;
- For each tortoise, a minimum of 0.1 ml of plasma was put on ice and shipped to the following address:

Mycoplasma Testing Lab
 University of Florida
 Department of Pathobiology
 1600 SW Archer Road - BSB 350
 Gainesville, Florida 32610

RLW tested a sample population of sixteen (16) gopher tortoises from the St. Michaels Campus at Hobe Sound project site. Three (3) gopher tortoises tested positive for URTD, nine (9) tested negative for the infection, and four (4) tested as serologically suspect. According to FFWCC guidelines, if any tortoises test positive for URTD, the entire project site is deemed infected; therefore, off-site relocation is not an option for this project

The Applicant will coordinate the gopher tortoise population with FFWCC agency personnel prior to land clearing activities and site construction.

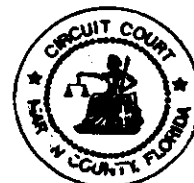
2.03 Protected Species/Wildlife Survey

The state lists of animals are maintained by the FFWCC and categorized as endangered, threatened and of special concern, and constitutes Florida Administrative Code Rules 39-27.003, 39-27.004, and 39-27.005, respectively. The state lists of plants are categorized into endangered, threatened, and commercially exploited, and are maintained by the Florida Department of Agriculture and Consumer Services (FDACS). The state plant lists are statutorily designated via the Preservation of Native Flora of Florida Act (s. 581185-187, Florida Statutes).

The federal list of plants and animals is administered by the USFWS and is published in 50 CFR 17.11-12. The list is categorized into endangered species, threatened species, and candidates for such designations.

Following are the methodologies and results of the wildlife/protected species surveys.

- Biologists conducted pedestrian transects between 2 July and 29 August 1997;
- The transects meandered through areas of suitable habitat;
- Biologists set six (6) small mammal trapping transects within the project site;



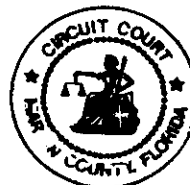
- Four (4) trapping transects consisted of twenty-five (25) stations and two (2) trapping transects consisted of twenty (20) stations. Each station contained two (2) Sherman live traps;
- Each transect was sampled for a minimum of four (4) consecutive nights to determine the presence/absence of the Florida mouse, and other protected species;
- Traps were set each afternoon, shortly before dusk, and checked each morning at dawn. Traps were closed during the morning sampling and reset each evening to prevent dehydration and loss of captured animals;
- The traps were baited with a mixture of peanut butter and sunflower seeds;
- Captures were identified as to species and released.

A total of eight-hundred eighty-six (886) trap nights were performed on the project site. Biologists did not capture any species during the small mammal survey.

- Three (3) drift fence arrays were placed on-site;
- Each drift fence array consisted of eight (8) pit traps (5-gallon buckets) and eight (8) two-way funnel traps located midway along the drift fences;
- Drift fence arrays were monitored from 2 through 20 August 1997;
- Biologists checked the arrays twice daily for captured animals;
- Captures were identified as to species and released at the capture site.

The only listed species captured by the drift fence array was the gopher frog which is listed as a species of special concern (SSC) by the FFWCC. The Applicant will coordinate the gopher frog population with FFWCC agency personnel prior to land clearing activities and site construction.

- Biologists followed the survey protocol as recommended in *Ecology and Development Related Habitat Requirements of the Florida Scrub Jay (Aphelocoma coerulescens coerulescens)*, Non-Game Wildlife Program, Technical Report #8, FGFWFC (now known as FFWCC), April 1991.
- RLW biologists established sixteen (16) transect locations within the boundaries of the subject property.



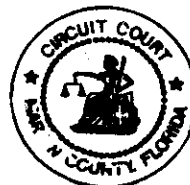
- Biologists played Florida scrub jay calls at a total of ninety-five (95) playback stations located along the transects;
- At each playback station, biologists played scrub jay territorial scolds, including the female "hiccup" call, for not less than one (1) minute in all four directions of a compass;
- The calls were played on a good-quality, hand-held cassette player and broadcast at full volume;
- The scrub jay survey was conducted for seven (7) days from 15 through 19 July and 22 and 23 July 2002;
- The surveys were conducted on calm, clear days;
- The surveys began approximately one (1) hour after sunrise, and were terminated prior to midday;
- Biologists traversed the transects by foot and all terrain vehicle (ATV);

A total of two (2) scrub jay groups were observed within the project site. Observed scrub jay locations are depicted on Figure 3. The first group of scrub jays was observed utilizing the western portion of the property around Banner Lake. Two (2) scrub jays were observed in this group during the survey; however, no nests were identified on-site.

The second group of scrub jays was observed utilizing the eastern portion of the property along US-1 (Figure 3). A total of two (2) scrub jays were observed in this group during the survey and no nest was identified on-site. This group was only observed perching on the power lines located along US-1 and flying to and from scrub habitat located off-site, east of US-1. These scrub jays were not observed foraging on-site; however, due to their close proximity to the property a 100' wide habitat area has been mapped to provide additional protection to these scrub jays.

Based upon site habitat and observed scrub jay locations throughout the property during this survey and the April 1999 survey, RLW has mapped the occupied scrub jay habitat within the project boundaries on Figure 3. The Applicant does not propose any impacts to the occupied scrub jay habitat on-site. The Applicant will coordinate the scrub jays with staff member of the U.S. Fish and Wildlife Service (FWS) prior to land clearing activities and site development.

The only listed species of flora observed by biologists on-site include wire weed (*Polygonella ciliata*) and scrub mit (*Conradina grandiflora*) (Figure 4). All protected flora observed on-site were observed within the areas slated for preservation; therefore, the Applicant does not propose any impacts to listed flora species.

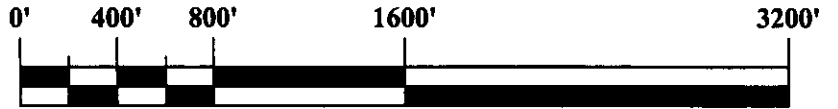


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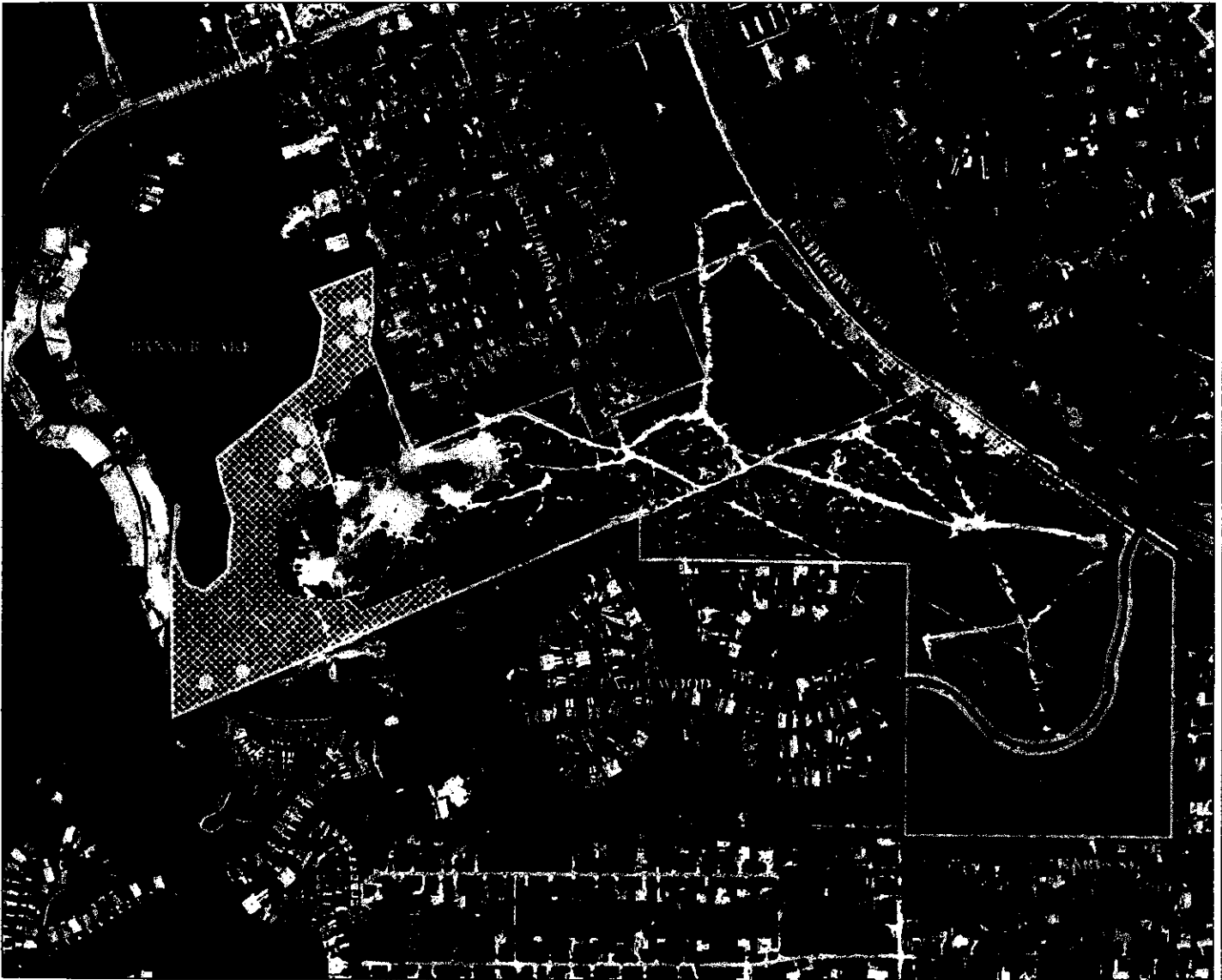
NOT A SURVEY



North



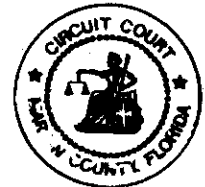
SCALE: 1" = 800'



SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2000 AERIAL PHOTOGRAPH.

LEGEND

- - OBSERVED SCRUB JAY (JULY 2002 SURVEY)
- ▨ - OCCUPIED SCRUB JAY HABITAT



LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	SCRUB-JAYS.DWG	25 NOVEMBER 2003	3

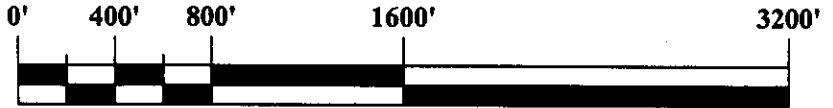
**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
SCRUB JAY MAP**

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NOT A SURVEY



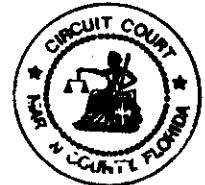
SCALE: 1" = 800'



SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2000 AERIAL PHOTOGRAPH.

LEGEND

- ▲ - SCRUB MINT (*CONRADINA GRANIFLORA*) - ENDANGERED
- ▲ - WIRE WEED (*POLYGONELLA CILIATA*) - ENDANGERED



LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	FLORA.DWG	25 NOVEMBER 2003	4

**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
PROTECTED FLORA LOCATION MAP**

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2.04 Vegetation Survey (FLUCCS)

Biologists used the following methodology to map vegetation found on the project site.

- Biologists used the *Florida Land Use and Cover Classification System: A Technical Report (FLUCCS)*, April 1976, State of Florida, Bureau of Comprehensive Planning;
- Biologists based vegetative community descriptions on field surveys, Soil Conservation Service (SCS) soil maps, and aerial photograph interpretations;
- Numerical community designations were carried to Level III, according to FLUCCS.

Refer to Section 2.3 of this PAMP for vegetation classifications.

2.05 Jurisdictional Wetlands

Biologists used the following methodologies to locate State of Florida and Federal jurisdictional wetlands on-site.

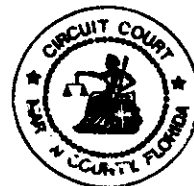
- Biologists delineated wetlands according to Florida Administrative Code (FAC) 62-340;
- Biologists delineated wetlands according to the U.S. Army Corps of Engineers (COE) Wetland Delineation Manual, January 1987, Technical Report Y-87-1;
- Biologists flagged the wetlands with consecutively numbered flagging tape marked "Wetland Delineation";
- Biologists completed COE wetland delineation data sheets;
- The delineated wetlands were field located on a Martin County aerial photograph.

Refer to Section 2.3 of this PAMP for wetland habitat results.

2.06 Soils

Biologists used the following methodology to identify soil types found on the project site.

- Project soils were mapped according to the *Soil Survey of Martin County Area, Florida*, March 1981, United States Department of Agriculture, Soil Conservation Service (SCS).



Refer to Section 2.2 of this PAMP for soil types found within the project site.

2.1 Location

The project site is located west of US-1, south of Bridge Road, and north of Eaglewood Way, Sections 27 and 28, Township 39S, Range 42E, Hobe Sound, Martin County, Florida.

2.2 Soils

The United States Department of Agriculture, SCS, has mapped the surficial soil types within the St. Michaels Campus at Hobe Sound project site. The resulting soil delineations were published in the *Soil Survey of Martin County Area, Florida*, March 1980. SCS soil types are mapped on Figure 5.

Detailed and complete descriptions of each of these soil communities are presented in the Martin County Soil Survey, and therefore, are not included herein. However, a general description of the soils is provided below.

2.2.01 Paola sand, 0-8% slopes (6)

This nearly level to sloping soil is excessively drained and located on the coastal ridge and isolated knolls in coastal areas. Slopes are smooth to convex. The water table is below a depth of 72 inches throughout the year. Permeability is very rapid and available water capacity is very low throughout the profile. Natural fertility and content of organic matter are very low.

2.2.02 St. Lucie sand, 0-8% slopes (7)

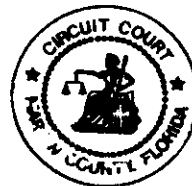
This deep, nearly level to sloping sandy soil is excessively drained. It is located on dry coastal ridges and on isolated knolls in the flatwoods. Slopes are uniform and range from 0-8%. The water table is below a depth of 72". Available water capacity is very low and permeability is very rapid. Natural fertility and content of organic matter are very low.

2.2.03 Satellite Variant sand (14)

This deep, nearly level sandy soil is moderately well drained. It is on slightly elevated ridges and knolls in the flatwoods. Slopes are smooth to convex and range from 0-2%. The water table is at a depth of 40-60" for 6 to 9 months, and between 30-40" for less than 60 cumulative days. It recedes below a depth of 60" for 2-4 months in drier seasons. Permeability is very rapid throughout the profile. Available water capacity, natural fertility, and organic matter content are very low.

2.2.04 Pits (68)

Pits consist of open excavations from which soil and geologic material have been removed for use in road construction or for foundation purposes.



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NOT A SURVEY



North



SCALE: 1" = 800'



SOURCE: SOIL SURVEY OF MARTIN COUNTY, FLORIDA, APRIL 1981.



LATITUDE: N27° 3.122' LONGITUDE: W080° 8.437'

LEGEND

- | | |
|---------------------------------|-----------------------------------|
| 6 - PAOLA SAND, 0-8% SLOPES | 68 - PITS |
| 7 - ST. LUCIE SAND, 0-8% SLOPES | 73 - SAMSULA MUCK |
| 14 - SATELLITE VARIANT SAND | 77 - ST. LUCIE SAND, 8-20% SLOPES |

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	SOIL.DWG	25 NOVEMBER 2003	5

**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
SOIL MAP**

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2.2.05 Samsula muck (73)

This nearly level, organic soil is very poorly drained. It is in depressions and freshwater swamps and marshes. Slopes are smooth to concave and are 0-1%. The soil is ponded for 6 to 9 months or more in most years. The water table is at a depth of less than 10" the rest of the year. Permeability is rapid in all layers. The available water capacity is very high in the organic material and very low in the underlying sand. Natural fertility is moderate.

2.2.06 St. Lucie sand, 8-20% slopes (77)

This deep, strongly sloping to moderately steep sandy soil is excessively drained. It is on the coastal ridge. Slopes are single or complex and range from 8-20%. The water table is below a depth of 72" at all times. The available water capacity is very low and permeability is very rapid. Natural fertility and organic matter content are very low.

2.3 Habitats - Figure 6 depicts the 2000 Aerial Photograph of the project site.

2.3.1 Wetland Habitats

One (1) State [South Florida Water Management District (SFWMD)] and Federally [U.S. Army Corps of Engineers (COE)] jurisdictional wetland is present on the subject property (Figure 7). Agency jurisdictional letters are included in Appendix A. No wetland impacts are proposed for this project; however, the Applicant will provide a 50' buffer surrounding the wetland.

2.3.1.1 Vegetated non-forested wetland (640)

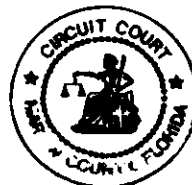
This low depression area is seasonably flooded and lacks a canopy cover. Vegetation includes pickerelweed (*Pontederia cordata*), maidencane (*Panicum hemitomon*), bacopa, beakrush (*Rhynchospora* spp.), cattail (*Typhia* spp.), primrose willow (*Ludwigia* spp.) and duck potato (*Sagittaria latifolia*).

2.3.2 Upland Habitat

Upland habitat for the project site has been mapped according to the Florida Land Use, Cover, and Classification System (FLUCCS). The classifications used represent the closest facsimile possible to the natural community present. Classifications depicted on the FLUCCS Map (Figure 8) are described below.

2.3.2.1 Sand pine (413)

The canopy of this community is dominated by an overstory of sand pine (*Pinus clausa*). Dominant midstory vegetation includes myrtle oak (*Quercus myrtifolia*), runner oak (*Quercus minima*), sand live oak (*Quercus geminata*), Chapman's oak (*Quercus chapmanii*), tallow-wood (*Ximenia americana*), rosemary (*Ceritola ericoides*) and saw palmetto (*Serenoa repens*). Groundcover consists of day flower (*Commelina erecta*), gopher apple (*Lucania michauxii*), pawpaw

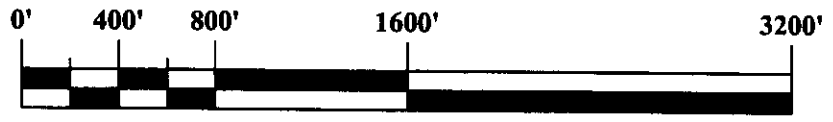


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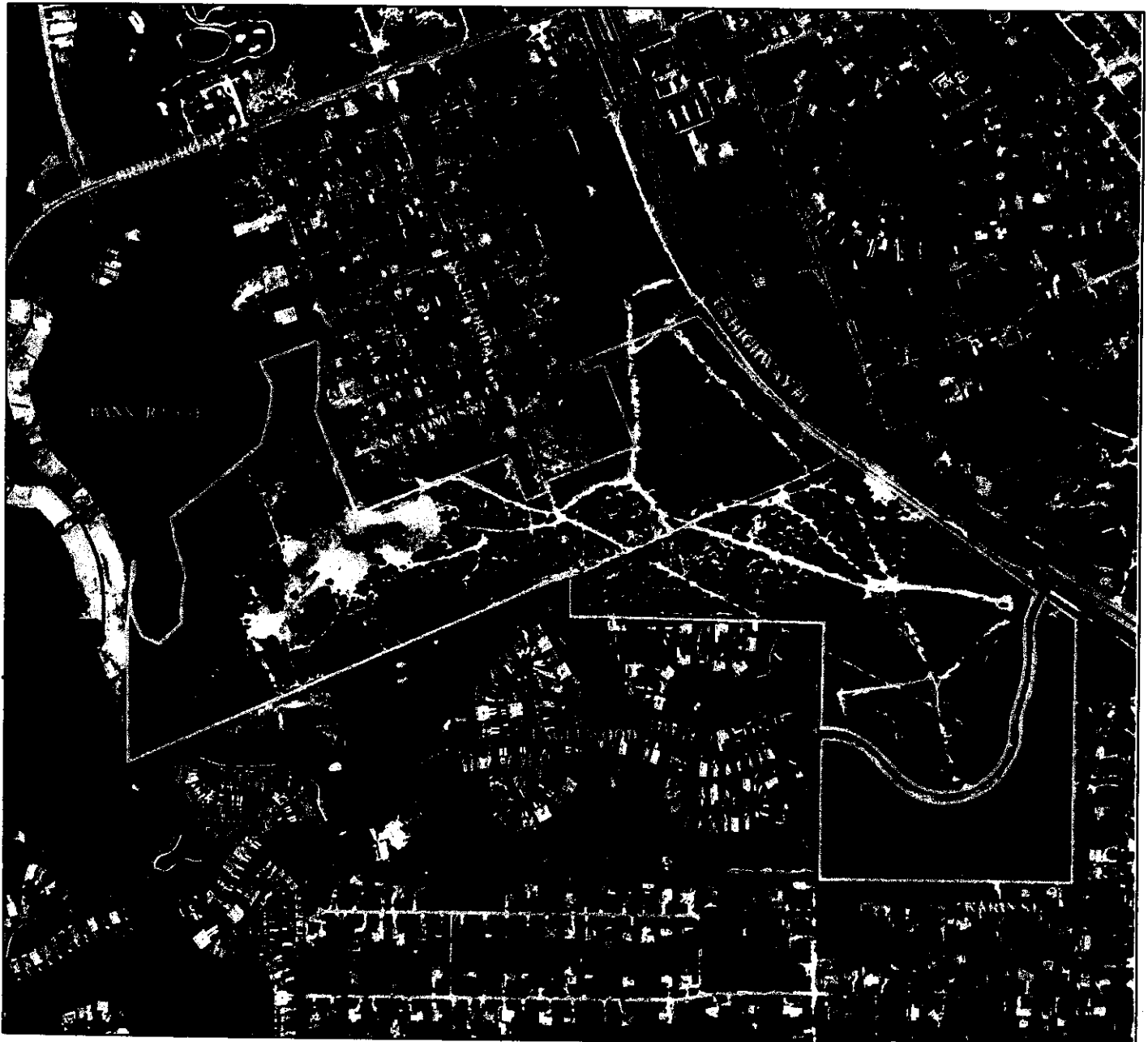
NOT A SURVEY



North



SCALE: 1" = 800'



SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2000 AERIAL PHOTOGRAPH.

LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	AERIAL.DWG	25 NOVEMBER 2003	6

**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
2000 AERIAL PHOTOGRAPH**



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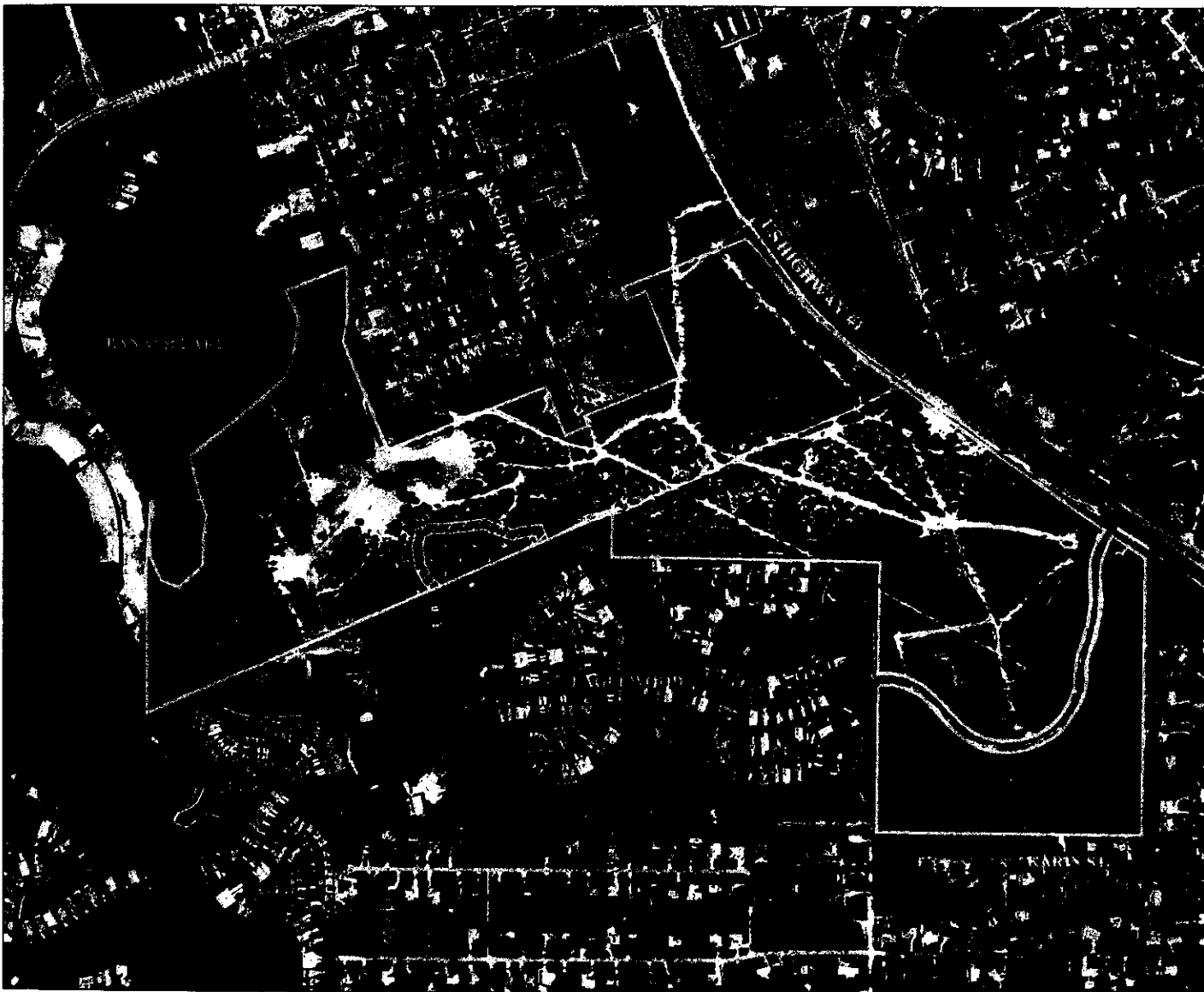
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North



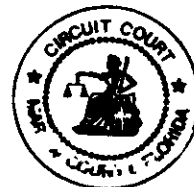
SCALE: 1" = 800'



SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2000 AERIAL PHOTOGRAPH.

LEGEND

- WETLAND (1.96 ACRES)
- 50' BUFFER (1.08 ACRES)



LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	WET.DWG	25 NOVEMBER 2003	7

**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
WETLAND LOCATION MAP**

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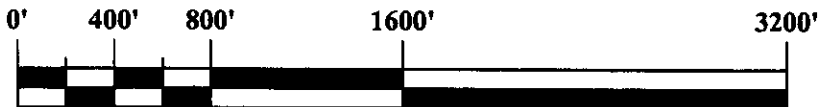
DR BK 02063 PG 2075

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NOT A SURVEY



North



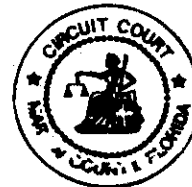
SCALE: 1" = 800'



LEGEND

- 413 - SAND PINE SCRUB (±101.54 ACRES)
- 421 - XERIC OAK SCRUB (±8.78 ACRES)
- 742 - BORROW PIT (±11.91 ACRES)
- 640 - HERBACEOUS WETLAND (±1.96 ACRES)
- 814 - DIRT TRAILS (±12.81 ACRES)
- TOTAL = 137 ACRES

SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2000 AERIAL PHOTOGRAPH.



LATITUDE: N27° 03.130' LONGITUDE: W080° 08.198'

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	FIGURE:
FLORIDA	27 & 28	39S	42E	03-102	FLUCCS.DWG	25 NOVEMBER 2003	8

**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
VEGETATION MAP (FLUCCS)**

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 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlw1@adelphia.net

DR BK 02063 PG 2076

(*Asimina reticulata*), prickly-pear cactus (*Opuntia humifusa*), spikemoss (*Selaginella myrsinites*), and lichen (*Cladonia prostrata*).

2.3.2.2 Xeric Oak (421)

This community is equally dominated by different scrub oak species. Major vegetation includes sand live oak, myrtle oak, and Chapman's oak. Other vegetation includes runner oak, pawpaw, prickly-pear cactus, tallow-wood, love vine (*Cassythia filiformis*), prickly-pear cactus, spikemoss and lichen.

2.3.2.3 Borrow Area (742)

This designation represents the barren sandy area located in the western portion of the property that has been previously excavated for fill.

2.3.2.4 Primitive Trails (814)

This designation represents the dirt trails located throughout the property created by ATV use. These trails range from 10'-12' wide and lack vegetation.

2.3.3 Exotic Vegetation

The only exotic vegetation noted on-site is Brazilian pepper. This species is found sporadically around the perimeter of the project site.

2.4 Protected Species

A complete listed species survey has been conducted for the project site by R.L. Weigt Environmental Consultants, Inc. (RLW) between 2 July and 29 August 1997, 15 through 19 July 2002, 22 and 23 July 2002, and 20 August through 3 September 2002.. The only listed species observed within the project boundaries include the gopher tortoise, gopher frog, and scrub jay. In addition, biologists noted the presence of wire weed and scrub mint.

2.5 Previous Impacts

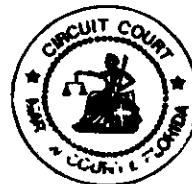
Previous impacts to the St. Michaels Campus at Hobe Sound project site include the borrow pit area and the primitive trails located throughout the project site.

2.6 Agency Correspondance

Agency coordination correspondence is located in Appendix A.

3.0 IDENTIFICATION OF PRESERVE AREAS

3.1 Site Plan - All Preserve Areas, right-of-ways and easements are shown on the St. Michaels Campus at Hobe Sound Site Plan (Figure 9). The Site Plan includes a summary of the following: acreage of wetlands under preservation; acreage of native upland habitat under preservation; acreage of common upland habitat under preservation; total acreage under preservation; and total acreage of the Site.



The Site Plan will contain the notation: "PRESERVE AREAS ARE NOT TO BE ALTERED WITHOUT WRITTEN PERMISSION OF THE MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS."

3.2 **Legal Recording** - The final St. Michaels Campus at Hobe Sound Site Plan will be recorded with the PAMP by the Martin County Clerk of Courts. The Site Plan and the PAMP will be labeled with the appropriate O.R. Book and Page Number and copies of each recorded document will be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.

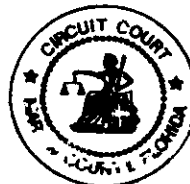
4.0 SURVEYING, MARKING AND BARRICADING REQUIREMENTS

All Preserve Areas shown on the Site Plan for St. Michaels Campus at Hobe Sound will be surveyed and marked in the field with appropriate survey markers and signage. During the clearing and construction phases of the project, Preserve Area boundaries will be marked by physical barriers. No plant material will be removed from the Preserve Areas to facilitate surveying, fencing or soil boring/sampling without prior permission from the Martin County Environmental Planning Administrator.

4.1 **Preserve Area Surveying Requirements** - Each Preserve Area will be surveyed and marked with permanent monuments at each corner and at other sites necessary for locating the boundary of the Preserve Area. These permanent monuments will be constructed under the supervision of a Registered Land Surveyor and will be shown on the Site Plan. Map coordinates of each Preserve Area will be provided to the Martin County Environmental Planning Administrator, in a form compatible for use in the County's GIS mapping system.

4.2 **Preserve Area Boundary Markers and Signs** - Preserve Areas will be posted with permanent signs and boundary markers. Boundary Markers will be placed at the corners of residential lots abutting Preserve Areas. Signs will be at least 11 x 14 inches in size and will be posted in conspicuous locations along the Preserve Area boundary, at a frequency of no less than one (1) sign per 500 feet. All boundary markers and signs will be approved by the Martin County Environmental Planning Administrator and they will be in place prior to issuance of a building permit for construction on the site. Illustrations of the signs and markers to be used for this project are included in Appendix B.

4.3 **Barricading Requirements** - Prior to clearing, the developer will ensure that all Preserve Areas are protected with physical barriers during all clearing and construction activities in accordance with the following guidelines. Barricades will be inspected by County Environmental Division staff prior to work approval. Removal of the barricade materials will be done upon issuance of the final Certificate of Occupancy with authorization from appropriate County staff.



Barricades (not including turbidity screens) will be high-visibility orange safety fence extending from the ground to a height of at least 4 feet. Barricades will not be attached to vegetation.

All barricades and turbidity screens will be upright and maintained intact for the duration of construction.

Where areas are proposed for clearing (i.e. building envelope, utilities, drainage, road right-of-way, etc.) the bright orange barricades will be offset at least 10 feet outside the Preserve Area or placed at the dripline of the canopy trees, whichever is greater.

All native vegetation not slated for removal as part of the development plans will be retained in their undisturbed state and will be barricaded at or outside the dripline of the trees.

Cut or fill will meet existing grade without encroaching into Preserve Areas.

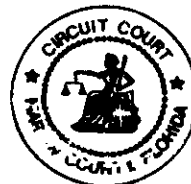
Wetlands will be protected from possible surface water and sediment runoff by the placement of silt screens, hay bales or other turbidity control measures, at or beyond the delineation line prior to any land clearing or construction.

It is the responsibility of the owner and developer of St. Michaels Campus at Hobe Sound to inform all contractors of these Marking and Barricading Requirements. Failure to comply with these Marking and Barricading Requirements will be considered a violation of the Site Plan approval. Further work on the project may be stopped until compliance with the Marking and Barricading Requirements is achieved, and the owner or developer may be required to appear before the Code Enforcement Board.

5.0 USE OF PRESERVE AREAS

5.1 Activities Prohibited In Preserve Areas - Activities prohibited in Preserve Areas or easements within Preserve Areas include, but are not limited to: construction or placing of building materials on or above the ground; dumping or placing soil or other substances such as garbage, trash, and cuttings; removal or destruction of native trees, shrubs or other native vegetation; excavation, dredging or removal of soil materials; diking or fencing; vehicular traffic including use by non-motorized vehicles, recreational vehicles and off-road vehicles; permanent irrigation; trimming, pruning, or fertilization; and any other activities detrimental to drainage, flood control, water conservation, erosion control or fish and wildlife conservation and preservation.

No hazardous material other than fuel for refueling on-site heavy equipment will be stored during the construction phases. On-site fuel tanks shall not be located within twenty-five (25) feet of any Preserve Areas and shall be removed upon completion of construction work.



Buildings proposed to be located adjacent to Preserve Areas shall be set back a minimum of ten (10) feet to allow for construction and maintenance without encroaching into the Preserve Area. All other structures (e.g. pools, sheds, decks, fences) shall be set back a minimum of five (5) feet from the Preserve Area boundary.

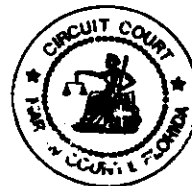
Development activities such as the construction of building pads for associated structures, swales, or culverts for surface water management shall not alter the hydrology of adjacent Preserve Areas. Nor shall any activities increase non-point source pollution in Preserve Areas.

Grazing of cattle and horses or other livestock in Preserve Areas, while not prohibited, is discouraged. Over-grazing can result in destruction of habitat, loss of top soils and changes in hydrology of the area as a result of the loss of ground cover material, increased fertilization from animal droppings, and contamination of surface waters. These and other effects of over-grazing will be considered violations of this PAMP and will be addressed as any other PAMP violation.

6.0 RESTORATION AND MAINTENANCE ACTIVITIES

Except for approved restoration and maintenance activities, Preserve Areas will be left undisturbed. All maintenance of Preserve Areas will be in accordance with this PAMP for St. Michaels Campus at Hobe Sound Maintenance and management activities will be performed by or under the supervision of a qualified environmental professional and must be approved by the Martin County Environmental Planning Administrator. The following restoration and maintenance activities may be allowed within Preserve Areas with prior written approval from the Environmental Planning Administrator: exotic plant removal, revegetation or planting native vegetation, and removal of dead, diseased, or safety hazard plant material.

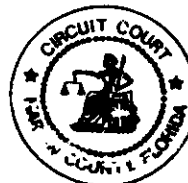
- 6.1 Exotic Vegetation Removal - Exotic vegetation shall be removed from Preserve Areas by the least ecologically-damaging method available. Such methods include hand pulling, hand spading, cutting with hand or chain saws and in-situ treatment with appropriate herbicides. No debris, including dead plants, plant clippings or wood scraps, shall be allowed in Preserve Areas. In addition, all dead plant material and exotic plant debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.
- 6.2 Revegetation - Any revegetation which might be necessary as a result of exotic vegetation removal or site construction activities shall consist of native plant species representative of the existing native plant community. This will ensure that the Preserve Areas maintain indigenous plant associations. Revegetation plans shall be submitted to the Martin County Environmental Planning Administrator for approval prior to implementation.



- 6.3 **Vegetation Removal - Dead or diseased plant material shall be removed from Preserve Areas upon approval by the Martin County Environmental Planning Administrator. Revegetation may be required for any removed plant material. No debris, including dead plants, plant clippings or wood scraps, shall be allowed in Preserve Areas. All dead plant material and debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.**
- 6.4 **Prescribed Burns - Martin County considers prescribed burns an acceptable habitat management tool. When approved by the Martin County Environmental Planning Administrator, they will be conducted by a certified burn manager who will be responsible for obtaining all appropriate permits from State and local agencies.**
- 6.5 **Hydrology - Previous or potential drainage impacts will be corrected to the extent technically feasible. Water quality and the rate, timing, and volume of run-off shall recreate natural conditions for the benefit of onsite wetlands and other waterbodies. Wetlands and waterbodies on adjacent properties shall be protected from adverse impacts.**

7.0 **PROTECTIVE MEASURES FOR LISTED SPECIES**

- 7.1 **Gopher Tortoises – In Florida, gopher tortoises are protected as a Species of Special Concern. Under Florida law, no person may take, possess, transport or sell a Species of Special Concern. No land clearing or construction shall occur until all tortoises which will be impacted are relocated to upland preservation areas and/or coordinated with FFWCC agency personnel. A certified environmental professional will supervise clearing in the areas of the gopher tortoise burrows. Tortoises inhabiting burrows in areas to be developed will be captured and relocated following guidelines set forth below. Tortoise burrows may be bucket trapped or excavated using methodology approved by the Florida Fish and Wildlife Conservation Commission and conducted by an environmental professional possessing a valid relocation permit. During clearing and grubbing operations, equipment operators will be notified of the occurrence of gopher tortoises on-site and instructed to observe for roaming and foraging individuals. Should gopher tortoises be seen during the clearing and grubbing, all equipment operations will be stopped and the gopher tortoises will be captured and relocated into a Preserve Area of the project away from the immediate clearing activities. Once the tortoise(s) have been safely relocated to a Preserve Area and restrained by tortoise fencing, equipment operation can resume.**
- 7.2 **Endemic Species - All gopher tortoise relocation efforts will include trapping of endangered endemic species that may live in the burrow. These endemic species include but are not limited to the Florida mouse (*Peromyscus floridana*), gopher frog (*Rana aerolata*) and Eastern indigo snake (*Drymarchon corias couperi*).**



7.3 **Relocation of Tortoises - If the number of tortoises exceeds the carrying capacity of the remaining natural area, the Martin County Environmental Planning Administrator will be notified and will be provided with a copy of the Gopher Tortoise Relocation Permit or Incidental Take Permit from the Florida Fish and Wildlife Conservation Commission. All relocations shall be carried out by an environmental professional licensed for gopher tortoise relocations. The responsible party shall have access to literature pertaining to gopher tortoise preservation and shall be encouraged to preserve additional areas and to landscape with native vegetation.**

8.0 MISCELLANEOUS PROVISIONS AND RESTRICTIONS

8.1 **Dust:** During construction, dust annoyance to adjacent property owners and Preserve areas shall be eliminated via application of water or other approved means.

8.2 **Noise:** Noise resulting from project site construction shall not exceed the noise levels and other requirements stated in Martin County Ordinances.

8.3 **Periodic Cleanup/Basic Site Restoration:** During construction, all accumulated debris and cleared vegetation will be removed from the project site on a regular basis, and as ordered by the Environmental Consultant and/or Project Engineer. **NO** construction debris or cleared vegetation shall be moved or stored within the on-site Preserve Areas.

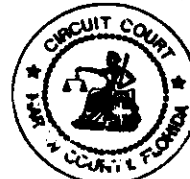
8.4 **Water Quality:** Turbidity curtains and erosion control structures will be installed around all Preserve Areas to prevent siltation and encroachment of turbid waters. All turbidity curtains and erosion control structures installed will be inspected by the Engineer and the Environmental Consultant prior to construction activities.

8.5 **Chemical, Fuel, and Other Hazardous Materials:** All chemicals, fuel, and other hazardous materials used on-site during construction activities, whether herbicide, pesticide, solvent, or reactant of other classification, will be required to have Environmental Protection Agency (EPA) or Housing and Urban Development (HUD) approval. The handling, use, storage, and disposal of such materials, containers, or residues shall be in strict conformance with the manufacturer and or supplier's instructions. **NO** chemicals, fuel, or other hazardous materials will be stored within the Preserve Areas. A hazardous substance cleanup kit will be kept on-site during construction activities. **NO** chemicals, fuel, or other hazardous materials will be stored within twenty-five (25) feet of a preserve area.

8.6 **Construction Equipment:** **NO** heavy equipment or construction equipment shall be stored, cleaned, repaired, or fueled in or within twenty-five (25) feet of a Preserve Area.

9.0 TRANSFER OF RESPONSIBILITIES

The property owner(s) and developers of St. Michaels Campus at Hobe Sound are responsible for implementation of all requirements of this Preserve Area Management Plan until such



time as the developer transfers responsibility to the owners or a successor. The Martin County Environmental Planning Administrator will be notified in writing within thirty (30) days of transfer of ownership of any lands to be preserved under this PAMP. Failure to notify will be considered as non-compliance with the terms of this PAMP. The developer will pay his share of total cost of management activities or fines on a per lot basis if he retains ownership of lots. At such time as the developer is ready to transfer control of the *St. Michaels Campus at Hobe Sound* to the property owners, whether the developer retains ownership of the lots in the project or not, an environmental professional shall certify, in writing, to the Martin County Environmental Planning Administrator, that the Preserve Areas are in full compliance with this PAMP.

The developer and/or successor will be responsible for maintaining the Preserve Areas in their existing natural condition with the periodic removal of invasive exotic vegetation. After transfer of responsibilities, funding for all maintenance and management programs will be the responsibility of all successors.

10.0 MONITORING, REPORTING AND INSPECTIONS

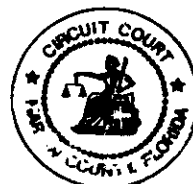
10.1 **Monthly Construction Reports** – During construction of *St. Michaels Campus at Hobe Sound*, the developer will be responsible for submitting a monthly report on the progress of *St. Michaels Campus at Hobe Sound*, which will address all aspects of the site construction relative to the Preserve Areas. Information regarding construction and maintenance of the Preserve Areas, such as placement of barriers and signage, removal of exotic vegetation, revegetation, prescribed burns, etc. will be described and supported with photographs, where appropriate.

10.2 Annual Monitoring Reports

The Annual Monitoring Report will list any violation of the Preserve Area Management Plan and make recommendations and develop a schedule for remedial action along with any enhancement activities proposed for the coming year. Appropriate code enforcement actions, including fines, may result from failure to report violations.

Monitoring and reporting will be conducted annually by a qualified environmental professional for a period of five years from the date of completion of the project or project phase encompassing the monitored area. Annual monitoring will be conducted at the end of the wet season (usually by November 30) and a report of the monitoring will be submitted to the Martin County Environmental Planning Administrator within 30 days of the completion of the monitoring.

The Annual Monitoring Reports will document changes in vegetation including encroachment and/or overgrowth of noxious or exotic vegetation. Fixed-point panoramic photos of all Preserve Areas will be included in each report. The reports will



include recommendations for exotic vegetation removal, revegetation, and any additional enhancement activities necessary to maintain the Preserve Area. A timetable for action within 90 days of the report will be prepared and followed.

A copy of the proposed Annual Monitoring Plan is attached to this PAMP as Appendix C.

Upon request, Martin County Environmental Planning staff may meet with the responsible parties to review the annual monitoring report findings and supply technical assistance and support for stewardship.

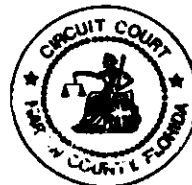
The first Annual Monitoring Report due in compliance with this PAMP will be submitted to the Martin County Environmental Planning Administrator no later than thirty (30) days after permit issuance. Subsequent Annual Monitoring Reports will be due on the same date for the next four years.

After the initial five-year monitoring period, the Preserve Areas may be subject to periodic review and, if conditions warrant, will be subject to further monitoring and maintenance to ensure environmental integrity, consistent with the provisions of this Plan.

10.3 Inspections - Martin County is authorized to inspect any County regulated site or appurtenance. Duly authorized representatives of Martin County may, at any time, upon presenting proper identification, enter upon and shall be given access to any premises for the purpose of such inspection.

11.0 ENFORCEMENT

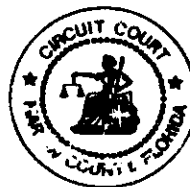
Martin County shall have the right to enforce the provisions of this PAMP through any available administrative or civil proceeding, which may result in penalties. Restoration of habitat and other remedies, such as fines and fees covering staff time, may be required of any person, corporation or other entity found in violation of any of the provisions of this PAMP or of Article 10 of the Martin County Land Development Regulations.



APPENDIX A

Agency Correspondence

T:/gmd/gme/Applications_Forms/NEW_Pamp



Page 31 of 33
Revised 1/4/05

OR BK 02063 PG 2086

R.L. WEIGT
Environmental Consultants, Inc.

(772) 546-6255
FAX (772) 546-2316
E-mail: rlw1@adelphia.net

18 December 2003

Ms. Sharon Tyson
U.S. Fish & Wildlife Service
1339 20th Street
Vero Beach, Florida 32960

Re: St. Michael's Campus at Hobe Sound Project Site, +/- 142.9 Acres of land located west of U.S. Highway #1 (US-1) and south of Bridge Road, Sections 27 and 28, Township 39S, Range 42E, Martin County, Florida

Dear Ms. Tyson:

R.L. Weigt Environmental Consultants, Inc. (RLW) is pleased to provide you with the enclosed Scrub Jay Survey conducted at the referenced project site. RLW is hereby requesting initiation of an information scrub jay coordination with the U.S. Fish and Wildlife Service (FWS). As you will note from the enclosed report, the Applicant will not impact any scrub jay habitat located on-site. Since no scrub jay habitat will be impacted, it is RLW's opinion that neither a Habitat Conservation Plan (HCP) nor an Incidental Take Permit will be necessary for this project.

Please review the enclosed and contact me at (772) 546-6255 if you have any questions or require additional information. Thank you for your cooperation and assistance concerning this matter.

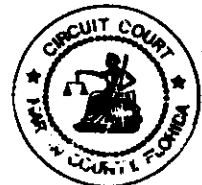
Sincerely,



Michael A. Aiken
Environmental Manager

MAA/djb

cc: Mark Matthes (Thomas Lucido & Associates, Inc.)
Dr. James Cantwell
Casey Cummings (c/o Dr. James Cantwell)
File #03-102.01





South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045
TDD (561) 697-2574

CON 24-06

Regulation Department

05

April 27, 1998

Mr. Robert L. Weigt
R.L. Weigt, Environmental Consultants, Inc.
10762 SE Federal Highway
Hobe Sound, FL 33455

Dear Mr. Weigt:

Subject: Application No. 971229-9, Wetland Boundary Survey for Banner Lake Parcel, Martin County S27,28/T39S/R42E

Staff has received the survey information compiled from the site inspections. The survey appears to accurately define the landward edge of wetland areas (pursuant to Chapter 62-340, Florida Administrative Code) inspected during the site visits.

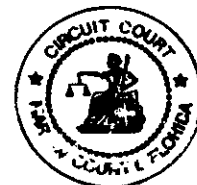
District staff will aid in additional pre-application efforts as time allows with the understanding that such verifications are informal, subject to further consideration during application review, and are not binding upon the District until a permit has been issued. The survey information has been added to the pre-application file at the West Palm Beach office. If you have any further questions pertaining to the pre-application information, please contact Scott McNabb at (561)687-6856.

Sincerely,

Anita R. Bain
Senior Supervising Environmental Analyst
Natural Resource Management Division

ARB/sbm
Enclosures (6 copies of Wetland Survey)

c: Martin County Growth Management Div. - w/Enclosure (1 copy)



Governing Board:
Frank Williamson, Jr., Chairman
Eugene K. Pettis, Vice Chairman
Mitchell W. Berger

Vera M. Carter
William E. Graham
William Hammond

Richard A. Machek
Michael D. Minton
Miriam Singer

Samuel E. Poole III, Executive Director
Michael Slayton, Deputy Executive Director

Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680

OR BK 02063 PG 2088



South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045
TDD (561) 697-2574

CON 24-01

Regulation Department

January 14, 1998

Mr. Robert Weigt
R.L. Weigt Environmental Consultants, Inc.
10762 S.E. Federal Hwy.
Hobe Sound, FL 33455

**Subject: Application No. 971229-9, Banner Lake Parcel, Martin County
S27,28/T39S/R42E**

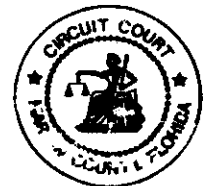
Dear Mr. Weigt:

The District offers the following in response to your request for a determination of wetland boundaries and other surface waters located within the subject property.

A site inspection was conducted by Scott McNabb, Staff Environmental Analyst, of the Natural Resource Management Division, on January 7, 1998.

The aerial photographs and project boundaries (defined by the black or blue lines on the attached aerial) define the area that was inspected. Based on the information provided, a portion of the project area is wetlands or other surface waters as defined by Chapter 62-340 F.A.C. Wetlands and other surface waters are indicated by red cross-hatching (ditches are indicated by red lines) on the attached Exhibits 2/3. Dredging or filling activities in these areas will require a permit from this agency. In addition, the attached memorandum further describes the areas inspected.

This correspondence is an informal pre-application determination of wetlands and other surface waters. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal pre-application wetland determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules. A binding wetland determination may be obtained by petitioning the District for a wetland declaratory statement pursuant to FAC Rule 62-312.040 or by applying for a permit.



Governing Board:
Frank Williamson, Jr., Chairman
Eugene K. Pettis, Vice Chairman
Mitchell W. Berger

Vera M. Carter
William E. Graham
William Hammond

Richard A. Machek
Michael D. Minton
Miriam Singer

Samuel E. Poole III, Executive Director
Michael Slayton, Deputy Executive Director

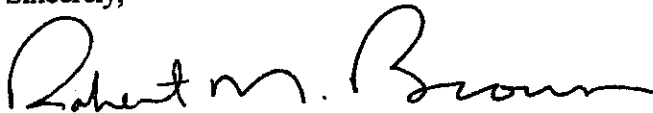
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680

OR BK 02063 PG 2089

Mr. Robert Weigt
SUBJECT: Banner Lake
DATE: January 14, 1998
Page 2 of 2

A file has been set up at the West Palm Beach office with pre-application materials. If you have any further questions please contact Scott McNabb at (561) 687-6856.

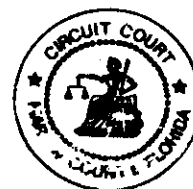
Sincerely,



Robert M. Brown
Supervising Professional
Natural Resource Management Division

RMB/sbm - Attachment (Aerial Photograph and Memorandum)

- c: FDEP- Larry O'Donnell (location map, aerial, memorandum)
- Martin County Growth Management Div. (location map, aerial, memorandum)
- USACOE (location map)



MEMORANDUM

TO: File

FROM: Scott B. McNabb, Staff Environmental Analyst, NRM Division

THROUGH: Robert M. Brown, Supervising Professional, NRM Division

DATE: January 14, 1998

SUBJECT: Application No. 971229-9, Pre-application Inspection for the Banner Lake, Martin County S27,28/T39S/R42E

At the request of Mr. Robert Weigt, I inspected wetland areas and other surface waters on approximately 200 acres of undeveloped land. The wetland areas are shown highlighted in red on attached Exhibit 2/3. The site is located south of Bridge Road, east and west of U.S. Hwy. 1 and north of the Eaglewood development (the entrance road to this development is part of the subject site). The property consists of four separate parcels, three of which are west of U.S. Hwy. 1. The remaining parcel is east of U.S. Hwy 1.

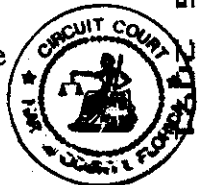
The eastern parcel (Parcel A, refer to Exhibit 2) does not contain any wetlands and is comprised of a sand pine and oak scrub habitat. It is anticipated that this parcel provides habitat for scrub jays, as well as gopher tortoises and several species of threatened or endangered plant species.

Parcel B is located west of U.S. Hwy 1, just south of Bridge Road. This parcel is vegetated with sand pine, scrub oak and Brazilian pepper. There are no wetlands on this parcel. This parcel may contain gopher tortoises. Scrub jays and other threatened or endangered species are not anticipated due to the size, location and condition of this parcel.

Parcel C is also located west of U.S. Hwy. 1. A small area of degraded scrub vegetation is located on the eastern portion of this parcel, while the western 2/3's of this parcel were previously cleared. There are no wetlands on this parcel. No threatened, endangered or species of special concern are anticipated due to the condition of this parcel.

Parcel D is the largest of the four parcels and is located west of U.S. Hwy. 1. The majority of this parcel is comprised of a good quality sand ridge community vegetated by sand pine, scrub oak, saw palmetto, rosemary, lyonia and gallberry. Several trails bisect this parcel. Approximately 10 acres in the western end of this parcel were mined for sand and also used as a recreational facility.

This parcel also is directly adjacent to Banner Lake, a large natural lake/wetland system. Banner Lake is in good condition. It is unclear as to where the actual property line is located between this site and the lake. However, the line was drawn on the aerial to exclude the lake/wetland known as Banner Lake (the property lines on several of the exhibits include small areas of this wetland and are highlighted in red). Should future surveys indicate that the property line is actual property line includes a portion of the lake/wetland, additional wetland delineations will be required. Appropriate upland buffers will be required between any development and Banner Lake. It is also unclear if portions of the hardwood slough to the west of the subject site are located within the boundaries. Additional wetland delineation may be required in this area once the property boundaries have been surveyed.



OK BK 02063 PG 2091

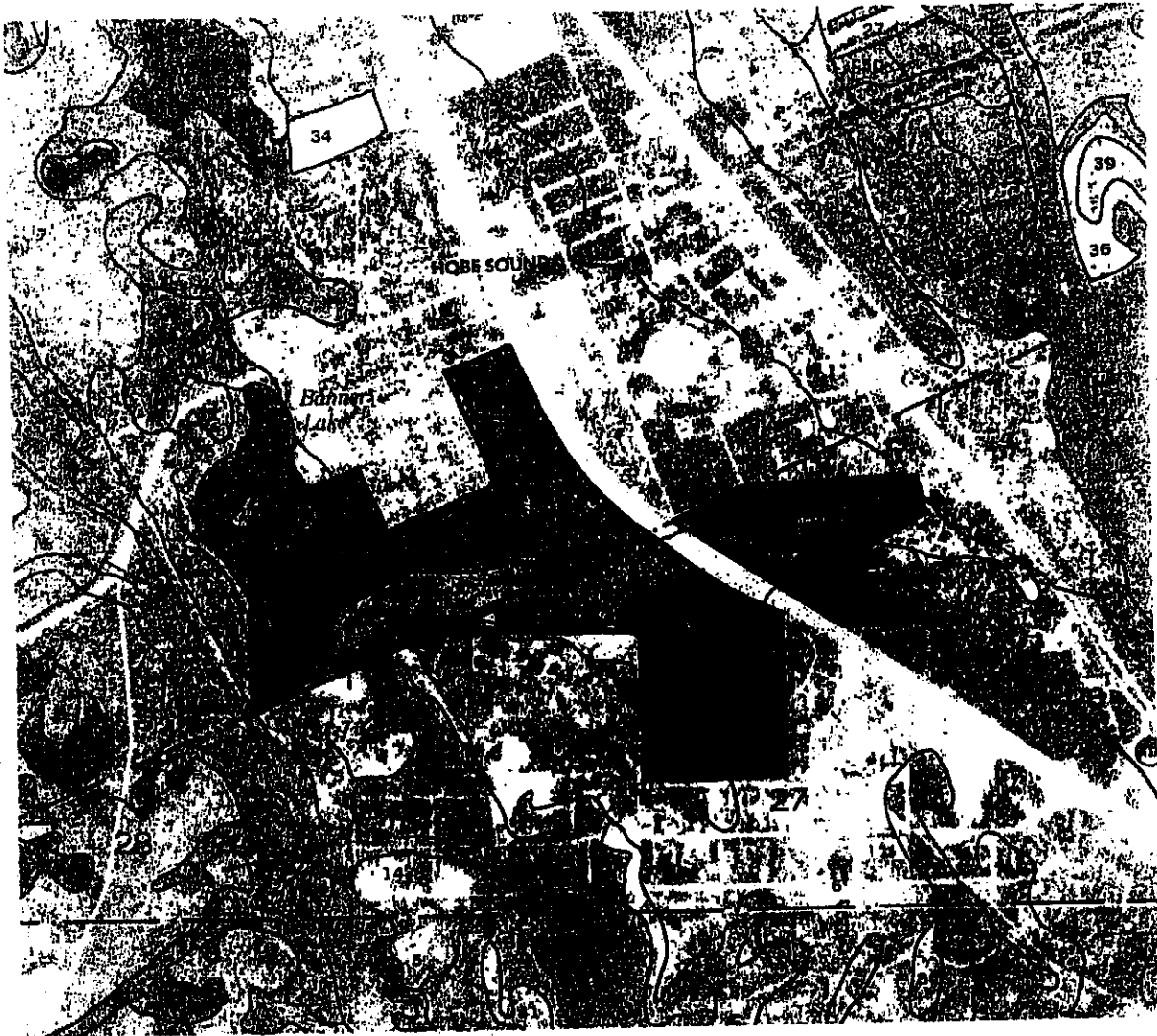
OR BK 02063 PG 2091



North

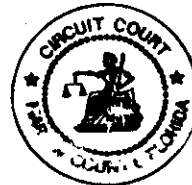


SCALE: 1" = 1666.68'



LEGEND

- 6 - Paola sand, 0 to 8% slopes
- 7 - St. Lucie sand, 0 to 8 % slopes
- 14 - Satellite Variant sand
- 68 - Pits
- 73 - Samsula Muck
- 77 - St. Lucie sand, 8 to 20% slopes



RLW #97-013
19 December 1997

Section 27 & 28, Township 39S, Range 42E, Martin County, FL
Source: USDA Soil Conservation Service, Soil Survey of Martin County Area, FI

97-13Soils.dwg

HOBE SOUND LAND COMPANY
SOILS MAP

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
10762 S.E. FEDERAL HWY. , HOBE SOUND, FL. 33455
(561) 546-6255 FAX (561) 546-2316

OR BK 02063 PG 2092



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019



REPLY TO
ATTENTION OF

" "
MAY 12 1998

Regulatory Division
South Permits Branch
Vero Beach Regulatory Office
199707118 (JF-TM)

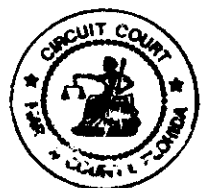
Mr. Robert L. Weigt
Environmental Consultants, Inc.
10762 S.E. Federal Highway
Hobe Sound, Florida 33455

Dear Mr. Weigt:

Reference is made to your correspondence received on April 7, 1998 for a jurisdictional determination for "Hobe Sound Land Company, US 1 Site" located in Section 27, Township 39 South, Range 42 East, Martin County, Florida. An onsite meeting on January 8, 1998 was attended by Ms. Terry Morgan.

The delineation shown on the attached survey which were submitted with your correspondence, have been verified and represent the approximate upland/wetland boundary for purposes of determining the U.S. Army Corps of Engineers (USACE) jurisdictional line. If any changes in the location of this project are necessary, another jurisdictional determination should be conducted. It is your responsibility to obtain State, local or other Federal approvals for your project, if required.

Please be advised that this jurisdictional delineation shown reflects current policy and regulations and is valid for a period no longer than 5 years from the date of this letter. If after the 5-year period this jurisdictional determination has not been specifically revalidated by the USACE, it shall automatically expire. Any reliance upon jurisdictional correspondence beyond that time frame may

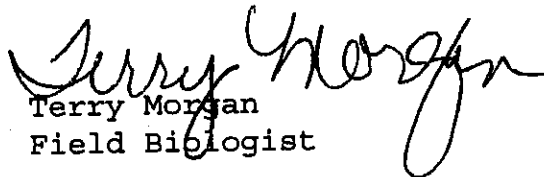


lead to incorrect planning and design efforts as well as possible violations of current Federal laws and/or regulations. You may revalidate or update the jurisdiction guidance as appropriate for your project duration. Any revalidation or updating will then reflect current Federal laws and regulations.

The jurisdictional areas are regulated by the USACE pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbor Act of 1899. Any activities undertaken in these areas may require Department of the Army authorization. Other federal, state or local permits may also be required.

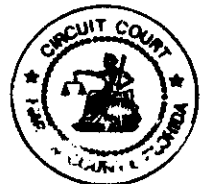
Thank you for your cooperation with the USACE Regulatory Program. If you have any questions, please contact Ms. Terry Morgan at the above letterhead address or by telephone at (561)567-1496 or facsimile (561)770-3611.

Sincerely,


Terry Morgan
Field Biologist

Enclosure

cc: SFWMD, West Palm Beach
NRCS, Stuart Field Office





United States Department of the Interior

FISH AND WILDLIFE SERVICE

South Florida Ecosystem Office

P.O. Box 2676

Vero Beach, Florida 32961-2676

August 25, 1997

Mr. Robert L. Weigt
President
R.L. Weigt Environmental Consultants, Inc.
10762 S.E. Federal Highway
Hobe Sound, Florida 33455

Dear Mr. Weigt:

Thank you for your August 11, 1997, letter requesting information on federally listed species and critical habitat potentially present at an approximately 200-acre parcel located along U.S. 1 in sections 27 and 28, Township 39 South, Range 42 East, Hobe Sound, Martin County, Florida. We understand you plan to conduct plant and animal surveys on the project site.

The U.S. Fish and Wildlife Service (FWS) has reviewed the information in your letter and examined information available to us on the presence of threatened and endangered species in the vicinity of the site. The threatened Florida scrub jay (*Aphelocoma coerulescens*) may occur along both sides of U.S. 1 in the vicinity of the proposed project site; however, the above determination has not been verified by a site inspection. The scrub jay prefers scrub live oaks from 3-10 feet tall surrounded with patches of bare, sandy ground and low, sparse vegetation with little canopy cover. Scrub jay families may maintain a territory averaging 20 to 25 acres.

At this time, the FWS recommends you conduct surveys in accordance with the *Ecology and Development-related Habitat Requirements of the Florida Scrub Jay (Aphelocoma coerulescens)* (Fitzpatrick *et al.* 1991) to determine if the Florida scrub jay has established territories within the area of the project. You should be able to obtain a copy of this document from the Office of Environmental Services, Florida Game and Fresh Water Fish Commission, 620 S. Meridian Street, Tallahassee, Florida 32399-1600.

We have provided for your consideration a list of species that are protected as either threatened or endangered under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), as well as candidates for listing which may be present in Martin County. Since this list does not include State-listed species, the Florida Game and Fresh Water Fish Commission should be contacted to identify those species potentially present in the vicinity.

In addition, we are providing you with a list of species that we would consider during our review of any proposal associated with this project. This list represents species that the FWS is required



to protect and conserve under other authorities, such as the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*) and the Migratory Bird Treaty Act (16 U.S.C. 701 *et seq.*). We are providing this list as technical assistance only. If you would like to discuss means and methods to conserve these species, please contact this office.

Thank you for the opportunity to provide this information. If you have any questions, please contact Diane Bowen at (561) 562-3909.

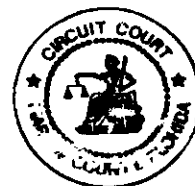
Sincerely,

Thomas E. Grahl

Thomas E. Grahl
Acting Field Supervisor
South Florida Ecosystem Office

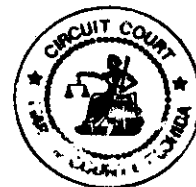
Enclosures

cc:
COE, Vero Beach, FL
GFC, Vero Beach, FL



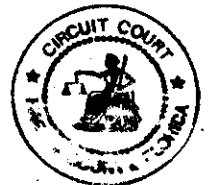
Literature Cited

Fitzpatrick, J.W., G.E. Woolfenden, and M.T. Kopeny. 1991. *Ecology and Development-related Habitat Requirements of the Florida Scrub Jay (Aphelocoma coerulescens coerulescens)*. Florida Game and Fresh Water Fish Commission, Nongame Wildlife Program Technical Report No. 8, Tallahassee, FL. 49 pp.



FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES
AND CANDIDATES FOR FEDERAL LISTING
IN MARTIN COUNTY

Scientific Name	Common Name	Status
Amphibians and Reptiles		
<i>Alligator mississippiensis</i>	American alligator	T(S/A)
<i>Caretta caretta</i>	Loggerhead sea turtle	T
<i>Chelonia mydas</i>	Green sea turtle	E
<i>Dermochelys coriacea</i>	Leatherback sea turtle	E
<i>Drymarchon corais couperi</i>	Eastern indigo snake	T
<i>Eretmochelys imbricata</i>	Hawksbill sea turtle	E
<i>Lepidochelys kempii</i>	Kemp's (=Atlantic) ridley sea turtle	E
Birds		
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	T
<i>Campephilus principalis principalis</i>	Ivory-billed woodpecker (probably extinct in south Florida)	E
<i>Charadrius melodus</i>	Piping plover	T
<i>Dendroica kirtlandii</i>	Kirtland's warbler	E
<i>Haliaeetus leucocephalus</i>	Bald eagle	T
<i>Mycteria americana</i>	Wood stork	E
<i>Picoides (=Dendrocopos) borealis</i>	Red-cockaded woodpecker	E
<i>Polyborus (=Caracara) plancus audubonii</i>	Audubon's crested caracara	T
<i>Rostrhamus sociabilis plumbeus</i>	Snail kite	E
<i>Sterna dougalli dougalli</i>	Roseate tern	T
<i>Vermivora bachmanii</i>	Bachman's warbler	E
Mammals		
<i>Trichechus manatus</i>	West Indian manatee	E*
<i>Ursus americanus floridanus</i>	Florida black bear	C
Plants		
Family Anonaceae		
<i>Asimina tetramera</i>	Four-petal pawpaw	E
Family Cladoniaceae		
<i>Cladonia perforata</i>	Florida perforate cladonia	E
Family Convolvulaceae		
<i>Jacquemontia reclinata</i>	Beach jacquemontia	E



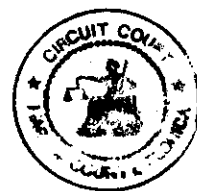
Family Polygalaceae

Polygala smallii

Tiny polygala

E

* Critical habitat has been designated for this species in this county.



MIGRATORY BIRDS OCCURRING IN SOUTH FLORIDA

ORDER GAVIIFORMES

FAMILY GAVIIDAE

- Gavia stellata*, Red-throated Loon
- Gavia immer*, Common Loon
- Gavia pacifica*, Pacific Loon

ORDER PODICIPEDIFORMES

FAMILY PODICIPEDIDAE

- Tachybaptus dominicus*, Least Grebe
- Podilymbus podiceps*, Pied-billed Grebe
- Podiceps auritus*, Horned Grebe
- Podiceps nigricollis*, Eared Grebe

ORDER PROCELLARIIFORMES

FAMILY PROCELLARIIDAE

- Calonectris diomedea*, Cory's Shearwater
- Puffinus gravis*, Greater Shearwater
- Puffinus griseus*, Sooty Shearwater
- Puffinus puffinus*, Manx Shearwater
- Puffinus lherminieri*, Audubon's Shearwater

FAMILY HYDROBATIDAE

- Oceanites oceanicus*, Wilson's Storm-Petrel
- Oceanodroma leucorhoa*, Leach's Storm-Petrel
- Oceanodroma castro*, Band-rumped Storm-Petrel

ORDER PELECANIFORMES

FAMILY PHAETHONTIDAE

- Phaethon lepturus*, White-tailed Tropicbird
- Phaethon aethereus*, Red-billed Tropicbird

FAMILY SULIDAE

- Sula dactylatra*, Masked Booby
- Sula leucogaster*, Brown Booby
- Sula sula*, Red-footed Booby
- Sula bassanus*, Northern Gannet

FAMILY PELECANIDAE

- Pelecanus erythrorhynchos*, American White Pelican
- Pelecanus occidentalis*, Brown Pelican

FAMILY PHALACROCORACIDAE

- Phalacrocorax carbo*, Great Cormorant
- Phalacrocorax auritus*, Double-crested Cormorant

FAMILY ANHINGIDAE

- Anhinga anhinga*, Anhinga

FAMILY FREGATIDAE

- Fregata magnificens*, Magnificent Frigatebird

ORDER CICONIIFORMES

FAMILY ARDEIDAE

- Botaurus lentiginosus*, American Bittern
- Ixobrychus exilis*, Least Bittern
- Ardea herodias*, Great Blue Heron
- Casmerodius albus*, Great Egret
- Egretta thula*, Snowy Egret

Egretta caerulea, Little Blue Heron

Egretta tricolor, Tricolored Heron

Egretta rufescens, Reddish Egret

Bubulcus ibis, Cattle Egret

Butorides striatus, Green-backed Heron

Nycticorax nycticorax, Black-crowned Night Heron

Nycticorax violaceus, Yellow-crowned Night Heron

FAMILY THRESKIORNITHIDAE

Eudocimus albus, White Ibis

Eudocimus ruber, Scarlet Ibis

Plegadis falcinellus, Glossy Ibis

Plegadis chihi, White-faced Ibis

Ajaia ajaja, Roseate Spoonbill

FAMILY CICONIIDAE

Mycteria americana, Wood Stork

ORDER PHOENICOPTERIFORMES

FAMILY PHOENICOPTERIDAE

Phoenicopus ruber, Greater Flamingo

ORDER ANSERIFORMES

FAMILY ANATIDAE

Dendrocygna bicolor, Fulvous Whistling-Duck

Dendrocygna autumnalis, Black-bellied Whistling-Duck

Anser albifrons, Greater White-fronted Goose

Chen caerulescens, Snow Goose

Branta bernicla, Brant

Branta canadensis, Canada Goose

Aix sponsa, Wood Duck

Anas crecca, Green-winged Teal

Anas rubripes, American Black Duck

Anas fulvigula, Mottled Duck

Anas platyrhynchos, Mallard

Anas bahamensis, White-cheeked Pintail

Anas acuta, Northern Pintail

Anas discors, Blue-winged Teal

Anas cyanoptera, Cinnamon Teal

Anas clypeata, Northern Shoveler

Anas strepera, Gadwall

Anas penelope, Eurasian Wigeon

Anas americana, American Wigeon

Aythya valisineria, Canvasback

Aythya americana, Redhead

Aythya collaris, Ring-necked Duck

Aythya marila, Greater Scaup

Aythya affinis, Lesser Scaup

Somateria mollissima, Common Eider

Somateria spectabilis, King Eider

Histrionicus histrionicus, Harlequin Duck

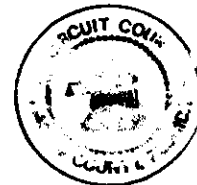
Clangula hyemalis, Oldsquaw

Melanitta nigra, Black Scoter

Melanitta perspicillata, Surf Scoter

Melanitta fusca, White-winged Scoter

Bucephala clangula, Common Goldeneye



Bucephala albeola, Bufflehead
Lophodytes cucullatus, Hooded Merganser
Mergus merganser, Common Merganser
Mergus serrator, Red-breasted Merganser
Oxyura jamaicensis, Ruddy Duck
Oxyura dominica, Masked Duck

ORDER FALCONIFORMES

FAMILY CATHARTIDAE

Coragyps atratus, Black Vulture
Cathartes aura, Turkey Vulture

FAMILY ACCIPITRIDAE

Pandion haliaetus, Osprey
Elanoides forficatus, American Swallow-tailed Kite
Elanus caeruleus, Black-shouldered Kite
Rhostrhamus sociabilis, Snail Kite
Ictinia mississippiensis, Mississippi Kite
Haliaeetus leucocephalus, Bald Eagle
Circus cyaneus, Northern Harrier
Accipiter striatus, Sharp-shinned Hawk
Accipiter cooperii, Cooper's Hawk
Buteo lineatus, Red-shouldered Hawk
Buteo platypterus, Broad-winged Hawk
Buteo brachyurus, Short-tailed Hawk
Buteo swainsoni, Swainson's Hawk
Buteo jamaicensis, Red-tailed Hawk

FAMILY FALCONIDAE

Polyborus plancus, Crested Caracara
Falco sparverius, American Kestrel
Falco columbarius, Merlin
Falco peregrinus, Peregrine Falcon

ORDER GRUIFORMES

FAMILY RALLIDAE

Coturnicops noveboracensis, Yellow Rail
Laterallus jamaicensis, Black Rail
Rallus longirostris, Clapper Rail
Rallus elegans, King Rail
Rallus limicola, Virginia Rail
Porzana carolina, Sora
Porphyryla martinica, Purple Gallinule
Gallinula chloropus, Common Moorhen
Fulica americana, American Coot

FAMILY ARAMIDAE

Aramus guarauna, Limpkin

FAMILY GRUIDAE

Grus canadensis, Sandhill Crane

ORDER CHARADRIIFORMES

FAMILY CHARADRIIDAE

Pluvialis squatarola, Black-bellied Plover
Pluvialis dominica, Lesser Golden-Plover
Charadrius alexandrinus, Snowy Plover
Charadrius wilsonia, Wilson's Plover

Charadrius semipalmatus, Semipalmated Plover
Charadrius melodus, Piping Plover
Charadrius vociferus, Killdeer
Charadrius montanus, Mountain Plover

FAMILY HAEMATOPODIDAE

Haematopus palliatus, American Oystercatcher

FAMILY RECURVIROSTRIDAE

Himantopus mexicanus, Black-necked Stilt
Recurvirostra americana, American Avocet

FAMILY SCOLOPACIIDAE

Tringa melanoleuca, Greater Yellowlegs
Tringa flavipes, Lesser Yellowlegs
Tringa solitaria, Solitary Sandpiper
Catoptrophorus semipalmatus, Willet
Actitis macularia, Spotted Sandpiper
Bartramia longicauda, Upland Sandpiper
Numenius phaeopus, Whimbrel
Numenius americanus, Long-billed Curlew
Limosa limosa, Black-tailed Godwit
Limosa haemastica, Hudsonian Godwit
Limosa fedoa, Marbled Godwit
Arenaria interpres, Ruddy Turnstone
Aphriza virgata, Surfbird
Calidris canutus, Red Knot
Calidris alba, Sanderling
Calidris pusilla, Semipalmated Sandpiper
Calidris mauri, Western Sandpiper
Calidris minutilla, Least Sandpiper
Calidris fuscicollis, White-rumped Sandpiper
Calidris bairdii, Baird's Sandpiper
Calidris melanotos, Pectoral Sandpiper
Calidris acuminata, Sharp-tailed Sandpiper
Calidris maritima, Purple Sandpiper
Calidris alpina, Dunlin
Calidris ferruginea, Curlew Sandpiper
Calidris himantopus, Stilt Sandpiper
Tryngites subruficollis, Buff-breasted Sandpiper
Philomachus pugnax, Ruff
Limnodromus griseus, Short-billed Dowitcher
Limnodromus scolopaceus, Long-billed Dowitcher
Gallinago gallinago, Common Snipe
Scolopax minor, American Woodcock
Phalaropus tricolor, Wilson's Phalarope
Phalaropus lobatus, Red-necked Phalarope
Phalaropus fulicaria, Red Phalarope

FAMILY LARIDAE

Stercorarius pomarinus, Pomarine Jaeger
Stercorarius parasiticus, Parasitic Jaeger
Stercorarius longicaudus, Long-tailed Jaeger
Larus atricilla, Laughing Gull
Larus pipixcan, Franklin's Gull
Larus minutus, Little Gull
Larus ridibundus, Common Black-headed Gull
Larus philadelphia, Bonaparte's Gull



Larus delawarensis, Ring-billed Gull
Larus argentatus, Herring Gull
Larus thayeri, Thayer's Gull
Larus fuscus, Lesser Black-backed Gull
Larus hyperboreus, Glaucous Gull
Larus marinus, Great Black-backed Gull
Rissa tridactyla, Black-legged Kittiwake
Xema sabini, Sabine's Gull
Sterna nilotica, Gull-billed Tern
Sterna caspia, Caspian Tern
Sterna maxima, Royal Tern
Sterna sandvicensis, Sandwich Tern
Sterna dougallii, Roseate Tern
Sterna hirundo, Common Tern
Sterna paradisaea, Arctic Tern
Sterna forsteri, Forster's Tern
Sterna antillarum, Least Tern
Sterna anaethetus, Bridled Tern
Sterna fuscata, Sooty Tern
Chlidonias niger, Black Tern
Anous stolidus, Brown Noddy
Anous minutus, Black Noddy
Rynchops niger, Black Skimmer

FAMILY ALCIDAE

Alle alle, Dovekie
Alca torda, Razorbill

ORDER COLUMBIFORMES

FAMILY COLUMBIDAE

Columba squamosa, Scaly-naped Pigeon
Columba leucocephala, White-crowned Pigeon
Columba fasciata, Band-tailed Pigeon
Zenaida asiatica, White-winged Dove
Zenaida aurita, Zenaida Dove
Zenaida macroura, Mourning Dove
Columbina passerina, Common Ground-Dove
Geotrygon chrysis, Key West Quail-Dove
Geotrygon montana, Ruddy Quail-Dove

ORDER CUCULIFORMES

FAMILY CUCULIDAE

Coccyzus erythrophthalmus, Black-billed Cuckoo
Coccyzus americanus, Yellow-billed Cuckoo
Coccyzus minor, Mangrove Cuckoo
Crotophaga ani, Smooth-billed Ani
Crotophaga sulcirostris, Groove-billed Ani

ORDER STRIGIFORMES

FAMILY TYTONIDAE

Tyto alba, Common Barn-Owl

FAMILY STRIGIDAE

Otus asio, Eastern Screech-Owl
Bubo virginianus, Great Horned Owl
Athene cunicularia, Burrowing Owl
Strix varia, Barred Owl

Asio otus, Long-eared Owl
Asio flammeus, Short-eared Owl
Aegolius acadicus, Northern Saw-whet Owl

ORDER CAPRIMULGIFORMES

FAMILY CAPRIMULGIDAE

Chordeiles acutipennis, Lesser Nighthawk
Chordeiles minor, Common Nighthawk
Chordeiles gundlacchii, Antillean Nighthawk
Caprimulgus carolinensis, Chuck-will's-widow
Caprimulgus vociferus, Whip-poor-will

ORDER APODIFORMES

FAMILY APODIDAE

Chaetura pelagica, Chimney Swift
Tachornis phoenicobia, Antillean Palm Swift

FAMILY TROCHILIDAE

Amazilia yucatenensis, Buff-bellied Hummingbird
Calliphlox evelynae, Bahama Woodstar
Archilochus colubris, Ruby-throated Hummingbird
Archilochus alexandri, Black-chinned Hummingbird
Selasphorus rufus, Rufous Hummingbird

ORDER CORACIIFORMES

FAMILY ALCEDINIDAE

Ceryle alcyon, Belted Kingfisher

ORDER PICIFORMES

FAMILY PICIDAE

Melanerpes erythrocephalus, Red-headed Woodpecker
Melanerpes carolinus, Red-bellied Woodpecker
Sphyrapicus varius, Yellow-bellied Sapsucker
Picoides pubescens, Downy woodpecker
Picoides villosus, Hairy woodpecker
Picoides borealis, Red-cockaded woodpecker
Colaptes auratus, Northern Flicker
Dryocopus pileatus, Pileated Woodpecker
Campephilus principalis, Ivory-billed Woodpecker

ORDER PASSERIFORMES

FAMILY TYRANNIDAE

Contopus borealis, Olive-sided flycatcher
Contopus virens, Eastern Wood-Pewee
Empidonax flaviventris, Yellow-bellied Flycatcher
Empidonax virescens, Acadian Flycatcher
Empidonax alnorum, Alder Flycatcher
Empidonax traillii, Willow Flycatcher
Empidonax minimus, Least Flycatcher
Sayornis nigricans, Black Phoebe
Sayornis phoebe, Eastern Phoebe
Sayornis saya, Say's Phoebe
Pyrocephalus rubinus, Vermilion Flycatcher
Myiarchus cinerascens, Ash-throated Flycatcher
Myiarchus crinitus, Great Crested Flycatcher
Myiarchus tyrannulus, Brown-crested Flycatcher
Tyrannus vociferans, Cassin's Kingbird



Tyrannus verticalis, Western Kingbird
Tyrannus tyrannus, Eastern Kingbird
Tyrannus dominicensis, Gray Kingbird
Tyrannus caudifasciatus, Loggerhead Kingbird
Tyrannus forficatus, Scissor-tailed Flycatcher
Tyrannus savana, Fork-tailed Flycatcher

FAMILY ALAUDIDAE

Eremophila alpestris, Horned Lark

FAMILY HIRUNDINIDAE

Progne subis, Purple Martin
Tachycineta bicolor, Tree Swallow
Tachycineta cyaneoviridis, Bahama Swallow
Stelgidopteryx serripennis, Northern Rough-winged Swallow
Riparia riparia, Bank Swallow
Hirundo pyrrhonota, Cliff Swallow
Hirundo fulva, Cave Swallow
Hirundo rustica, Barn Swallow

FAMILY CORVIDAE

Cyanocitta cristata, Blue Jay
Aphelocoma coerulescens, Scrub Jay
Corvus brachyrhynchos, American Crow
Corvus ossifragus, Fish Crow

FAMILY PARIDAE

Parus carolinensis, Carolina Chickadee
Parus bicolor, Tufted Titmouse

FAMILY SITTIDAE

Sitta canadensis, Red-breasted Nuthatch
Sitta pusilla, Brown-headed Nuthatch

FAMILY CERTHIIDAE

Certhia americana, Brown Creeper

FAMILY TROGLODYTIDAE

Thryothorus ludovicianus, Carolina Wren
Troglodytes aedon, House Wren
Troglodytes troglodytes, Winter Wren
Cistothorus platensis, Sedge Wren
Cistothorus palustris, Marsh Wren

FAMILY MUSCICAPIDAE

SUBFAMILY SYLVIINAE

Regulus satrapa, Golden-crowned Kinglet
Regulus calendula, Ruby-crowned Kinglet
Poliopitila caerulea, Blue-gray Gnatcatcher

SUBFAMILY TURDINAE

Oenanthe oenanthe, Northern Wheatear
Sialis sialis, Eastern Bluebird
Catharus fuscescens, Veery
Catharus minimus, Gray-cheeked Thrush
Catharus ustulatus, Swainson's Thrush
Catharus guttatus, Hermit Thrush
Hylocichla mustelina, Wood Thrush
Turdus migratorius, American Robin
Ixoreus naevius, Varied Thrush

FAMILY MIMIDAE

Dumetella carolinensis, Gray Catbird
Mimus polyglottos, Northern Mockingbird
Toxostoma rufum, Brown Thrasher

FAMILY MOTACILLIDAE

Anthus spragueii, Sprague's Pipit

FAMILY BOMBYCILLIDAE

Bombycilla cedrorum, Cedar Waxwing

FAMILY LANIIDAE

Lanius ludovicianus, Loggerhead Shrike

FAMILY VIREONIDAE

Vireo griseus, White-eyed Vireo
Vireo bellii, Bells' Vireo
Vireo solitarius, Solitary Vireo
Vireo flavifrons, Yellow-throated Vireo
Vireo gilvus, Warbling Vireo
Vireo philadelphicus, Philadelphia Vireo
Vireo olivaceus, Red-eyed Vireo
Vireo altiloquus, Black-whiskered Vireo

FAMILY EMBERIZIDAE

SUBFAMILY PARULINAE

Vermivora bachmanii, Bachman's Warbler
Vermivora pinus, Blue-winged Warbler
Vermivora chrysoptera, Golden-winged Warbler
Vermivora peregrina, Tennessee Warbler
Vermivora celata, Orange-crowned Warbler
Vermivora ruficapilla, Nashville Warbler
Parula americana, Northern Parula
Dendroica petechia, Yellow Warbler
Dendroica pensylvanica, Chestnut-sided Warbler
Dendroica magnolia, Magnolia Warbler
Dendroica tigrina, Cape May Warbler
Dendroica caerulescens, Black-throated Blue Warbler
Dendroica coronata, Yellow-rumped Warbler
Dendroica nigrescens, Black-throated Gray Warbler
Dendroica townsendi, Townsend's Warbler
Dendroica virens, Black-throated Green Warbler
Dendroica fusca, Blackburnian Warbler
Dendroica dominica, Yellow-throated Warbler
Dendroica pinus, Pine Warbler
Dendroica kirtlandii, Kirtland's Warbler
Dendroica discolor, Prairie Warbler
Dendroica palmarum, Palm Warbler
Dendroica castanea, Bay-breasted Warbler
Dendroica striata, Blackpoll Warbler
Dendroica cerulea, Cerulean Warbler
Mniotilta varia, Black-and-White Warbler
Setophaga ruticilla, American Redstart
Protonotaria citrea, Prothonotary Warbler
Helmitheros vermivorus, Worm-eating Warbler
Limnothlypis swainsonii, Swainson's Warbler
Seiurus aurocapillus, Ovenbird
Seiurus noveboracensis, Northern Waterthrush
Seiurus motacilla, Louisiana Waterthrush



Oporornis formosus, Kentucky Warbler
Oporornis agilis, Connecticut Warbler
Oporornis philadelphia, Mourning Warbler
Geothlypis trichas, Common Yellowthroat
Wilsonia citrina, Hooded Warbler
Wilsonia pusilla, Wilson's Warbler
Wilsonia canadensis, Canada Warbler
Icteria virens, Yellow-breasted Chat

SUBFAMILY THRAUPINAE

Spindalis zena, Stripe-headed Tanager
Piranga rubra, Summer Tanager
Piranga olivacea, Scarlet Tanager
Piranga ludoviciana, Western Tanager

SUBFAMILY CARDINALINAE

Cardinalis cardinalis, Northern Cardinal
Pheucticus ludovicianus, Rose-breasted Grosbeak
Pheucticus melanocephalus, Black-headed Grosbeak
Guiraca caerulea, Blue Grosbeak
Passerina amoena, Lazuli Bunting
Passerina cyanea, Indigo Bunting
Passerina ciris, Painted Bunting
Spiza americana, Dickcissel

SUBFAMILY EMBERIZINAE

Pipilo erythrophthalmus, Rufous-sided Towhee
Tiaris bicolor, Black-faced Grassquit
Aimophila aestivalis, Bachman's Sparrow
Spizella passerina, Chipping Sparrow
Spizella pallida, Clay-colored Sparrow
Spizella pusilla, Field Sparrow
Pooecetes gramineus, Vesper Sparrow
Chondestes grammacus, Lark Sparrow
Calamospiza melanocorys, Lark Bunting
Passerculus sandwichensis, Savannah Sparrow
Ammodramus savannarum, Grasshopper Sparrow
Ammodramus henslowii, Henslow's Sparrow
Ammodramus leconteii, Le Conte's Sparrow
Ammodramus caudacutus, Sharp-tailed Sparrow
Ammodramus maritimus, Seaside Sparrow
Melospiza melodia, Song Sparrow
Melospiza lincolni, Lincoln's Sparrow
Melospiza georgiana, Swamp Sparrow
Zonotrichia albicollis, White-throated Sparrow
Zonotrichia leucophrys, White-crowned Sparrow
Zonotrichia querula, Harris' Sparrow
Junco hyemalis, Dark-eyed Junco
Calcarius lapponicus, Lapland Longspur

SUBFAMILY ICTERINAE

Dolichonyx oryzivorus, Bobolink
Agelaius phoeniceus, Red-winged Blackbird
Sturnella magna, Eastern Meadowlark
Sturnella neglecta, Western Meadowlark
Xanthocephalus xanthocephalus, Yellow-headed Blackbird
Euphagus carolinus, Rusty Blackbird
Euphagus cyanocephalus, Brewer's Blackbird
Quiscalus major, Boat-tailed Grackle

Quiscalus quiscula, Common Grackle
Molothrus bonariensis, Shiny Cowbird
Molothrus aeneus, Bronzed Cowbird
Molothrus ater, Brown-headed Cowbird
Icterus spurius, Orchard Oriole
Icterus galbula, Northern Oriole

FAMILY FRINGILLIDAE

SUBFAMILY CARDUELINAE

Carpodacus purpureus, Purple Finch
Carduelis pinus, Pine Siskin
Carduelis tristis, American Goldfinch





FLORIDA GAME AND FRESH WATER FISH COMMISSION

JULIE K. MORRIS
Sarasota

QUINTON L. HEDGEPEETH, DDS
Miami

MRS. GILBERT W. HUMPHREY
Miccosukee

THOMAS B. KIBLER
Lakeland

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

EVERGLADES REGION
August 19, 1997
Lt. COL. WOODROW J. DARDEN, Director
551 North Military Trail
West Palm Beach, FL 33415
(407) 640-6100

Mr. Robert L. Weigt
Environmental Consultants, Inc.
10762 S.E. Federal Highway
Hobe Sound, FL 33455

Dear Mr. Weigt:

This responds to your 11 August inquiry regarding the potential occurrence of listed species on the ±200 acre parcel located in Section 27 and 28, Township 39S, Range 42E in Hobe Sound, Martin County. As for wildlife species over which this agency has jurisdiction, our database contained no records of listed species in the area of concern.

Please note, however, that our database is not necessarily inclusive of all listed species which may occur in a given area. For various reasons, occurrence records for some species are not necessarily entered into our database on a site-specific basis. The sandhill crane, scrub jay, and least tern are notable examples relative to your particular area of concern. Moreover, some species which are accounted for in the database may occur in areas we are unaware of. Only through systematic field surveys could such data be factored in with respect to your specific request.

Thank you for consulting us in this matter. However, future data requests should now be addressed to me. As for occurrence records for listed plants and plant communities of concern, the appropriate contact would be the Florida Natural Areas Inventory, 1018 Thomasville Road, Suite 200C, Tallahassee, FL 32303, (904) 224-8207.

Sincerely,

Ricardo Zambrano
Nongame Wildlife Biologist

WLD 4-2-5

cc: Mr. Mark S. Robson
Lt. Col. Woodrow J. Darden
Mr. Tom Logan

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1943 - 1993

50 YEARS AS STEWARD OF FLORIDA'S FISH AND WILDLIFE

OR BK 02063 PG 2105



FLORIDA DEPARTMENT OF STATE
Sandra B. Mortham
Secretary of State
DIVISION OF HISTORICAL RESOURCES

August 28, 1997

Mr. Robert L. Weigt
R. L. Weigt Environmental Consultants, Inc.
10762 S.E. Federal Highway
Hobe Sound, Florida 33455

In Reply Refer To:
Frank J. Keel
Historic Preservation Planner
Project File No. 974118

RE: Cultural Resource Assessment Request
USACOE Nationwide Permit Application
±200.0 Acre Parcel (Sect. 27 and 28, Twn. 39S, Rng 42E)
Hobe Sound, Martin County, Florida

Dear Mr. Weigt:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project(s) for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

A review of the Florida Site File indicated that four potentially significant archaeological sites (8MT370, 380, 381 and 387) are situated within the proposed project (see attached map). The sites were recorded as part of a countywide survey conducted in 1995. During this survey, the recorded sites were limited to only surface collections; no subsurface investigations were conducted. Given the presence of the archaeological sites and because the project the area has never been formally subjected to a systematic, professional survey to locate additional properties, it is the opinion of this office that there is a reasonable probability of project activities impacting historic properties potentially eligible for listing in the *National Register of Historic Places*.

Since potentially significant archaeological sites are present, it is our recommendation that, prior to initiating any project related land clearing or ground disturbing activities within the project area, a systematic, professional archaeological and historical survey should be conducted to locate and assess additional historical properties within project area. The recorded archaeological sites should be subjected to archaeological investigations to assess their significance. The results of the investigations will determine if significant historic properties would be disturbed by this project.

Because this letter and its contents are a matter of public record, the applicant may be contacted by consultants who have knowledge of our recommendations. This should in no way be interpreted as an endorsement by this agency. The *Society of Professional Archaeologists* (SOPA) is the national certifying organization for archaeologists. Upon request, our office can supply a listing of archaeologists who are SOPA members living or working in Florida. In addition, we can provide information on ordering their Directory of Certified Professional Archaeologists from them.



DIRECTOR'S OFFICE

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • (850) 488-1480
FAX: (850) 488-3353 • WWW Address <http://www.dos.state.fl.us>

ARCHAEOLOGICAL RESEARCH
(850) 487-2299 • FAX: 414-2207

HISTORIC PRESERVATION
(850) 487-2333 • FAX: 922-0496

HISTORICAL MUSEUMS
(850) 488-1484 • FAX: 921-2503

Mr. Weigt
August 26, 1997
Page 2

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

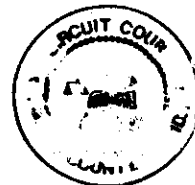
Sincerely,

Laura A. Kammerer

for

George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Kfk
Enclosure (1)
xc: Bertil Heimer, USACOE, w/o enc.



FLORIDA NATURAL AREAS INVENTORY

1018 Thomasville Road, Suite 200-C · Tallahassee, Florida 32303 · (850) 224-8207

20 August 1997

Mr. Robert L. Weigt
R.L. Weigt Env. Consultants, Inc.
10762 S.E. Federal Hwy.
Hobe Sound, FL 33455

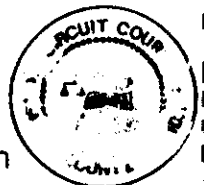
Dear Mr. Weigt,

This letter is in reference to your request for information from the Florida Natural Areas Inventory (FNAI). Your data request of 11 August 1997 specified a tract of land in Township 38S, Range 42E, Sections 27, 28 in Martin County. This site is found on the Hobe Sound, Gomez USGS 7.5 minute quadrangle.

A search of our maps and computerized database indicates that currently we have the following "Element Occurrence Records" mapped within a one mile radius of this area:

Scientific Name	Common Name	Global Rank	State Rank	Fed. Status	State Status	Notes
Plants:						
<i>Conradina grandiflora</i>	large-flowered rosemary	G3	S3	N	LE	3 occurrences: .5 mi. E; adj. on N; 1 mi. N.
<i>Cladonia perforata</i>	perforate reindeer lichen	G1	S1	LE	LE	on or very near site, see record.
<i>Lechea cernua</i>	nodding pinweed	G3	S3	N	LT	.25 mi. N.
<i>Oncidium bahamense</i>	dancing-lady orchid	G3	S1	N	LE	3 occurrences: on site, see record; .5 mi. E; adj. to site on N.
<i>Persea humilis</i>	scrub bay	G3	S3	N	N	on site, see record.
<i>Cochloschia tuberculosa</i>	piedmont jointgrass	G3	S3	N	N	1 mi. W.
<i>Halophila johnsonii</i>	Johnson's seagrass	G2	S2	PT	LE	in Hobe Sound.
<i>Rhynchosia cinerea</i>	brown-haired snoutbean	G3	S3	N	N	.5 mi. E.
Vertebrates:						
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	N	LS	on or very near site, see record.
<i>Crotalus adamanteus</i>	eastern diamondback rattlesnake	G5	S7	N	N	.5 mi. E.
<i>Trichechus manatus</i>	manatee	G27	S27	LE	LE	in Hobe Sound.
Natural Communities:						
Scrub		G2	S2	N	N	6 occurrences: 2 occurrences .5 mi. E; 1 mi. N; .25 mi. N.; adj. on N.; on site, see record.

The Johnathan Dickinson State Park/FL Dept. of Environmental Protection is located .5 miles to the south of this property. The 1995 Atlantic Ridge Ecosystem Conservation and Recreation Lands (CARL) Project is located approximately one mile to the southwest of this site. The Hobe Sound National Wildlife



Mr. Robert L. Weigt
20 August 1997
Page 2

Refuge/U.S. Fish & Wildlife Service, the Jensen Beach-Jupiter Inlet Aquatic Preserve/FL Dept. of Environmental Protection and the Hobe Sound Sandhill/The Nature Conservancy is located .5 miles east of this site.

The enclosed element occurrence records represent the special elements that occur on the project site. Also enclosed is an element rank explanation sheet defining the FNAI Global/State Ranking and Federal/State legal status of each element. For your convenience, a summary of the elements recorded for Martin County and a matrix giving seasonal and habitat distributions for the species are enclosed.

Whereas the data maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources, it is not always based on comprehensive or site specific field surveys and therefore should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and FNAI must be credited as an information source in these publications. FNAI data may not be resold for profit.

If I can be of further assistance, please call me at (850) 224-8207.

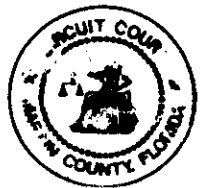
Sincerely,

Barbara Lenczewski

Barbara Lenczewski, Ph.D.
Environmental Reviewer

enclosures

I:\DRAMART.WEI



RANK EXPLANATIONS
for FNAI Global Rank, FNAI State Rank, Federal Status, and State Status

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

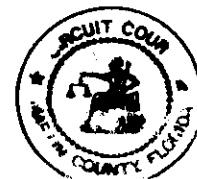
Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Game and Freshwater Fish Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI GLOBAL RANK DEFINITIONS

- G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- G4 = apparently secure globally (may be rare in parts of range)
- G5 = demonstrably secure globally
- GH = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GX = believed to be extinct throughout range
- GXC = extirpated from the wild but still known from captivity or cultivation
- G#? = tentative rank (e.g., G2?)
- G#G# = range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T# = rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q = rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q) OR BK 02063 PG 2110
- G#T#Q = same as above, but validity as subspecies or variety is questioned.
- GU = due to lack of information, no rank or range can be assigned (e.g., GUT2).
- G? = not yet ranked (temporary)

FNAI STATE RANK DEFINITIONS

- S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- S4 = apparently secure in Florida (may be rare in parts of range)
- S5 = demonstrably secure in Florida



FNAL STATE RANK DEFINITIONS (cont.)

- SH = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- SX = believed to be extinct throughout range
- SA = accidental in Florida, i.e., not part of the established biota
- SE = an exotic species established in Florida may be native elsewhere in North America
- SN = regularly occurring, but widely and unreliably distributed; sites for conservation hard to determine
- SU = due to lack of information, no rank or range can be assigned (e.g., SUT2).
- S? = not yet ranked (temporary)

LEGAL STATUS

- N = Not currently listed, nor currently being considered for listing, by state or federal agencies.

FEDERAL (Listed by the U. S. Fish and Wildlife Service - USFWS)

- LE = Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
- PE = Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT = Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- PT = Proposed for listing as Threatened Species.
- C = Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.
- E(S/A) = Endangered due to similarity of appearance.
- T(S/A) = Threatened due to similarity of appearance.

OR BK 02063 PG 2111

STATE

Animals (Listed by the Florida Game and Fresh Water Fish Commission - FGFWFC)

- LE = Listed as Endangered Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT = Listed as Threatened Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- LS = Listed as Species of Special Concern by the FGFWFC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

Plants (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

- LE = Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
- LT = Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.



Guide to the
COUNTY MATRIX
of Habitats and Distribution of Rare/Endangered Species in Florida

Information on the geographical distribution, natural community type, and seasonality of rare species is presented here in an easy-to-use matrix format. These data can provide government and private sector decision-makers, planners, and natural resource managers with an efficient method of determining the potential impacts of land use decisions on rare and endangered species.

The matrix allows users to determine quickly which rare/endangered species are likely to occur in a particular county, in which natural communities to expect those species, and at what time of year to search for them. The matrix is updated periodically to reflect current knowledge of distribution, status, and taxonomy. Users of these data are encouraged to submit suggested revisions to FNAI.

The following sources were reviewed in assembling the matrix: the FNAI database, *Rare and Endangered Biota of Florida*, volumes 1-5; species checklists; field surveys; journal articles; floras; herbarium and museum records; field guides; and other literature. Detailed descriptions of natural communities are contained in the *Guide to the Natural Communities of Florida* (Florida Natural Areas Inventory & Florida Department of Natural Resources 1990). The *Checklist of Florida's Birds* (Stevenson n.d.) was used to determine the seasonal presence of birds.

MATRIX EXPLANATION

Natural Community. The habitats given for each species are those natural communities most frequently inhabited by or most likely to contain the species. Specific habitat comments pertaining to each species are incorporated into the comments portion following the habitat listing. Because the natural communities listed apply to the statewide distribution of each species, more habitats may be listed than a species occupies at the local level. Because of their mobility, some animals may enter communities other than those listed. For especially wide-ranging species which may occupy a multitude of natural community types (such as the Florida panther), the habitats may be broadly identified. The term "ruderal" is placed in the habitat comment field for those species that sometimes may occur in artificial habitats such as ditches, canals, canal banks, abandoned quarries, dredge spoil, trash piles, pine plantations, citrus groves, roof tops, bridges, buildings, pastures, and old fields.

Seasonal Distribution. The seasonal presence or recognizability of a taxon is denoted by the months that the species occurs in Florida, is active, or can be easily identified. The first and second halves of each month are indicated by "A" (days 1-15) and "B" (days 16-31), respectively.

For plants, the seasonal distribution indicates the time of year when taxonomic identification can be determined from Vegetative, Flowering, or Fruiting parts.

For animals, seasonal distribution is normally prefaced by Present and indicates those months in which the species can be found in Florida or most easily located within its preferred habitat. Additionally, the seasonal distribution for some salamanders is broken down by the months that



FLORIDA NATURAL AREAS INVENTORY

March 5, 1997

1018 Thomasville Road, Suite 200-C, Tallahassee, FL 32303 (904) 224-8207

Martin County Summary

Occurrence Records currently in the FNAI database

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	# FNAI Recorded Locations
<u>FISH</u>						
<i>Bairdiella sanctaeluciae</i>	striped croaker	G5	S2	N	N	1
<i>Gobionellus stigmaturus</i>	spottail goby	G2	S2	N	N	1
<i>Microphis brachyurus</i>	opossum pipefish	G5	S2	N	N	1
<u>AMPHIBIANS</u>						
<i>Rana capito</i>	gopher frog	G4	S3	N	LS	1
<u>REPTILES</u>						
<i>Alligator mississippiensis</i>	American alligator	G5	S4	T(S/A)	LS	1
<i>Caretta caretta</i>	loggerhead	G3	S3	LT	LT	3
<i>Chelonia mydas</i>	green turtle	G3	S2	LE	LE	3
<i>Crotalus adamanteus</i>	eastern diamondback rattlesnake	G5	S7	N	N	3
<i>Dermodochelys coriacea</i>	leatherback	G3	S2	LE	LE	3
<i>Drymarchon corais couperi</i>	eastern indigo snake	G4T3	S3	LT	LT	5
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	N	LS	5
<i>Sceloporus woodi</i>	Florida scrub lizard	G3	S3	N	N	7
<u>BIRDS</u>						
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	G3	S3	LT	LT	11
<i>Ardea alba</i>	great egret	G5	S4	N	N	2
<i>Caracara plancus</i>	crested caracara	G5	S2	LT	LT	3
<i>Egretta caerulea</i>	little blue heron	G5	S4	N	LS	2
<i>Egretta thula</i>	snowy egret	G5	S4	N	LS	2
<i>Egretta tricolor</i>	tricolored heron	G5	S4	N	LS	2
<i>Eudocimus albus</i>	white ibis	G5	S4	N	LS	2
<i>Falco peregrinus</i>	peregrine falcon	G4	S2	E(S/A)	LE	1
<i>Grus canadensis pratensis</i>	Florida sandhill crane	G5T2T3	S2S3	N	LT	2
<i>Haliaeetus leucocephalus</i>	bald eagle	G4	S3	LT	LT	9
<i>Nycticorax nycticorax</i>	black-crowned night-heron	G5	S3?	N	N	1
<i>Pandion haliaetus</i>	osprey	G5	S3S4	N	LS*	1
<i>Pelecanus occidentalis</i>	brown pelican	G4	S3	N	LS	1
<i>Picoides borealis</i>	red-cockaded woodpecker	G3	S2	LE	LT	1
<i>Rostrhamus sociabilis plumbeus</i>	snail kite	G4G5T1	S1	LE	LE	1
<i>Rynchops niger</i>	black skimmer	G5	S3	N	LS	1
<i>Sterna antillarum</i>	least tern	G4	S3	N	LT	1
<u>MAMMALS</u>						
<i>Felis concolor coryi</i>	Florida panther	G5T1	S1	LE	LE	1
<i>Podomys floridanus</i>	Florida mouse	G3	S3	N	LS	1
<i>Trichechus manatus</i>	manatee	G2?	S2?	LE	LE	3



FLORIDA NATURAL AREAS INVENTORY
Martin County Summary

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	# FNAI Recorded Locations
<u>INVERTREBRATES</u>						
Cicindela hirtilabris	peninsular tiger beetle	G3?	S?	N	N	1
Latrodectus bishopi	red widow spider	GU	S?	N	N	1
<u>VASCULAR PLANTS</u>						
Argusia gnaphalodes	sea lavender	G4	S3	N	N	4
Aristida rhizomophora	Florida three-awned grass	G2	S2	N	N	2
Asclepias curtissii	Curtiss' milkweed	G3	S3	N	LE	4
Asimina tetramera	four-petal pawpaw	G1	S1	LE	LE	8
Chamaesyce cumulicola	sand-dune spurge	G2	S2	N	LE	2
Cheiroglossa palmata	hand fern	G5	S2	N	N	2
Coelorachis tuberculosa	piedmont jointgrass	G3	S3	N	N	3
Conradina grandiflora	large-flowered rosemary	G3	S3	N	LE	17
Ctenitis sloanei	Florida tree fern	G5	S2	N	LE	1
Glandularia maritima	coastal vervain	G2	S2	N	N	2
Halophila johnsonii	Johnson's seagrass	G2	S2	PT	LE	3
Jacquemontia reclinata	beach jacquemontia	G1	S1	LE	LE	2
Lechea cernua	nodding pinweed	G3	S3	N	LT	4
Lechea divaricata	pine pinweed	G2	S2	N	LE	1
Lilium catesbaei	southern red lily	G4	S3	N	LT	1
Linum carteri var smallii	Carter's large-flowered flax	G2T2	S2	N	LE	1
Oncidium bahamense	dancing-lady orchid	G3	S1	N	LE	7
Peperomia humilis	terrestrial peperomia	G5	S2	N	LE	1
Peperomia obtusifolia	blunt-leaved peperomia	G5	S2	N	LE	1
Persea humilis	scrub bay	G3	S3	N	N	7
Polygala smallii	tiny polygala	G1	S1	LE	LE	3
Pteroglossaspis ecristata	wild coco	G2G3	S2	N	LT	1
Remirea maritima	beach-star	G4	S3S4	N	LE	4
Rhynchosia cinerea	brown-haired snoutbean	G3	S3	N	N	2
Sophora tomentosa	necklace pod	G4G5	S3	N	N	5
Vanilla mexicana	scentless vanilla	G2G4	S1	N	LE	1
<u>NON-VASCULAR PLANTS</u>						
Cladonia perforata	perforate reindeer lichen	G1	S1	LE	LE	5
<u>NATURAL COMMUNITIES</u>						
Beach Dune		G4?	S2	N	N	9
Blackwater Stream		G4	S2	N	N	2
Coastal Strand		G3?	S2	N	N	5
Depression Marsh		G4?	S3	N	N	2
Dome Swamp		G4?	S3?	N	N	2
Estuarine Tidal Swamp		G3	S3	N	N	1
Floodplain Swamp		G?	S4?	N	N	1
Hydric Hammock		G?	S4?	N	N	2
Marine Composite Substrate		G3	S3	N	N	1
Marine Consolidated Substrate		G3	S3	N	N	1
Marine Octocoral Bed		G2	S1	N	N	1
Marine Sponge Bed		G2	S2	N	N	1
Maritime Hammock		G4	S2	N	N	14
Marl Prairie		G?	S4?	N	N	1



FLORIDA NATURAL AREAS INVENTORY
Martin County Summary

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	# FNAI Recorded Locations
<u>NATURAL COMMUNITIES</u> - cont.						
Mesic Flatwoods		G?	S4	N	N	2
Scrubby Flatwoods		G3	S3	N	N	1
Scrub		G2	S2	N	N	27
Shell Mound		G3	S2	N	N	1
Wet Flatwoods		G?	S4?	N	N	4
Xeric Hammock		G?	S3	N	N	1
 <u>OTHER</u>						
Bird rookery				N	N	5
Geological feature				N	N	2
Manatee aggregation site				N	N	1



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SPECIAL PLANTS (cont.)

MYCCLIA BOOTHIANA (DOLLAR ORCHID) C

HABITAT: TERRESTRIAL: Prairie Hammock, Rockland Hammock MARINE: Marine Tidal Swamp COMMENTS: epiphytic

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

PIDENDRUM NOCTURNUM (NIGHT-SCENTED ORCHID) C

HABITAT: TERRESTRIAL: Rockland Hammock PALUSTRINE: Dome Swamp, Slough, Strand Swamp COMMENTS: epiphytic

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

EUGENIA CONFUSA (TROPICAL IRONWOOD) C

HABITAT: TERRESTRIAL: Rockland Hammock

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

GLANDULARIA MARITIMA (COASTAL VERVAIN) R

HABITAT: TERRESTRIAL: Beach Dune, Coastal Strand COMMENTS: ruderal

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

HALOPHILA JOHNSONII (JOHNSON'S SEAGRASS) C

HABITAT: ESTUARINE: Intertidal Grass Bed

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

JACQUEMONTIA RECLINATA (BEACH JACQUEMONTIA) R

HABITAT: TERRESTRIAL: Coastal Strand -openings, Beach Dune

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

LANTANA DEPRESSA (FLORIDA LANTANA) C

HABITAT: TERRESTRIAL: Coastal Strand, Pine Rockland, Beach Dune PALUSTRINE: Marl Prairie

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB Maya MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

COMMENTS: often hybridizes with the exotic, L. camara



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SPECIAL PLANTS (cont.)

LECHEA CERNUA (WIDDING PINWEED) C

HABITAT: TERRESTRIAL: Scrub COMMENTS: openings; disturbed areas; common after fires

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr

LECHEA DIVARICATA (PINE PINWEED) C

HABITAT: TERRESTRIAL: Scrub, Scrubby Flatwoods

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr F Fr

LILIUM CATESBAEI (SOUTHERN RED LILY) C

HABITAT: TERRESTRIAL: Mesic Flatwoods PALUSTRINE: Wet Prairie, Wet Flatwoods, Seepage Slope COMMENTS: usually with grasses

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F F

LINUM CARTERI VAR. SMALLII (CARTER'S LARGE-FLOWERED FLAX) C

HABITAT: TERRESTRIAL: Dry Prairie, Mesic Flatwoods COMMENTS: disturbed areas

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F F

OXENIA HYPOGAEA (BURROWING FOUR-O'CLOCK) C

HABITAT: TERRESTRIAL: Beach Dune, Coastal Strand

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F F

OPHIOGLOSSUM PALMATUM (HAND FERN) C

HABITAT: PALUSTRINE: Hydric Hammock COMMENTS: epiphytic on cabbage palms (Sabal palmetto)

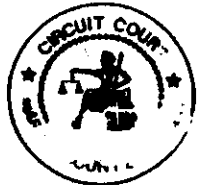
SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F F

PEPEROMIA HUMILIS (TERRESTRIAL PEPERONIA) C

HABITAT: TERRESTRIAL: Maritime Hammock, Upland Hardwood Forest PALUSTRINE: Slough, Hydric Hammock MARINE: Marine Tidal Swamp ESTUARINE: Estuarine Tidal Swamp

COMMENTS: rarely epiphytic; usually on thin humus over calcareous substrate

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB
F F



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FISHES

GOBIONELLUS STIGMATURUS (SPOTTAIL GOBY) C

HABITAT: MARINE: Marine Composite Substrate

SEASONAL DIST.:	JanA	JanB	FebA	FebB	MarA	MarB	AprA	AprB	MayA	MayB	JunA	JunB	JulA	JulB	AugA	AugB	SepA	SepB	OctA	OctB	NovA	NovB	DecA	DecB
	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

OOSTEITHUS BRACHYURUS (OPPOSUM PIPEFISH) R

HABITAT: RIVERINE: Blackwater Stream ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.:	JanA	JanB	FebA	FebB	MarA	MarB	AprA	AprB	MayA	MayB	JunA	JunB	JulA	JulB	AugA	AugB	SepA	SepB	OctA	OctB	NovA	NovB	DecA	DecB
	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

AMPHIBIANS

RAMA AREOLATA (GOPHER FROG) C

HABITAT: TERRESTRIAL: Sandhill, Scrub, Scrubby Flatwoods, Xeric Hammock (reproduces in ephemeral wetlands within these communities) LACUSTRINE: Ruderal, Sandhill Upland Lake

SEASONAL DIST.:	JanA	JanB	FebA	FebB	MarA	MarB	AprA	AprB	MayA	MayB	JunA	JunB	JulA	JulB	AugA	AugB	SepA	SepB	OctA	OctB	NovA	NovB	DecA	DecB
AD. (calling):	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
TADPOLES:	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

REPTILES

ALLIGATOR MISSISSIPPIENSIS (AMERICAN ALLIGATOR) C

HABITAT: PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats RIVERINE: Various Riverine Habitats ESTUARINE: Various Estuarine Habitats

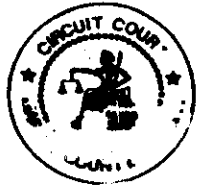
SEASONAL DIST.:	JanA	JanB	FebA	FebB	MarA	MarB	AprA	AprB	MayA	MayB	JunA	JunB	JulA	JulB	AugA	AugB	SepA	SepB	OctA	OctB	NovA	NovB	DecA	DecB
	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

CARETTA CARETTA (LOGGERHEAD) C

HABITAT: TERRESTRIAL: Beach Dune -nesting, Coastal Grassland -nesting MARINE: Various Marine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.:	JanA	JanB	FebA	FebB	MarA	MarB	AprA	AprB	MayA	MayB	JunA	JunB	JulA	JulB	AugA	AugB	SepA	SepB	OctA	OctB	NovA	NovB	DecA	DecB
	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

COMMENTS: "C" in county distribution represents nesting records; "R" represents non-nesting records



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REPTILES (cont.)

CHELONIA MYDAS (GREEN TURTLE) C

HABITAT: TERRESTRIAL: Beach Dune -nesting, Coastal Grassland -nesting MARINE: Various Marine Habitats ESTUARINE: Various Estuarine Habitats SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

COMMENTS: "C" in county distribution represents nesting records; "R" represents non-nesting records

DERMOCHELYS CORIACEA (LEATHERBACK TURTLE) C

HABITAT: TERRESTRIAL: Beach Dune -nesting, Coastal Grassland -nesting MARINE: Various Marine Habitats ESTUARINE: Various Estuarine Habitats SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

COMMENTS: "C" in county distribution represents nesting records; "R" represents non-nesting records

DRYARCHON CORAIS COUPERI (EASTERN INDIGO SNAKE) C

HABITAT: TERRESTRIAL: Mesic Flatwoods, Upland Pine Forest, Sandhill, Scrub, Scrubby Flatwoods, Rockland Hammock, Ruderal PALUSTRINE: Hydric Hammock, Wet Flatwoods ESTUARINE: Estuarine Tidal Swamp

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

ERETHOCHELYS IMBRICATA (HAMKSBILL) R

HABITAT: TERRESTRIAL: Beach Dune -nesting, Coastal Grassland -nesting MARINE: Various Marine Habitats ESTUARINE: Various Estuarine Habitats SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

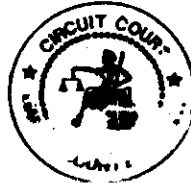
COMMENTS: "C" in county distribution represents nesting records; "R" represents non-nesting records

GOPHERUS POLYPHEMUS (GOPHER TORTOISE) C

HABITAT: TERRESTRIAL: Sandhill, Scrub, Scrubby Flatwoods, Xeric Hammock, Coastal Strand, Ruderal SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

SCELOPORUS WOODI (FLORIDA SCRUB LIZARD) C

HABITAT: TERRESTRIAL: Scrub, Sandhill, Ruderal SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB



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BIRDS (cont.)

CASMERODIUS ALBUS (GREAT EGRET)

HABITAT: TERRESTRIAL: Various Terrestrial Habitats PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats RIVERINE: Various Riverine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

CHARADRIUS MELODUS (PIPING PLOVER)

HABITAT: TERRESTRIAL: Beach Dune MARINE: Exposed Marine Unconsolidated Substrate ESTUARINE: Exposed Estuarine Unconsolidated Substrate

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

DENDROICA DISCOLOR PALUDICOLA (FLORIDA PRAIRIE WARBLER)

HABITAT: TERRESTRIAL: Maritime Hammock MARINE: Marine Tidal Swamp ESTUARINE: Estuarine Tidal Swamp

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

EGRETTA CAERULEA (LITTLE BLUE HERON)

HABITAT: PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats RIVERINE: Various Riverine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

EGRETTA THULA (SNOWY EGRET)

HABITAT: PALUSTRINE: Various Palustrine Habitats , Ruderal LACUSTRINE: Various Lacustrine Habitats , Ruderal RIVERINE: Various Riverine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

EGRETTA TRICOLOR (TRICOLORED HERON)

HABITAT: PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats RIVERINE: Various Riverine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB

EUDOCINUS ALBUS (WHITE IBIS)

HABITAT: PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NovA NovB DecA DecB



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BIRDS (cont.)

FALCO COLUMBARIUS (MERLIN) R

HABITAT: TERRESTRIAL: Various Terrestrial Habitats PALUSTRINE: Various Palustrine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NOVA NOV8 DecA DecB

COMMENTS: most often seen during migration

FALCO PEREGRINUS (PEREGRINE FALCON) C

HABITAT: TERRESTRIAL: Various Terrestrial Habitats , Ruderal PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NOVA NOV8 DecA DecB

COMMENTS: most often seen during migration; uncommon in winter

FALCO SPARVERIUS PAULUS (SOUTHEASTERN AMERICAN KESTREL) R

HABITAT: TERRESTRIAL: Various Terrestrial Habitats , Ruderal PALUSTRINE: Various Palustrine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NOVA NOV8 DecA DecB

COMMENTS: best identified between May and August (breeding season)

GRUS CANADENSIS PRATIENSIS (FLORIDA SANDHILL CRANE) C

HABITAT: TERRESTRIAL: Dry Prairie , Ruderal PALUSTRINE: Swale, Basin Marsh, Depression Marsh, Bog, Marl Prairie , Wet Prairie LACUSTRINE: Flatwoods/Prairie Lake , Marsh Lake

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NOVA NOV8 DecA DecB

HAEMATOPUS PALLIATUS (AMERICAN OYSTERCATCHER) R

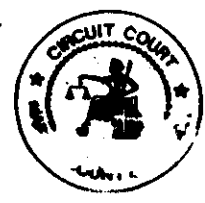
HABITAT: TERRESTRIAL: Beach Dune , Ruderal MARINE: Exposed Marine Unconsolidated Substrate , Exposed Marine Mollusk Reef ESTUARINE: Exposed Estuarine Unconsolidated Substrate , Exposed Estuarine Mollusk Reef

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NOVA NOV8 DecA DecB

HALIAEETUS LEUCOCEPHALUS (BALD EAGLE) C

HABITAT: PALUSTRINE: Various Palustrine Habitats LACUSTRINE: Various Lacustrine Habitats RIVERINE: Various Riverine Habitats ESTUARINE: Various Estuarine Habitats

SEASONAL DIST.: JanA JanB FebA FebB MarA MarB AprA AprB MayA MayB JunA JunB JulA JulB AugA AugB SepA SepB OctA OctB NOVA NOV8 DecA DecB



FLORIDA NATURAL AREAS INVENTORY - ELEMENT OCCURRENCE RECORD
08/18/97

scientific name: CLADONIA PERFORATA
common name: PERFORATE REINDEER LICHEN

grank: G1 federal status: LE
srank: S1 state status: LE

date last observed: 1994
county name: Martin

quad name: GOMEZ

township and range: 039S042E section: precision: M
town/range comments: No sec.

general desc.: Scrub.

EO data: Several to many individuals scattered in scrub area.

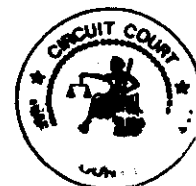
managed area name:

owner:
owner comments:

best source: Hilsenbeck, Richard A. Senior Research Botanist. Florida
Natural Areas Inventory, 1018 Thomasville Road, Suite 200-C,
Tallahassee, FL 32303. (904) 224-8207.

eonum.: 015

data sens.: YY



FLORIDA NATURAL AREAS INVENTORY - ELEMENT OCCURRENCE RECORD
08/18/97

scientific name: ONCIDIUM BAHAMENSE
common name: DANCING-LADY ORCHID

grank: G3 federal status: N
srank: S1 state status: LE

date last observed: 1988-04-30
county name: Martin

quad name: GOMEZ

township and range: 039S042E section: 27 precision: SC
town/range comments:

general desc.: SAND PINE SCRUB NEAR CREST OF TALL RIDGE (ON N. SLOPE)
(UNBURNED PORTION).

EO data: 5 PLANTS ON N. SIDE OF TRAIL ALONG RIDGE ON ROSEMARY SHRUBS
-- ALL IN FLOWER. 4 TO W. OF JCT. RIDGE TRAIL AND SAND RD.
TO SATURN ST. AND 1 TO E. OF JCT.

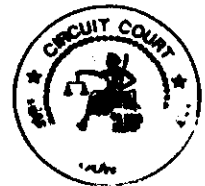
managed area name:

owner: HOBE SOUND WATER CO (NAT REED)
owner comments:

best source: JOHNSON, ANN F. 1988. FIELD SURVEY FOR ASIMINA TETRAMERA --
WATER COMPANY LAND-NE, MARTIN CO., FL. 30 APR. & 5 MAY 1988.

eonum.: 003

data sens.: YY



FLORIDA NATURAL AREAS INVENTORY - ELEMENT OCCURRENCE RECORD
08/18/97

scientific name: SCRUB
common name:

grank: G2 federal status: N
srank: S2 state status: N

date last observed: 1988-04-30
county name: Martin

quad name: GOMEZ

township and range: 039S042E section: 27 precision: SC
town/range comments:

general desc.: SAND PINE SCRUB -- PARTLY BURNED. WITH YOUNG (10-12 YR.)
SAND PINES.

EO data: PARTLY MATURE (20-30') WIDELY SPACED SAND PINES WITH OPEN
MYRTLE OAK AND ROSEMARY UNDERSTORY. PARTLY BURNED SCRUB WITH
YOUNG (10-12 YR.) SAND PINES NOT YET PROVIDING SHADE.
ROSEMARY NODES COUNTED: 13,13,11,19,10, 16,14. (SEE PLANT
LIST - F88JOH06).

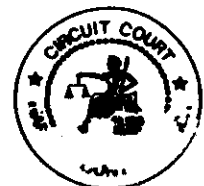
managed area name:

owner: HOBE SOUND WATER CO (NAT REED)
owner comments: LAND PATROLLED TO KEEP OUT TRESSPASSERS.

best source: JOHNSON, ANN F. 1988. FIELD SURVEY FOR ASIMINA TETRAMERA --
WATER COMPANY LAND-NE, MARTIN CO., FL. 30 APR. & 5 MAY,
1988.

eonum.: 412

data sens.:



FLORIDA NATURAL AREAS INVENTORY - ELEMENT OCCURRENCE RECORD
08/18/97

scientific name: PERSEA HUMILIS
common name: SCRUB BAY

grank: G3 federal status: N
srank: S3 state status: N

date last observed: 1988-04-30
county name: Martin

quad name: GOMEZ

township and range: 039S042E section: 27 precision: SC
town/range comments:

general desc.: SAND PINE SCRUB ON TALL (50') RIDGE.

EO data: ONE SHRUB SEEN ON N. SIDE OF RIDGE, E. OF JCT. OF FIRELANE
TO SATURN ST. AND FIRE LANE ALONG RIDGE CREST.

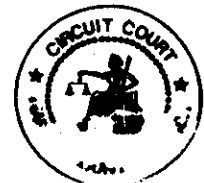
managed area name:

owner: HOBE SOUND WATER CO (NAT REED)
owner comments: LAND PATROLLED TO KEEP OUT TRESSPASSERS.

best source: JOHNSON, ANN F. 1988. FIELD SURVEY FOR ASIMINA TETRAMERA --
WATER COMPANY LAND-NE, MARTIN CO., FL. 30 APR. & 5 MAY 1988.

eonum.: 048

data sens.:



FLORIDA NATURAL AREAS INVENTORY - ELEMENT OCCURRENCE RECORD
08/18/97

scientific name: GOPHERUS POLYPHEMUS
common name: GOPHER TORTOISE

grank: G3 federal status: N
srank: S3 state status: LS

date last observed: 1981-
county name: Martin

quad name: GOMEZ

township and range: 039S042E section: precision: M
town/range comments: GOMEZ GRANT

general desc.:

EO data: RELEASE SITE, 16 TORTOISES

managed area name:

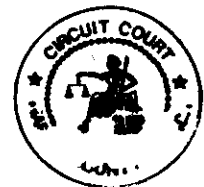
owner:

owner comments:

best source: DIEMER, JOAN E. (MS.). FLA. GAME AND FRESH WATER FISH
COMMISSION, 4005 S. MAIN ST., GAINESVILLE, FL 32601 (904)
376-6481

eonum.: 258

data sens.:



FLORIDA NATURAL AREAS INVENTORY - ELEMENT OCCURRENCE RECORD
08/18/97

scientific name: LECHEA CERNUA
common name: NODDING PINWEED

grank: G3 federal status: N
srank: S3 state status: LT

date last observed: 1987-07-25
county name: Martin

quad name: HOBE SOUND

township and range: 039S042E section: 26 precision: M
town/range comments:

general desc.: SAND PINE, BARE SAND. FLORA INCLUDES: QUERCUS MYRTIFOLIA,
GLAUCOUS SERENOA, Q. GEMINATA, PALAFOX, GALACTIA, DALEA, Q.
INOPINA, ROSEMARY, Q. CHAPMANII, HOG PLUM, LYONIA
FERRIGINIA, CASSIA OCCIDENTALIS, OPUNTIA, HELIANTHEMUM,
POLYGONELLA SP., P. CILIATA, ANDROPOGON, SCRUB HICKORY,
GIANT WILD PINE, STIPULICIDA, LECHEA CERNUA. ALSO CLADINA.

EO data: ON SITE.

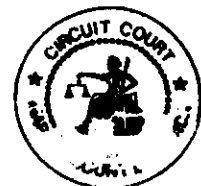
managed area name:

owner:
owner comments:

best source: MINNO, MARIA (MS.). 1992. UNPUBLISHED SURVEY NOTES FOR THE
OCCURRENCE OF ASCLEPIAS CURTISSII IN FLORIDA.

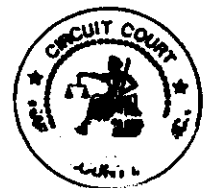
eonum.: 128

data sens.:



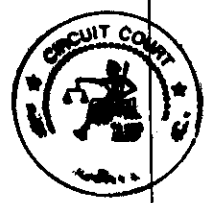
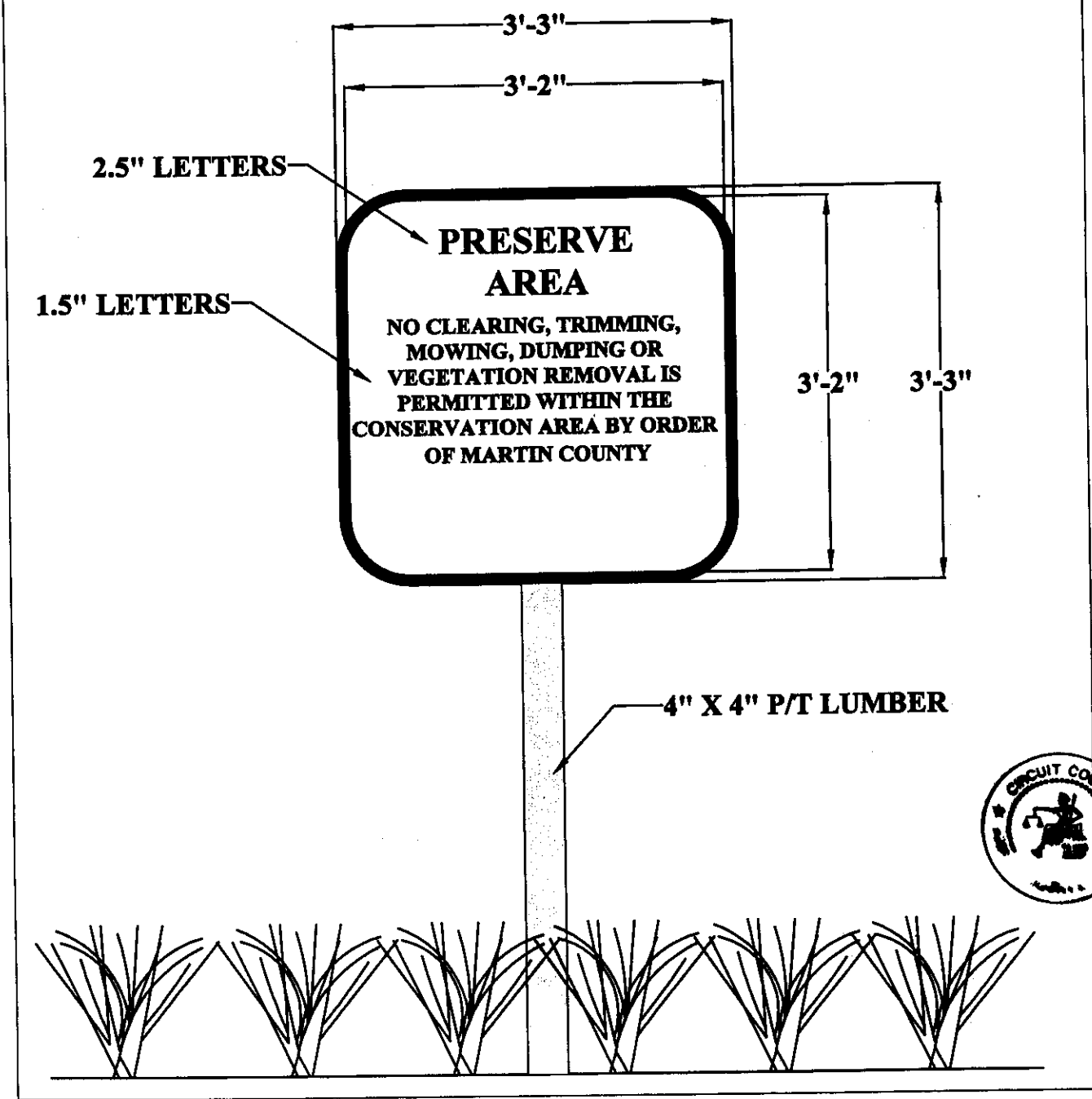
APPENDIX B

Preserve Area Sign Detail



THIS DRAWING, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE #9 AND IMPROPER RELIANCE ON THIS DRAWING WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. SHALL BE WITHOUT LIABILITY TO R.L. WEIGT ENVIRONMENTAL CONSULTANTS, INC.

NOT TO SCALE



OR BK 02063 PG 2137

MARTIN COUNTY	SEC.	TWP.	R.	RLW JOB NO.:	DRAWING NAME:	DATE:	APPENDIX:
FLORIDA	27 & 28	39S	42E	03-102	PRESV-SIGN.DWG	25 NOVEMBER 2003	B

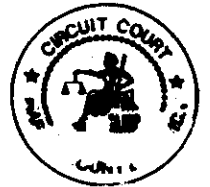
**ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
PRESERVE AREA SIGN**

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlw1@adelphia.net

APPENDIX C

Proposed Monitoring Plan

T:/gmd/gme/Applications_Forms/NEW_Pamp



Page 33 of 33
Revised 1/4/05

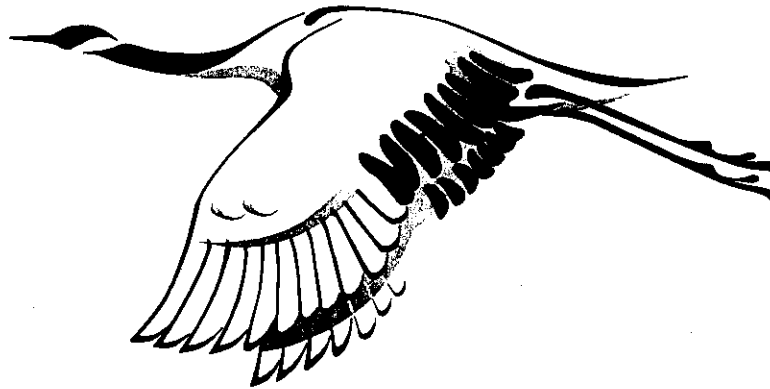
OR BK 02063 PG 2138

**ST. MICHAELS CAMPUS
AT HOBE SOUND
PROJECT SITE**

Martin County, Florida

Monitoring Plan

November 2003



Prepared for:

**Dr. James Cantwell
St. Michaels Independent School
1300 E. 10th Street
Stuart, Florida 34996
(772) 283-1222
FAX (772) 283-1913**

Prepared by:

**R.L. Weigt
Environmental Consultants, Inc.
8985 S.E. Bridge Road
Suite A
Hobe Sound, FL 33455
(772) 546-6255
FAX (772) 546-2316
E-Mail: rlw1@adelphia.net**

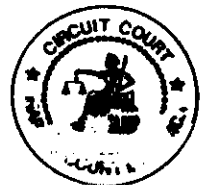


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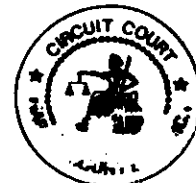
<u>Section</u>	<u>Description</u>	<u>Page</u>
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2.00	MONITORING SET-UP	1
3.00	VEGETATION SURVEY	3
4.00	PANORAMIC AND QUADRAT PHOTOGRAPHS	3
5.00	WILDLIFE UTILIZATION	3
6.00	FISH AND AQUATIC MACROINVERTEBRATE SAMPLING	4
7.00	EXOTIC PLANT SPECIES	4
8.00	MONITORING REPORTS	4

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**ST. MICHAEL'S CAMPUS AT HOBE SOUND
PROJECT SITE
MONITORING AND MAINTENANCE PLAN**

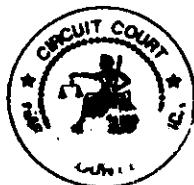
1.00 INTRODUCTION

The St. Michael's Campus at Hobe Sound project site is located west of U.S. Highway #1 (US-1), south of Bridge Road, and north of Eaglewood Way in Sections 27 and 28, Township 39S, Range 42E, Hobe Sound, Martin County, Florida. The St. Michael's Campus at Hobe Sound project site contains 2.03 acres of jurisdictional wetlands. The project will not have any impacts to the jurisdictional wetland located on-site.

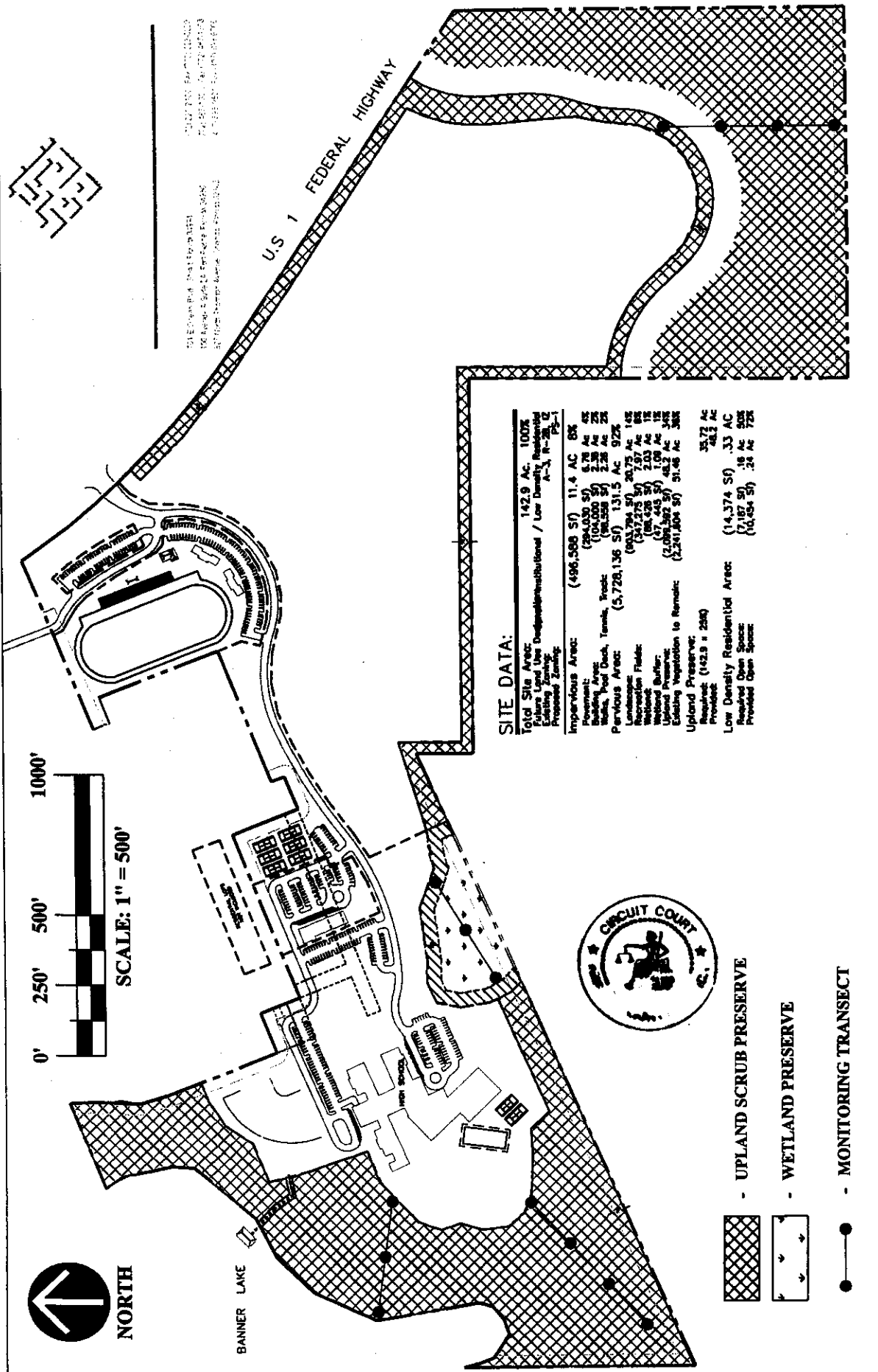
The St. Michael's Campus at Hobe Sound project site will be monitored annually for a five (5) year period. Monitoring will be conducted annually during the wet season (October/November). Annual monitoring reports will be submitted to the Martin County Environmental Planning Administrator within 30 days of the completion of the monitoring. The reports will include vegetation analysis, wildlife utilization, macroinvertebrate and fish sampling, panoramic photographs, and conclusions of the annual monitoring iterations.

2.00 MONITORING SET-UP

R.L. Weigt Environmental Consultants, Inc. (RLW) will establish one (1) monitoring transect within the preserved wetland and three (3) monitoring transects within the upland preserve areas (Figure 1). The beginning of each transect will be established with a 4" x 4" x 24" concrete monument. The concrete monument will also serve as the panoramic photograph locations for the preserve areas. Compass bearings from the concrete markers will be established for each transect. A metal plate will be engraved with the transect number, compass bearing, and date. The metal plates



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501 E. Highway Blvd., Suite 100, Ft. Lauderdale, FL 33309
 190 N.W. 25th St., Suite 100, Ft. Lauderdale, FL 33309
 754-562-2222
 754-562-2223
 754-562-2224
 754-562-2225
 754-562-2226
 754-562-2227
 754-562-2228
 754-562-2229
 754-562-2230

SITE DATA:

Total Site Area:	142.9 AC	100%
Future Land Use Designation:	Residential / Low Density Residential	
Existing Zoning:	A-3, R-2B, U	
Proposed Zoning:	PS-1	
Impervious Area:	(496,598 SF)	11.4 AC
Pavement:	(284,030 SF)	6.78 AC
Building Area:	(104,000 SF)	2.38 AC
Walks, Pool Deck, Tennis, Treads:	(8,568 SF)	0.20 AC
Pervious Area:	(5,728,136 SF)	131.5 AC
Landscaping Fields:	(603,794 SF)	13.8 AC
Lawns:	(347,275 SF)	7.97 AC
Turf:	(15,445 SF)	0.35 AC
Wetland Buffer:	(15,445 SF)	0.35 AC
Upland Preserve:	(2,097,392 SF)	48.2 AC
Existing Vegetation to Remain:	(5,241,804 SF)	119.8 AC
Upland Preserve:		35.72 AC
Residual:	(142.9 x 258)	48.3 AC
Low Density Residential Area:	(14,374 SF)	0.33 AC
Residual Open Space:	(7,187 SF)	0.16 AC
Proposed Open Space:	(1,454 SF)	0.03 AC

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 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
 PHONE: (772) 546-6255 FAX: (772) 546-2316
 E-MAIL: rtw1@adelphia.net

DRAWING NAME:	MONITORING.DWG
APPENDIX:	C
RLW JOB NO.:	03-102
DATE:	25 NOVEMBER 2003
MARTIN COUNTY	FLORIDA
SEC. 27 & 28	TWP. 39S 42E
R.	R.

ST. MICHAELS CAMPUS AT HOBE SOUND
PRESERVE AREA MANAGEMENT PLAN
MONITORING MAP

SOURCE:

will be attached to the 4" x 4" x 24" concrete monuments with stainless steel bolts. The concrete monuments will be field-located with a hand-held GPS unit and the latitude and longitude recorded.

3.00 VEGETATION SURVEY

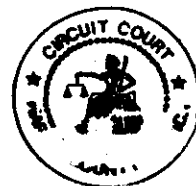
RLW biologists will conduct annual (October/November) vegetation surveys for each of the four (4) transects for a period of five (5) years. Sample quadrats, 10 meters x 10 meters (100 square meters), will be established along each of the transects. Vegetation inside the quadrats will be identified to species where possible, and recorded. Percent-coverage of each species will be recorded. Biologists will list all the species that are observed for each particular sample quadrat.

4.00 PANORAMIC TRANSECT PHOTOGRAPHS AND QUADRAT PHOTOGRAPHS

During each sample iteration, RLW will take color panoramic photographs (180°) of each transect. A range-pole will be provided in each photograph for scaling vegetation growth. A single photograph will be taken of each sample quadrat. The photographs will provide physical documentation of the conditions within the preserve areas. Photographs of the monitoring iterations will be included in each of the annual reports.

5.00 WILDLIFE UTILIZATION

A qualitative study of wildlife utilization (birds, mammals, amphibians, and reptiles) will be conducted during each sample iteration. Wildlife utilization will be determined by sighting, scat, calls, nest, burrows, tracks, etc. A species list of observed wildlife will be compiled and included in each of the annual reports.



6.00 FISH AND AQUATIC MACROINVERTEBRATE SAMPLING

Qualitative sampling for the presence of fish and aquatic macroinvertebrates will be conducted by biologists during each annual sample iteration. The fish and aquatic macroinvertebrates will be collected with cast nets, seines, and/or dipnets, whichever is more applicable at the time of sampling. A species list of the fish and aquatic macroinvertebrate sampling will be included in the annual reports.

7.00 EXOTIC PLANT SPECIES

Exotic and nuisance plant species will be controlled, in perpetuity, within the preserved areas. Brazilian pepper will either be treated with an approved herbicide and allowed to die in-place, or they will be cut and removed from site. An appropriate herbicide will be applied to the stumps to prevent regrowth. Other exotic and nuisance species will be treated with an approved herbicide or pulled by hand. Exotic maintenance will be performed on an as-needed basis, depending on the existing conditions.

The wetland buffer area will be maintained free of exotic vegetation defined as Category I Plants by the Florida Exotic Pest Plant Council (Table 1). Other exotic or nuisance vegetation will be maintained to comprise less than five percent (<5%) of the total acreage of the wetland. Maintenance will be conducted in perpetuity and will run with the land.

8.00 MONITORING REPORTS

Annual reports will be submitted to the Martin County Board of County Commissioners (MCBOCC), Growth Management Department according to the following schedule of events:

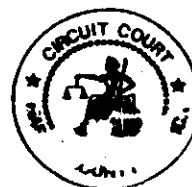


Table 1. Florida Exotic Pest Plant Council's Category I Invasive Exotic Species (2001).

<u>Scientific Name</u>	<u>Common Name</u>
<i>Abrus precatorius</i>	rosary pea
<i>Acacia auriculiformis</i>	earleaf acacia
<i>Albizia julibrissin</i>	mimosa, silk tree
<i>Albizia lebbek</i>	woman's tongue
<i>Ardisia crenata</i> (= <i>Ardisia crenulata</i>)	coral ardisia
<i>Ardisia elliptica</i>	shoebutton ardisia
<i>Ardisia humilis</i>	shoebutton ardisia
<i>Asparagus densiflorus</i>	Asparagus fern
<i>Bauhinia variegata</i>	Orchid tree
<i>Bischofia javanica</i>	bischofia
<i>Calophyllum antillanum</i> (= <i>Calophyllum calaba</i> ; <i>Calophyllum inophyllum</i> , misapplied)	santa maria (names "mast wood", "Alexandrian laurel" used in cultivation)
<i>Casuarina equisetifolia</i>	Australian pine
<i>Casuarina glauca</i>	suckering Australian pine
<i>Cestrum diurnum</i>	day jessamine
<i>Cinnamomum camphora</i>	camphor-tree
<i>Colocasia esculenta</i>	wild taro
<i>Colubrina asiatica</i>	lather leaf
<i>Cupaniopsis anacardioides</i>	carrotwood
<i>Dioscorea alata</i>	winged yam
<i>Dioscorea bulbifera</i>	air potato
<i>Eichornia crassipes</i>	water hyacinth
<i>Eugenia uniflora</i>	Surinam cherry
<i>Ficus microcarpa</i> (= <i>Ficus nitida</i> ; <i>Ficus retusa</i> var. <i>nitida</i> misapplied)	laurel fig
<i>Hydrilla verticillata</i>	hydrilla
<i>Hygrophila polysperma</i>	green hygro
<i>Hymenachne amplexicaulis</i>	West Indian marsh grass
<i>Imperata cylindrica</i> (= <i>Imperata brasiliensis</i> misapplied)	cogon grass
<i>Ipomoea aquatica</i>	waterspinach
<i>Jasminum dichotomum</i>	Gold Coast jasmine
<i>Jasminum fluminense</i>	Brazilian jasmine
<i>Lantana camara</i>	lantana, shrub verbena
<i>Ligustrum lucidum</i>	glossy privet
<i>Ligustrum sinense</i>	Chinese privet, hedge privet
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Lygodium japonicum</i>	Japanese climbing fern
<i>Lygodium microphyllum</i>	Old World climbing fern
<i>Macfadyena unguis-cati</i>	cats claw vine
<i>Manilkara zapota</i>	sapodilla
<i>Melaleuca quinquenervia</i>	melaleuca, paper bark
<i>Melia azedarach</i>	Chinaberry
<i>Mimosa pigra</i>	catclaw mimosa
<i>Nandina domestica</i>	nandina, heavenly bamboo
<i>Nephrolepis cordifolia</i>	sword fern

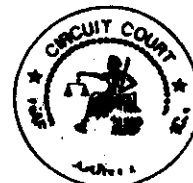
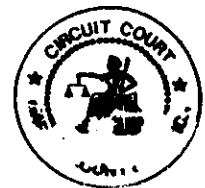


Table 1. Continued.

<i>Nephrolepis multiflora</i>	Asian sword fern
<i>Neyraudia reynaudiana</i>	Burma reed, cane grass
<i>Paederia cruddasiana</i>	sewer vine, onion vine
<i>Paederia foetida</i>	skunk vine
<i>Panicum repens</i>	torpedo grass
<i>Pennisetum purpureum</i>	napier grass
<i>Pistia stratiotes</i>	water lettuce
<i>Psidium cattleianum</i>	strawberry guava
(= <i>Psidium littorale</i>)	
<i>Psidium guajava</i>	guava
<i>Pueraria montana</i>	kudzu
(= <i>Pueraria lobata</i>)	
<i>Rhodomyrtus tomentosa</i>	downy rose-myrtle
<i>Rhoeo spathacea</i>	oyster plant
(= <i>Rhoeo discolor</i> ;	
<i>Tradescantia spathacea</i>)	
<i>Ruellia brittoniana</i>	Mexican petunia
<i>Sapium sebiferum</i>	popcorn tree, Chinese tallow tree
<i>Scaevola sericea</i>	scaevola, half-flower, beach naupaka
(= <i>Scaevola frutescens</i> ;	
<i>Scaevola taccada</i> var. <i>sericea</i>)	
<i>Schefflera actinophylla</i>	schefflera, Queensland umbrella tree
(= <i>Brassaia actinophylla</i>)	
<i>Schinus terebinthifolius</i>	Brazilian pepper
<i>Senna pendula</i>	climbing cassia, Christmas cassia, Christmas senna
(= <i>Cassia coluteoides</i>)	
<i>Solanum tampicense</i>	wetland night shade, aquatic soda apple
(= <i>Solanum houstonii</i>)	
<i>Solanum viarum</i>	tropical soda apple
<i>Syngonium podophyllum</i>	Arrowhead vine
<i>Syzygium cumini</i>	jambolan, Java plum
<i>Tectaria incisa</i>	incised halberd fern
<i>Thespesia populnea</i>	seaside mahoe
<i>Tradescantia fluminensis</i>	white-flowered wandering jew
<i>Tradescantia spathacea</i>	oyster plant
(= <i>Rhoeo spathacea</i> ;	
<i>Rhoeo discolor</i>)	
<i>Urochloa mutica</i>	Para grass
(= <i>Brachiaria mutica</i>)	

Source: Florida Exotic Pest Plant Council, 2001 List of Invasive Species



November/December	Monitoring Report #1
November/December	Monitoring Report #2
November/December	Monitoring Report #3
November/December	Monitoring Report #4
November/December	Final Monitoring Report #5

The first monitoring report will be submitted to the MCBOCC at the end of the first wet season following completion of project construction. Annual reports will be submitted within thirty (30) days of sampling the preserve areas. The monitoring reports will contain the following data:

- results of the vegetation surveys
- results of the wildlife utilization
- panoramic and quadrat photographs
- results of the fish and aquatic macroinvertebrate survey
- discussion of project issues related to vegetation changes, fish and wildlife utilization, percent-coverage, permit compliance, exotic species, and recommendations or proposed changes, as necessary for improving the success of the preserve areas.

STATE OF FLORIDA
MARTIN COUNTY

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AND CORRECT COPY OF THE ORIGINAL.
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