



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

Jeffrey Schaffer
Weaver Boos Consultants
365 Citrus Tower Boulevard, Suite 110
Clermont, FL 34711

January 30, 2012

Dear Mr. Schaffer,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Proposed National Cemetery Site
Date Received: 01/30/2012
Location: Brevard County

Please note that FNAI does not compile and is unable to provide information on water resources, soils, geologic features, farmland, traffic, noise, socioeconomic concerns, air quality concerns, or any natural or cultural resource other than those described herein.

Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.

Tracking Florida's Biodiversity

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

Florida Scrub-jay Survey – U.S. Fish and Wildlife Service

This survey was conducted by staff and associates of the Archbold Biological Station from 1992 to 1996. An attempt was made to record all scrub-jay (*Aphelocoma coerulescens*) groups, although most federal lands were not officially surveyed. Each map point represents one or more groups.

This data layer indicates that there are potential scrub-jay populations on or very near your site. For additional information:

Fitzpatrick, J.W., B. Pranty, and B. Stith, 1994, Florida scrub jay statewide map, 1992-1993. U. S. Fish and Wildlife Service Report, Cooperative Agreement no. 14-16-004-91-950.

Managed Areas

Portions of the site appear to intersect the Merritt Island National Wildlife Refuge, managed by the US Fish and Wildlife Service.

The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.

Land Acquisition Projects

This site appears to intersect the Indian River Lagoon Blueway Florida Forever BOT Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. A description of this project is enclosed. For more information on this Florida Forever Project, contact the Florida Department of Environmental Protection, Division of State Lands.

Florida Forever Board of Trustees (BOT) projects are proposed and acquired through the Florida Department of Environmental Protection, Division of State Lands. The state has no specific land management authority over these lands until they are purchased.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database 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.

However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information 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. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

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

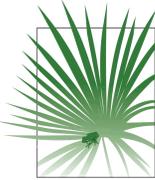
Thank you for your use of FNAI services. An invoice will be mailed separately. If I can be of further assistance, please contact me at (850) 224-8207 or at mobrien@fnai.org.

Sincerely,

Michael O'Brien

Michael O'Brien
GIS / Data Services

Encl

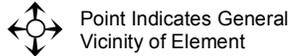


1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive



● U.S. Fish & Wildlife Service
Scrub Jay Survey 1992-96

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever
- Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units

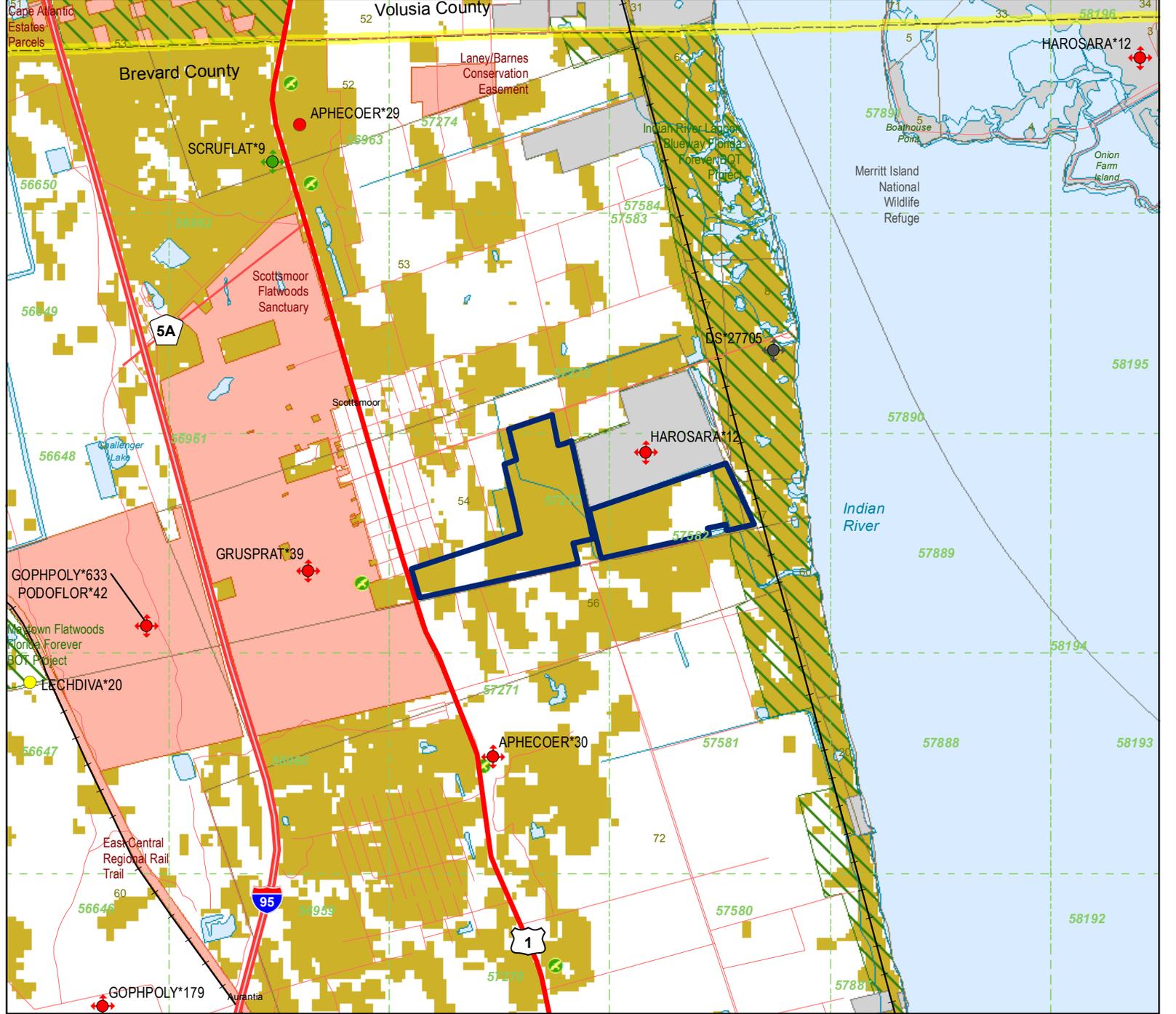
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads shown in Gray]
- Water

NOTE
Map should not be interpreted without accompanying documents.

Proposed National Cemetery Site

Site boundaries are approximate.

Brevard County



Map produced by MGO
Map Date: 30 Jan 2012



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

DOCUMENTED ELEMENT OCCURRENCES ON OR NEAR Proposed National Cemetery Site, Brevard County



Map Label	Scientific Name	Common Name	Global State Federal State Observation				Date	Description	EO Comments
			Rank	Rank	Status	Listing			
APHECOER*29	<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	G2	S2	LT	FT	1991-07-15	SLASH PINE SCRUB [=SCRUBBY FLATWOODS]	1981-08-21: 3 SCRUB JAYS (U81COX01). SNODGRASS ET AL. ESTIMATED SMALL ISOALTED POPULATION OF 0-5 FAMILY GROUPS. TWO ADULTS AND 1 JUVENILE REPORTED 1990-08-28; TWO JUVENILES REPORTED 1991-07-15 (U91SNO01).
APHECOER*30	<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	G2	S2	LT	FT	1981-07-25	OAK SCRUB	1981-07-25: 2 SCRUB JAYS
DS*27705	<i>Data Sensitive Element</i>	Data Sensitive	G2	S2	N	LE	1990-08	Data Sensitive	Data Sensitive
GOPHPOLY*179	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST	1987-PRE	IMPROVED PASTURE	1987-pre: REPORTED BY ANDY BECK (U86DIE01FLUS).
GOPHPOLY*633	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST	1989	HIGH SCRUBBY FLATWOODS, A NORTH-SOUTH RUNNING RIDGE OF ABOUT 13.8 ACRES, SURROUNDED BY CA. 125 ACRES OF WETLANDS; WITH THE EXCEPTION OF ONE ROAD CROSSING IT WILL ALL BE PRESERVED.	GOPHER TORTOISE POPULATIONS ON SITE ARE "LIGHT" AND MOST OCCUR IN THE AREA TO BE PRESERVED. PODOMYS FLORIDANUS ASSOC. WITH BURROWS IN MORE NORTHERN PART OF SITE.
GRUSPRAT*39	<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST	1990-PRE	127 ACRES OF WET PRAIRIE, INTERCONNECTED FOR THE MOST PART, AND TO BE PRESERVED.	REPORTED TO NEST ON SITE THOUGH NO NESTS WERE OBSERVED DURING THE 1990 SEASON.
HAROSARA*12	<i>Haroldiataenius saramari</i>	Sand Pine Scrub Ataenius Beetle	G3G4	S3S4	N	N	2001-05-16	2001-05-16: No description given (N05LAM01FLUS).	2001-05-16: One specimen was collected (N05LAM01FLUS).
LECHDIVA*20	<i>Lechea divaricata</i>	Pine Pinweed	G2	S2	N	LE	2009-09-24	2009-09-24: Along small road through scrubby flatwoods (F09FNA10FLUS).	2009-09-24: 11-50 scattered plants in fruit (F09FNA10FLUS).
PODOFLOR*42	<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC	1989	HIGH, SCRUBBY FLATWOODS, NORTHERN PORTION OF THE SANDY RIDGE RUNNING NORTH-SOUTH. AREA INCLUDING ADJ. WETLANDS TO BE PRESERVED. (13.8 ACRES XERIC, CA. 125 ACRES WETLAND HARDWOODS.)	HABITAT APPEARS SUITABLE IN SOUTHERN END WHERE GOPHER TORTOISES ALSO OCCUR BUT NO ANIMALS WERE TRAPPED. A LOCAL RESIDENT EXPLAINED THAT THE AREA WAS A COMMON DROP OFF POINT FOR ABANDONED HOUSECATS.



1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 (850) 224-8207
 (850) 681-9364 Fax
 www.fnai.org

FLORIDA
 Natural Areas
 INVENTORY

Florida Natural Areas Inventory

DOCUMENTED ELEMENT OCCURRENCES ON OR NEAR Proposed National Cemetery Site, Brevard County



Map Label	Scientific Name	Common Name	Global State Federal State Observation				Date	Description	EO Comments
			Rank	Rank	Status	Listing			
SCRUFLAT*9	Scrubby flatwoods		G2	S2?	N	N	2004	SLASH PINE SCRUB [=SCRUBBY FLATWOODS]	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1991-07-15) (U05FNA02FLUS). OCCURRENCE AT SITE



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 57272					
Likely					
<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	G2	S2	LT	FT
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Glandularia tampensis</i>	Tampa Vervain	G2	S2	N	LE
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
Scrub		G2	S2	N	N
Potential					
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamovilfa curtissii</i>	Curtiss' Sandgrass	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chamaesyce cumulicola</i>	Sand-dune Spurge	G2	S2	N	LE
<i>Conradina grandiflora</i>	Large-flowered Rosemary	G3	S3	N	LT
<i>Deeringothamnus pulchellus</i>	Beautiful Pawpaw	G1	S1	LE	LE
<i>Deeringothamnus rugelii</i>	Rugel's Pawpaw	G1	S1	LE	LE
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Dicerandra thincicola</i>	Titusville Balm	G1Q	S1	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Haroldiataenius saramari</i>	Sand Pine Scrub Ataenius Beetle	G3G4	S3S4	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Lechea divaricata</i>	Pine Pinweed	G2	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Platanthera integra</i>	Yellow Fringeless Orchid	G3G4	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Salix floridana</i>	Florida Willow	G2	S2	N	LE

Matrix Unit ID: 57273

Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Glandularia tampensis</i>	Tampa Vervain	G2	S2	N	LE
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

Potential

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calamovilfa curtissii</i>	Curtiss' Sandgrass	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Carex chapmanii</i>	Chapman's Sedge	G3	S3	N	LT
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Conradina grandiflora</i>	Large-flowered Rosemary	G3	S3	N	LT
<i>Deeringothamnus rugelii</i>	Rugel's Pawpaw	G1	S1	LE	LE
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Haroldiataenius saramari</i>	Sand Pine Scrub Ataenius Beetle	G3G4	S3S4	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Platanthera integra</i>	Yellow Fringeless Orchid	G3G4	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Salix floridana</i>	Florida Willow	G2	S2	N	LE

Matrix Unit ID: 57582

Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Glandularia tampensis</i>	Tampa Vervain	G2	S2	N	LE
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE

Potential

<i>Acipenser oxyrinchus oxyrinchus</i>	Atlantic Sturgeon	G3T3	S1	C	SSC
<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	G2	S2	LT	FT
<i>Calamovilfa curtissii</i>	Curtiss' Sandgrass	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Conradina grandiflora</i>	Large-flowered Rosemary	G3	S3	N	LT
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Dermochelys coriacea</i>	Leatherback	G2	S2	LE	FE
<i>Eretmochelys imbricata</i>	Hawksbill	G3	S1	LE	FE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Haroldiataenius saramari</i>	Sand Pine Scrub Ataenius Beetle	G3G4	S3S4	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE

Definitions: Documented - Rare species and natural communities documented on or near this site.

Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.

Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.

Potential - This site lies within the known or predicted range of the species listed.



1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 (850) 224-8207
 (850) 681-9364 Fax

FLORIDA
 Natural Areas
 INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Nerodia clarkii taeniata</i>	Atlantic Salt Marsh Snake	G4T1Q	S1	LT	FT
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Salix floridana</i>	Florida Willow	G2	S2	N	LE

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Elements and Element Occurrences

An **element** is 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 an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for 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 (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

- 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 from 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).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- 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 in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- C** = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- LE** = Endangered: species in danger of extinction throughout all or a significant portion of its range.
- LE, LT** = Species currently listed endangered in a portion of its range but only listed as threatened in other areas
- LE, PDL** = Species currently listed endangered but has been proposed for delisting.
- LE, PT** = Species currently listed endangered but has been proposed for listing as threatened.
- LE, XN** = Species currently listed endangered but tracked population is a non-essential experimental population.
- LT** = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
- SAT** = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
- SC** = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

- FE** = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
- FT** = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
- F(XN)** = Federal listed as an experimental population in Florida
- FT(S/A)** = Federal Threatened due to similarity of appearance
- ST** = State population listed as Threatened by the FFWCC. 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. (ST* for *Ursus americanus floridanus* (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for *Neovison vison* pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)
- SSC** = Listed as Species of Special Concern by the FFWCC. 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. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)
- N** = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

- LE** = Endangered: species of plants native to Florida 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; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.
- LT** = Threatened: 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 number as to cause them to be Endangered.
- N** = Not currently listed, nor currently being considered for listing.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

- A** = Excellent estimated viability
- A?** = Possibly excellent estimated viability
- AB** = Excellent or good estimated viability
- AC** = Excellent, good, or fair estimated viability
- B** = Good estimated viability
- B?** = Possibly good estimated viability
- BC** = Good or fair estimated viability
- BD** = Good, fair, or poor estimated viability
- C** = Fair estimated viability
- C?** = Possibly fair estimated viability
- CD** = Fair or poor estimated viability
- D** = Poor estimated viability
- D?** = Possibly poor estimated viability
- E** = Verified extant (viability not assessed)
- F** = Failed to find
- H** = Historical
- NR** = Not ranked, a placeholder when an EO is not (yet) ranked.
- U** = Unrankable
- X** = Extirpated

*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

- H?** = Possibly historical
- F?** = Possibly failed to find
- X?** = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).

Indian River Lagoon Blueway

Volusia, Brevard, Indian River, St. Lucie, and Martin Counties

Partnerships

Purpose for State Acquisition

Public acquisition would help preserve and improve the aquatic natural communities of the Indian River Lagoon, one of the country's most productive, diverse, and commercially and recreationally important estuaries. A third of the country's manatee population lives in the Indian River, and the area is important for many migratory birds as well as for oceanic and estuarine fishes. Additionally, public acquisition would provide natural resource based recreation in a developing area of Florida.

Manager

Division of Recreation and Parks (DRP) of the Florida Department of Environmental Protection (DEP) management centers around the Mullet Creek area. The previous managing agency, DEP Coastal and Aquatic Managed Areas (CAMA), also requested that the lands purchased for this project within St. Lucie County be leased directly to the county. The county has purchased parcels using county funds, Florida Communities Trust (FCT) money and other sources, and they would like to manage the lands under a single plan. Other agencies participating as cooperating managers are Brevard County Environmentally Endangered Lands (EEL) Program, Brevard Mosquito Control, and Indian River Mosquito Control. Several of the previously listed cooperating Managers are currently managing some of the

tracts within the project boundaries. The Florida Fish and Wildlife Conservation Commission (FWC) wishes to participate in the management of some sites (including Phase II sites). Additionally the St. Johns River Water Management District (SJRWMD) and South Florida Water Management District (SFWMD) will likely be cooperating Managers on some sites as part of their SWIM programs. The FWC will manage that part of the project that was formally the North Indian River Lagoon project. The Pelican Island National Wildlife Refuge will manage the Pelican Island Addition site, if it is acquired. Florida Atlantic University (FAU) will manage the Harbor Branch sites.

Management of lands previously owned by to Harbor Branch Oceanographic Institute will be divided among several entities. Some of the unimproved uplands will be managed by St. Lucie County Environmental Resources Division and some of the unimproved wetlands by St. Lucie County Mosquito Control District. Much of the improved acreage will be leased by the Board of Trustees for management by Harbor Branch Oceanographic Foundation or Florida Atlantic University.

General Description

The 5,136-acre, Phase I, project is located in five counties, includes 36 separate areas (combined into 20 sites), and lies within the jurisdictions of two water management districts. It spans approximately 150 miles along the east and west sides of the Indian River Lagoon. Marine tidal marsh and maritime hammock, largely in good condition, cover roughly 60 per cent of the project;

Indian River Lagoon Blueway FNAI Elements	
Manatee	G2/S2
<i>Lakela's Mint</i>	G1/S1
Florida Scrub-jay	G2/S2
Gopher Tortoise	G3/S3
Loggerhead	G3/S3
Eastern Indigo Snake	G3/S3
<i>Atlantic Coast Florida Lantana</i>	G2T1/S1
Atlantic Salt Marsh Snake	G4T1Q/S1
<i>Burrowing Four-o'clock</i>	G3?/S2
<i>Coastal Vervain</i>	G3/S3
Wood Stork	G4/S2
<i>Large-flowered Rosemary</i>	G3/S3
18 rare species are associated with the project	

Placed on List	1998
Project Area (Acres)	26,610
Acres Acquired	4,447*
at a Cost of	\$45,794,168*
Acres Remaining	22,163

with Estimated (Tax Assessed) Value of \$90,061,244
*Includes acreage acquired and funds spent by the SJRWMD and Martin/Brevard/Indian River counties, and Harbor Branch.



INDIAN RIVER LAGOON BLUEWAY: OVERVIEW
VOLUSIA, BREVARD, INDIAN RIVER, ST. LUCIE, AND MARTIN COUNTIES

- Map 1: Volusia County**
 A. Barrier Island Marshes Sites
 B. North Indian River Lagoon Site
 C. Edgewater Sites
 D. Oak Hill Site

- Map 2: Volusia and Brevard Counties**
 A. North Indian River Lagoon Site
 B. North Titusville Site

- Map 3: Brevard County**
 A. Pine Island Site
 B. Sykes Creek Sites

- Map 4: Brevard County**
 A. East Merritt Island Impoundment Sites

- Map 5: Brevard County**
 A. Hog Point Site
 B. Washburn Cove Site
 C. Snagg Point Site
 D. Mullet Creek Site
 E. Old Oak Lodge Preserve Site

- Map 6: Indian River County**
 A. Pelican Island Addition Site
 B. Morgan's Impoundment Site
 C. Winter Beach Marsh Site
 D. Vossinbury Site

- Map 7: Indian River and St. Lucie Counties**
 A. Diamond Site
 B. Martin Site
 C. Oyster Bar Impoundment Site
 D. Avalon Site
 E. Harbor Branch Site
 F. Pappas Site
 G. Queens Island Site

- Map 8: St. Lucie County**
 A. Bear Point Site

- Map 9: St. Lucie and Martin Counties**
 A. Hutchinson Island Site
 B. Jensen Site

- Map 10: Martin County**
 A. Gomez Site
 B. Corset Island Site
 C. Palmer Sound Site
 D. Hobe Sound Site



AUGUST 2007

Indian River Lagoon Blueway

many of the marshes have been diked for mosquito control and require reconnection to the lagoon. Mangrove swamps, scrub, and flatwoods cover small portions of the proposal areas. A large part of the country's manatee population lives in the Indian River, and the area is important for many migratory birds as well as for oceanic and estuarine fishes. The Indian River Lagoon is a state aquatic preserve and classified as an Outstanding Florida Water. It is also a SWIM priority waterbody, and an Estuary of National Significance. The commercial and recreational fisheries (based on estuarine-dependent species) in the Indian River are some of Florida's most important—over 100,000 saltwater recreational anglers are registered in the proposal area.

Public Use

Parcels within the project fall within or are adjacent to five aquatic preserves; Mosquito Lagoon, Banana River, Indian River—Malabar to Vero Beach, Indian River—Vero Beach to Ft. Pierce, and Jensen Beach to Jupiter Inlet. It will be managed as a buffer to the aquatic preserves.

Acquisition Planning

On December 12, 1997, the LAAC added the Indian River Lagoon Blueway project to the CARL 1998 Priority list. This fee-simple acquisition, sponsored by multiple sponsors, consisted of approximately 5,136 acres, 460 owners, and a 1996 taxable value of \$24,519,173.

On June 17, 1999, the LAMAC approved a fee-simple, 42-acre addition to the project boundary. It was sponsored by Brevard County, consisted of multiple owners, and a 1998 taxable value of \$865,400.

On December 9, 1999, LAMAC approved combining the North Indian River Lagoon project with the existing Indian River Lagoon Blueway project. The added acreage brought the total Project Area to approximately 25,345 acres.

On December 19, 2000, the LAMAC approved a fee-simple, 186-acre addition to the project boundary. It was sponsored by multiple sponsors, consisted of multiple owners, and a 1999 taxable value of \$4,205,800. The addition was broken down as follows: (1) Brevard County Snagg Point, sponsored by TNC, consisted of 125 acres with a taxable value of \$1,246,520. The SJRWMD acquired 14.63 acres in 2005; (2) Martin County Bon Air Beach, sponsored by the Town of Ju-

pter Island, consisted of 43 acres with a taxable value of \$1,116,000; and (3) St. Lucie County Hobe Sound Addition, sponsored by St. Lucie County, consisted of 18 acres with a taxable value of \$1,798,280.

On April 16, 2001, ARC established Groups A & B and moved this project to Group B of the 2001 Florida Forever Priority list.

On December 5, 2002, ARC moved this project to Group A of the 2003 Florida Forever Priority list.

On August 15, 2003, the ARC approved a fee-simple, 15-acre addition, aka Old Oak Lodge Preserve, to the project boundary. It was sponsored by the Florida Institute of Technology, Dept. of Marine & Environmental Systems, consisted of one owner, Indian River No. 1 Developer, and a 2002 taxable value of \$685,170.

On February 11, 2005, the ARC approved a fee-simple, 297-acre addition, to the project boundary. It was sponsored by TNC, consisted of four owners, and a 2004 taxable value of \$1,137,380.

On February 16, 2007, the ARC approved a fee-simple, 194-acre addition to the project boundary. It was sponsored by the Brevard County EEL Program, consisted of nine ownerships, 10 parcels, and a taxable value of \$984,310. Brevard County will manage these parcels considered essential to the project.

On April 13, 2007, the ARC approved a fee-simple, 296-acre addition, known as Harbor Branch, to the project boundary. It was sponsored by the St. Lucie County government, and consisted of three landowners, 12 parcels, and a taxable value of \$16,248,257. The parcels were designated as essential and will be managed by the St. Lucie County Mosquito Control District.

On August 16, 2007, the ARC approved a fee-simple, 47-acre addition (aka Pelican Island Addition Site) to the project boundary. It was sponsored by the landowner, Torwest, Inc., and the Pelican Island National Wildlife Refuge and consisted of one parcel with a 2006 taxable value of \$5,816,550. The Pelican Island National Wildlife Refuge is the recommended manager of this essential parcel. Approximately half an acre overlaps with the Archie Carr Sea Turtle Refuge site in Indian River County.

In August, 2008, 41.88 acres of the Kaufman/Young ownership were purchased for \$1,970,000 (\$1,313,333

from DSL Florida Forever funds and \$656,666 paid for by the SJRWMD). The DRP will manage this addition.

On December 12, 2008 ARC voted to extend the boundary with a fee-simple 230-acre addition in St. Lucie County, with a tax-assessed value of \$33,756,700. This is the Indian River Lagoon Blueway Harbor Branch, Phase II. This addition is part of the Harbor Branch Oceanographic campus. The proposal was submitted as a stand-alone project and designated as essential.

On March 10, 2010, two parcels--approx 384 acres (136/DSL plus 248/DCA)--were purchased from Harbor Branch (HB) for \$24,040,488 funding from FF-HB-Other. These parcels are to be managed by FAU.

Coordination

Acquisition of this project will be a coordinated effort between directly involved local governments and water management districts and the State. The five counties (Volusia, Brevard, Indian River, St. Lucie and Martin) and the water management districts (St. Johns River WMD and South Florida WMD) have sent resolutions in support of this project. The District and Brevard County have acquired more than 3,200 acres. The District has acquired the Snag Point tract (214 acres), an essential parcel.

A "161" agreement has been formalized for the tracts in the St. Johns River WMD.

Management Policy Statement

The primary goals of management of Indian River Lagoon Blueway project are: to conserve and protect environmentally unique and irreplaceable lands that contain native flora and fauna representing a natural area unique to or scarce within this state; to conserve and protect significant habitat for native species or endangered and threatened species; to conserve, protect, manage or restore important ecosystems in order to enhance or protect significant surface water, coastal, recreational, fish and wildlife resources which local or state regulatory programs cannot adequately protect; and to provide areas for natural resource-based recreation.

Management Prospectus

Qualifications for state designation The project will acquire numerous parcels adjoining the Indian River Lagoon. The habitats include freshwater marsh, salt marsh, mangrove fringe, maritime hammock, coastal

strand, scrub, baygall, and pine flatwoods. Many of the wetland sites are impounded or otherwise hydrologically altered. Management and restoration of these habitats would provide protection for the Indian River Lagoon, increase estuarine habitat, and improve public access and recreational opportunities. The parcels fall within five aquatic preserves; Mosquito Lagoon, Banana River, Indian River—Malabar to Vero Beach, Indian River—Vero Beach to Fort. Pierce, and Jensen Beach—to Jupiter Inlet, and therefore is appropriate for designation as a State Buffer Preserve.

Manager Division of Recreation and Parks (DRP) of the Florida Department of Environmental Protection (DEP) will serve as the project Manager.

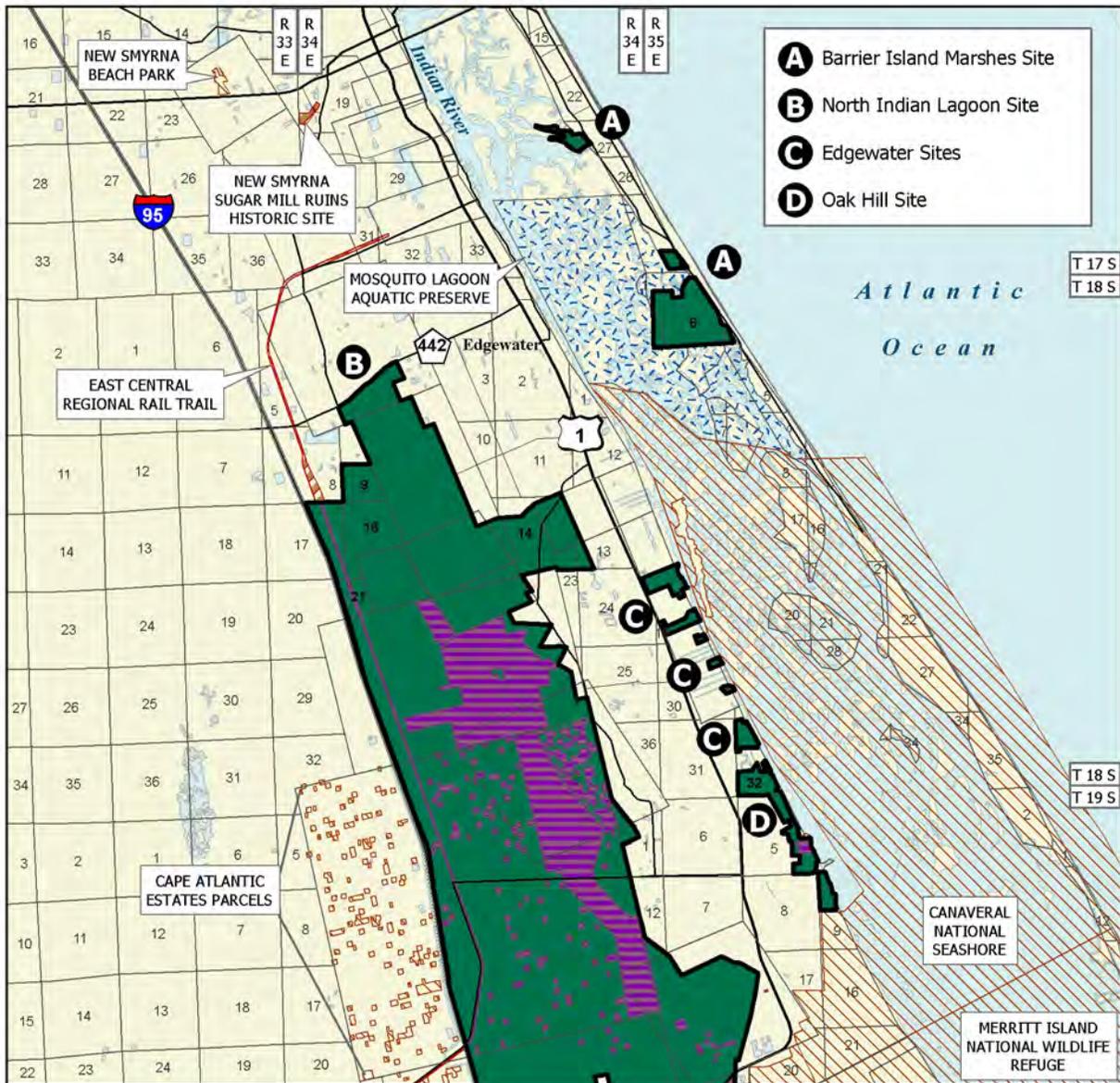
Conditions affecting intensity of management Initially all acquisitions will be of "high need." Most of the wetlands are impounded, some are connected to the lagoon and managed, others are not. The long-term goal will be to reconnect all impoundments to the Lagoon through control structures. Structures will have to be installed and maintained in many areas and dikes repaired or removed where no longer functional. Most of the upland parcels have been unmanaged and have exotic plant infestations, and trash. Since most of the parcels are in urbanized areas the demand for water access will be high. Construction of several access points will be needed. Increased patrol and law enforcement presence will be necessary to prevent future dumping and vandalism. Long-term routine management activities within the upland areas will be at the "moderate need" level. However, due to the maintenance needs of the dikes and water control structures, and the required management of water levels, the impoundments will continue to require "high need" management.

Timetable for implementing management and provisions for security and protection of infrastructure

The management goals of this project are to utilize an ecosystems management approach: to enhance the protection of the adjacent Indian River Lagoon and its aquatic preserves; to conserve and restore coastal wetlands and uplands; to protect and manage native flora and fauna; to provide areas for boating, fishing, camping, hiking, bike riding, picnicking and nature appreciation; to protect archaeological and historical resources; to enhance public appreciation for natural diversity; and to cooperate with local mosquito control authorities to ensure that impoundments are properly managed.

Upon acquisition, initial activities will concentrate on the site security of the upland properties, including posting, fencing where needed, and patrols. Within the

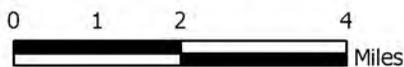
Indian River Lagoon Blueway



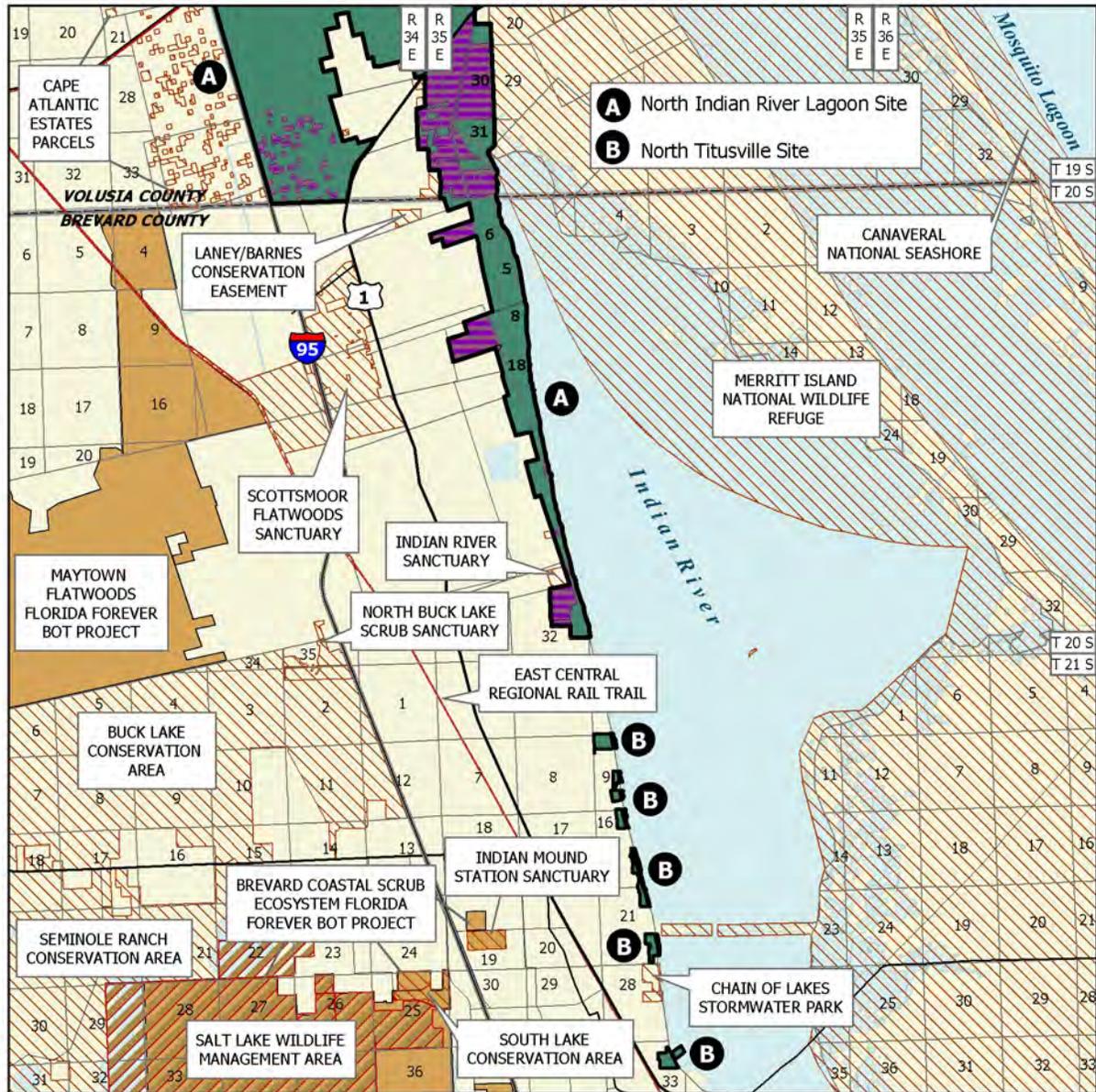
INDIAN RIVER LAGOON BLUEWAY: MAP 1 OF 10

VOLUSIA COUNTY

-  Florida Forever BOT Project Boundary
-  Acquired for Conservation (Fee Simple)
-  Essential Parcel(s) Remaining
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves



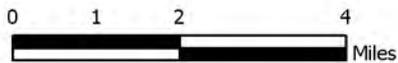
OCTOBER 2010



INDIAN RIVER LAGOON BLUEWAY: MAP 2 OF 10

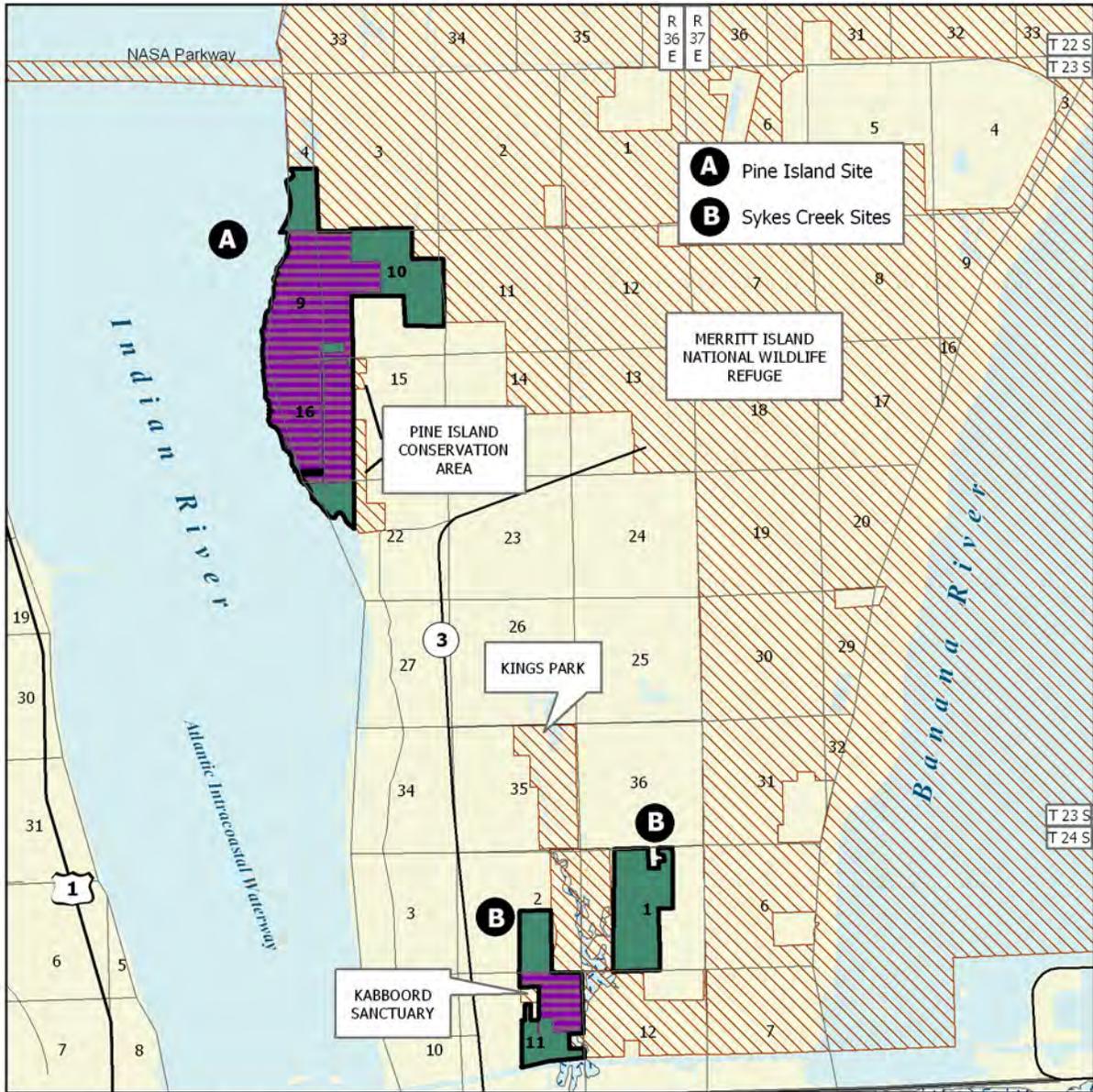
VOLUSIA AND BREVARD COUNTIES

-  Florida Forever BOT Project Boundary
-  Acquired for Conservation (Fee Simple)
-  Essential Parcel(s) Remaining
-  Other Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands



OCTOBER 2010

Indian River Lagoon Blueway



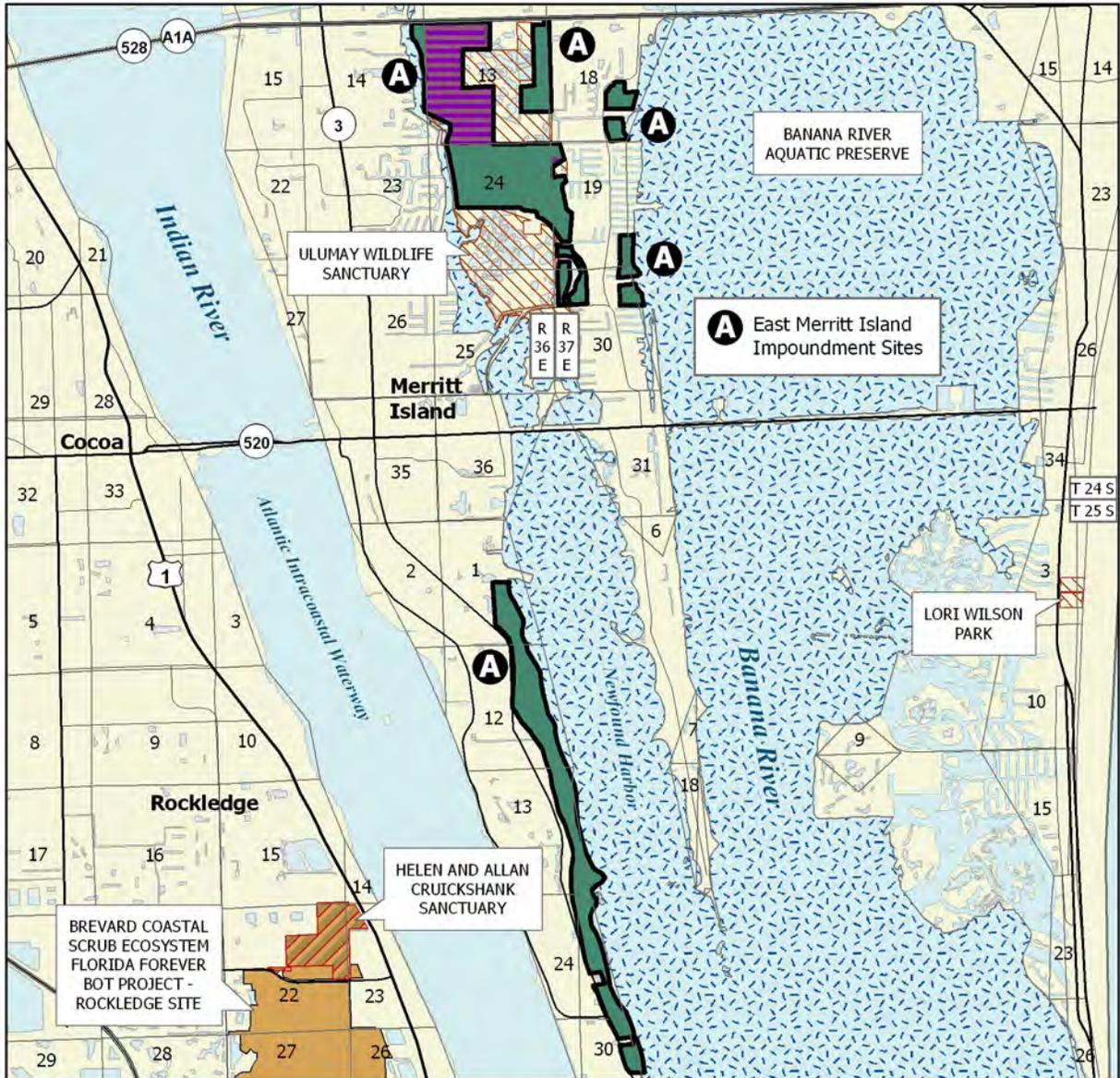
INDIAN RIVER LAGOON BLUEWAY: MAP 3 OF 10

BREVARD COUNTY

-  Florida Forever BOT Project Boundary
-  Acquired
-  Essential Parcel(s) Remaining
-  Other Florida Forever BOT Projects
-  Other Conservation Lands



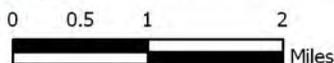
FEBRUARY 2007



INDIAN RIVER LAGOON BLUEWAY: MAP 4 OF 10

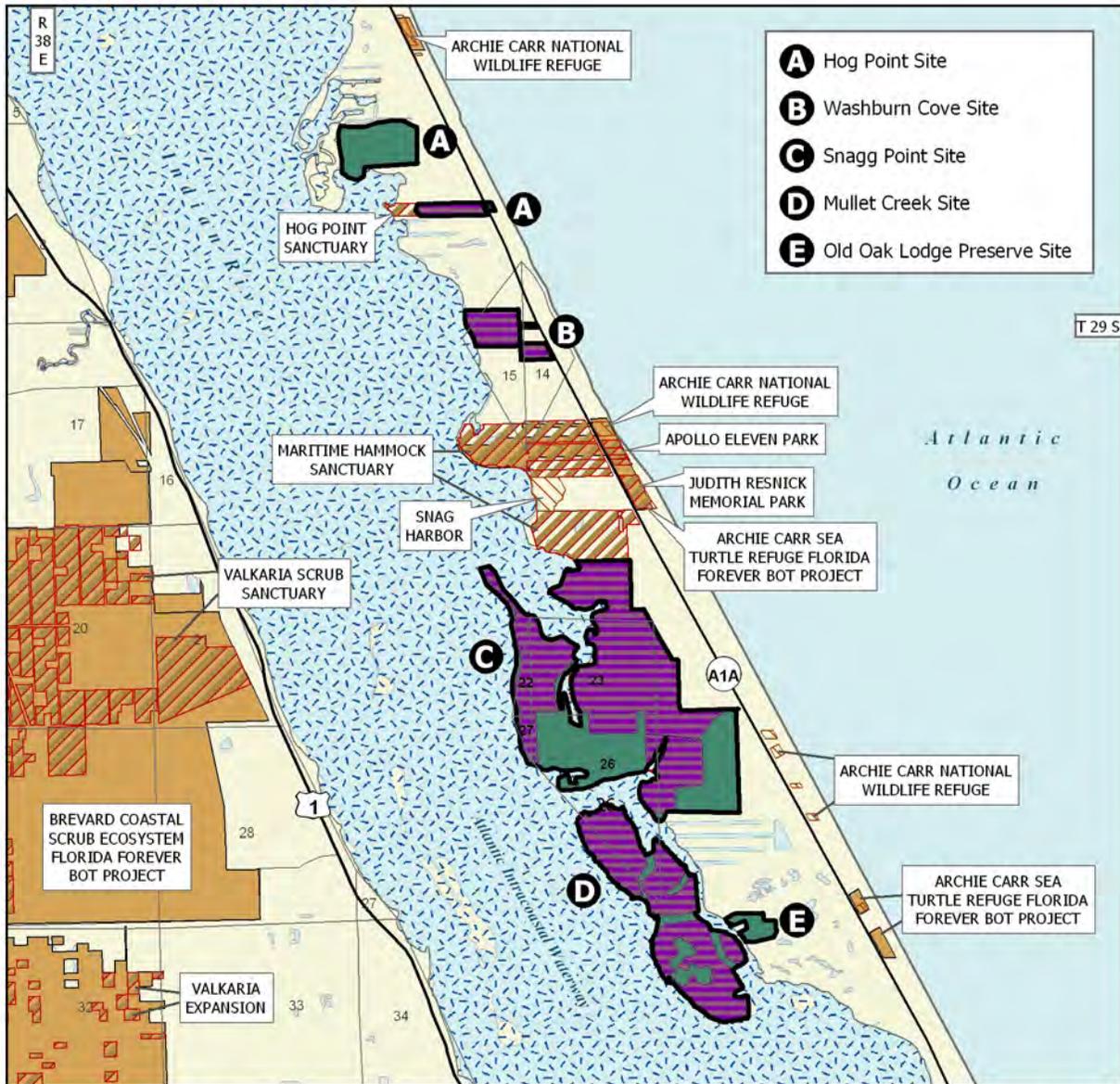
BREVARD COUNTY

-  Florida Forever BOT Project
-  Acquired
-  Essential Parcel(s) Remaining
-  Other Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves



FEBRUARY 2008

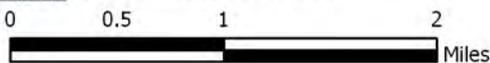
Indian River Lagoon Blueway



INDIAN RIVER LAGOON BLUEWAY: MAP 5 OF 10

BREVARD COUNTY

- Florida Forever BOT Project Boundary
- Acquired
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands
- State Aquatic Preserves



JULY 2009



INDIAN RIVER LAGOON BLUEWAY: MAP 6 OF 10

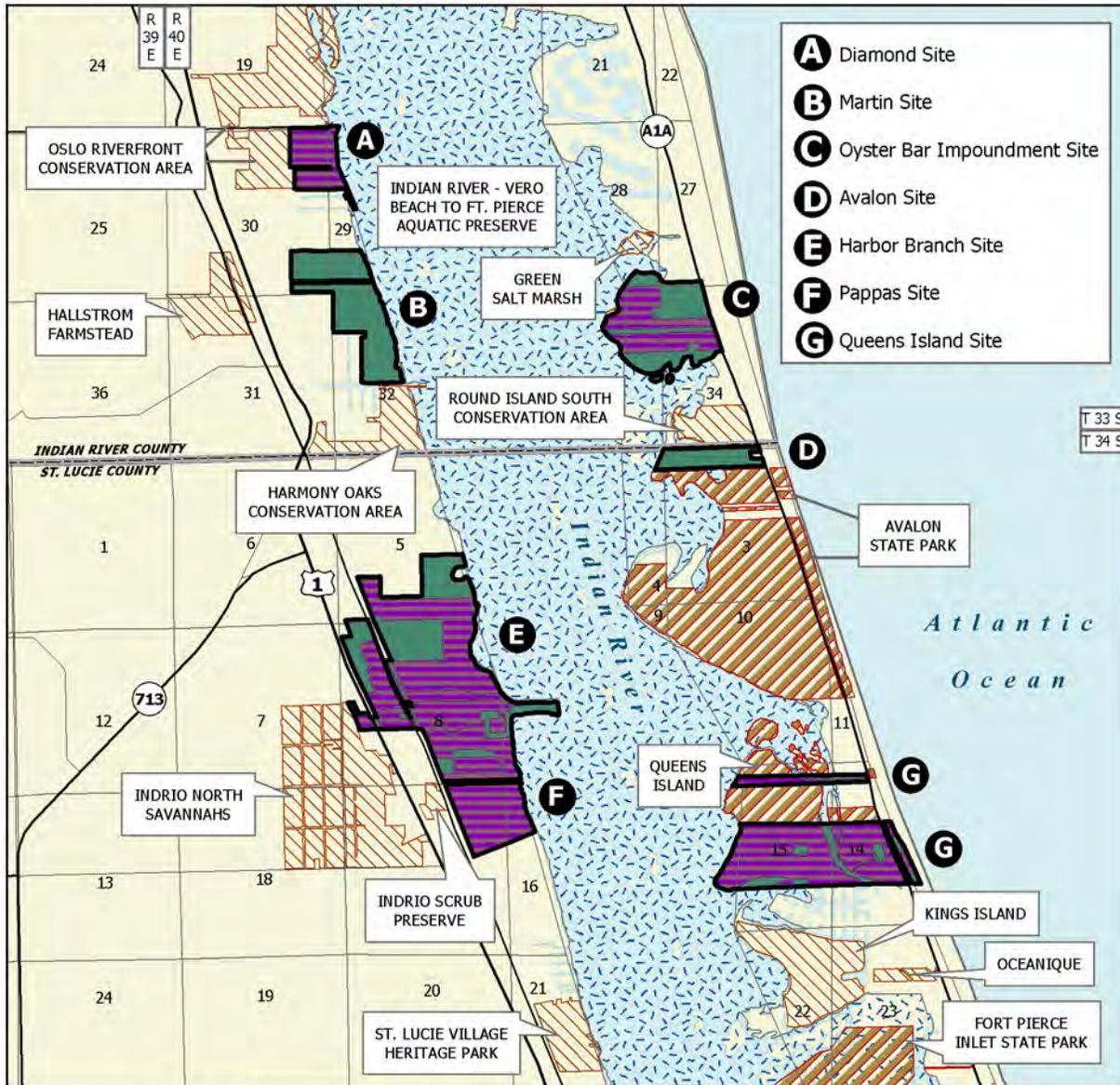
INDIAN RIVER COUNTY

- Florida Forever BOT Project Boundary
- Acquired
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands
- State Aquatic Preserves



AUGUST 2007

Indian River Lagoon Blueway



INDIAN RIVER LAGOON BLUEWAY: MAP 7 OF 10

INDIAN RIVER AND ST. LUCIE COUNTIES

- Florida Forever BOT Project Boundary
- Acquired for Conservation (Fee Simple)
- Essential Parcel(s) Remaining
- State Owned Lands
- Other Conservation Lands
- State Aquatic Preserves



OCTOBER 2010



INDIAN RIVER LAGOON BLUEWAY: MAP 8 OF 10

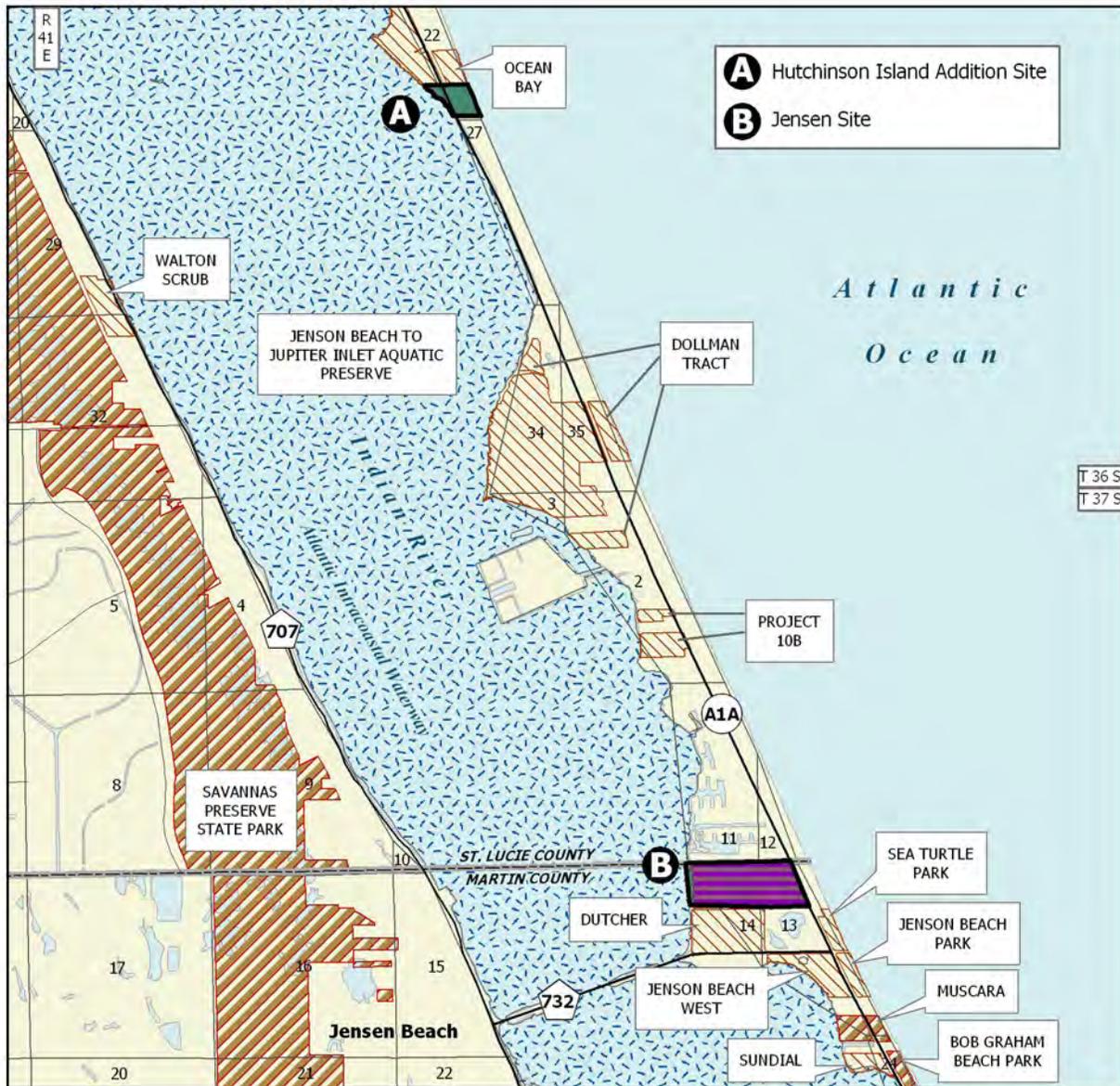
ST. LUCIE COUNTY

-  Florida Forever BOT Project
-  Acquired
-  Essential Parcel(s) Remaining
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves



SEPTEMBER 2008

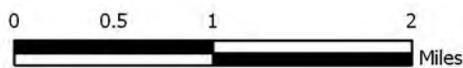
Indian River Lagoon Blueway



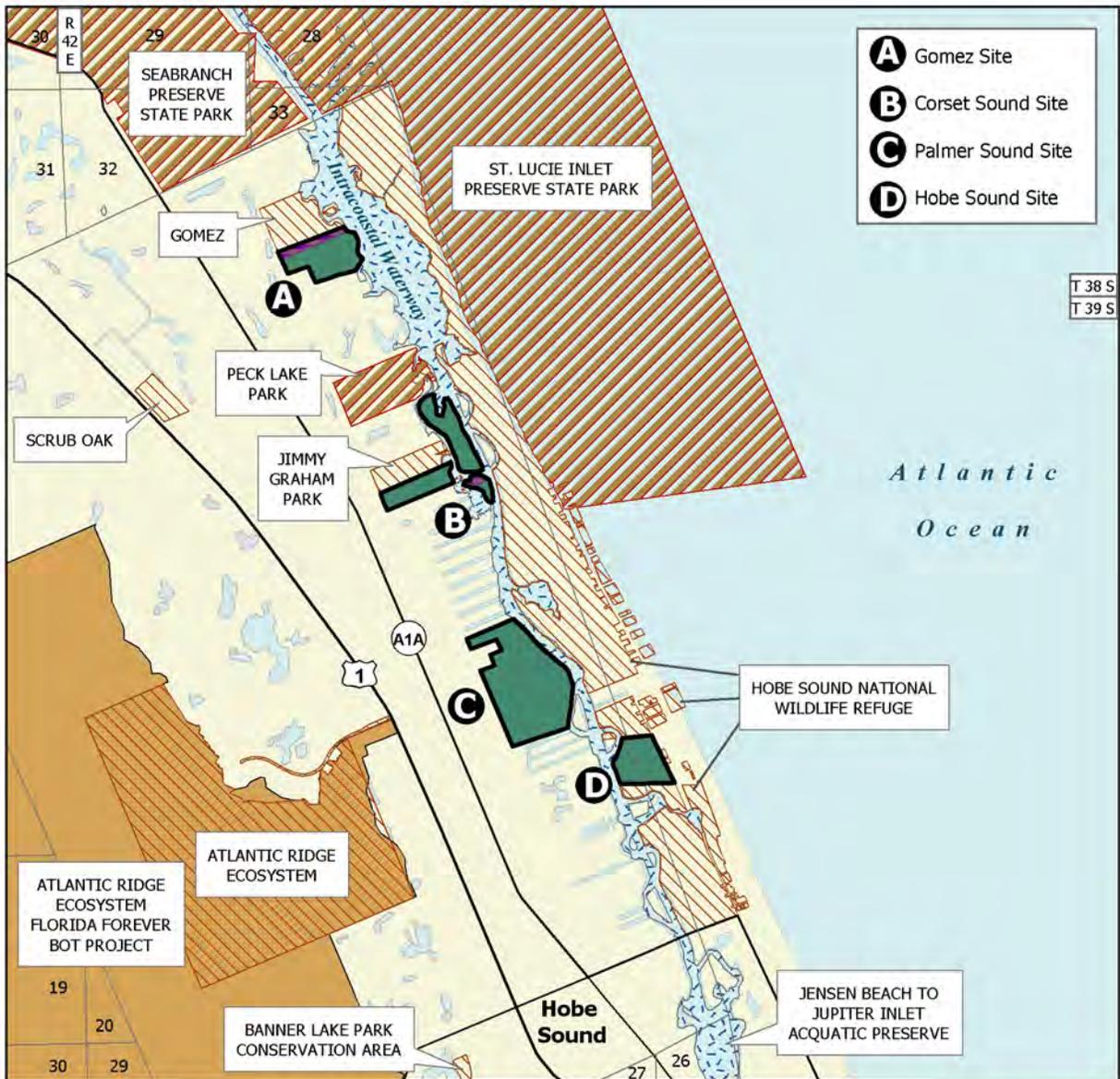
INDIAN RIVER LAGOON BLUEWAY: MAP 9 OF 10

ST. LUCIE AND MARTIN COUNTIES

-  Florida Forever BOT Project Boundary
-  Acquired
-  Essential Parcel(s) Remaining
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves



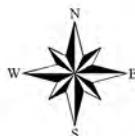
AUGUST 2007



INDIAN RIVER LAGOON BLUEWAY: MAP 10 OF 10

MARTIN COUNTY

-  Florida Forever BOT Project Boundary
-  Acquired for Conservation (Fee Simple)
-  Essential Parcel(s) Remaining
-  Other Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves



OCTOBER 2010

Indian River Lagoon Blueway

first year of appropriate funding, management activities will concentrate on trash removal, public access, and planning for management activities such as impoundment management, restoration projects, prescribed fire, and exotic plant and animal eradication. Appropriate access to the public will be provided while protecting sensitive resources on site.

The site's natural resources and threatened and endangered species will be inventoried and a management plan will be formulated. The resource inventory will be used to identify sensitive areas that need special attention, protection or management and to locate areas that are appropriate for any recreational or administrative facilities. Unnecessary roads, fire lanes and hydrological disturbances will be abandoned and/or restored to the greatest extent practical. Infrastructure development will be confined to already disturbed areas and will be the minimum required to allow public access, and to manage the property. Long-range goals will be established by the management plan and will provide for ecological restoration, the removal of exotic species, and the perpetuation and maintenance of natural communities. Prescribed fires will be used to maintain the appropriate communities and associated wildlife populations. Management activities will also stress the protection of threatened and endangered species, and the preservation of the significant archaeological sites for professional investigation. Existing mosquito control impoundments will be reconnected to the Indian River Lagoon and rotational impoundment management implemented to meet both the goals of improved estuarine habitat and mosquito population management. Managed marshes offer excellent habitat for waterfowl and wading birds, and viewing opportunities for the public.

Revenue-generating potential No revenue is expected

to be generated from this property. The project will benefit the state indirectly by protecting or enhancing water quality, fisheries and public recreation activities, and preserving natural and historical resources.

Cooperators in management activities This project will require a great deal of coordination between the affected parties. The St. Johns River and South Florida Water Management Districts, Volusia/Brevard/Indian River/St. Lucie/Martin Counties, and Mosquito Control Districts have all expressed interest in some form of cooperative management of portions of the project. This level of cooperation is needed if the project is to successfully serve the multiple purposes for which it was designed. In a few cases intensive recreation or stormwater infrastructure have been suggested as management uses, which might not be compatible with the management approach or capabilities. Such parcels may be more appropriately managed directly by the interested agency. The Pelican Island National Wildlife Refuge will manage the Pelican Island Addition site.

Updated 12/30/2010

Management Cost Summary/Start-Up	
Salary	\$64,805
OPS	\$36,100
Expense	\$16,146
OCO	\$27,692
Special	\$20,311
FCO	
Grant	\$15,000



Atlas of Florida's Natural Heritage

Biodiversity, Landscapes, Stewardship, and Opportunities

The Florida Natural Areas Inventory is pleased to announce the publication of the ***Atlas of Florida's Natural Heritage: Biodiversity, Landscapes, Stewardship, and Opportunities***. This high-quality, full-color *Atlas* is sure to become a standard reference for anyone involved in the conservation, management, study, or enjoyment of Florida's rich natural resources. We hope the *Atlas* will inspire, educate, and raise awareness of and interest in biodiversity and conservation issues.



*Institute of Science
and Public Affairs*



AUDIENCE:

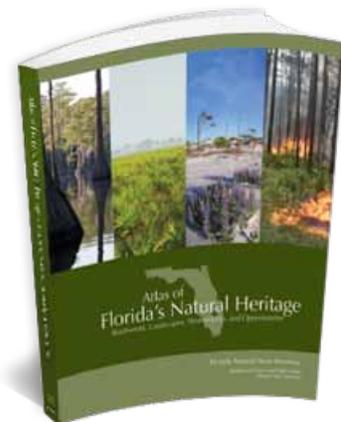
The ***Atlas of Florida's Natural Heritage: Biodiversity, Landscapes, Stewardship, and Opportunities*** was envisioned as a resource that would appeal to a wide-ranging audience. Through its use of colorful maps, graphics, and photography, Florida's Natural Heritage and appeal is dramatically highlighted. It is intended to appeal to a wide audience. Hopefully, it will increase awareness of the resources we take for granted, and the challenges we face in preserving them.

It is for those who are informed, interested, and/or influential in environmental issues, but may lack specific information and expertise. These may include planners, policymakers, and environmental/conservation advocates from the local to state level. It is also for environmental/conservation/natural resource managers. While the atlas may not provide "new information" to this audience, it will serve as a useful reference that brings many of the elements of biodiversity together in one publication. The final audience are the citizens of Florida and those who may visit our state.

We want the atlas to inspire, educate, and raise awareness of and the interest in biodiversity and conservation issues. Florida's biodiversity is not only important to maintain our quality of life, but it is a primary reason why so many people visit our state.

FEATURES INCLUDE:

- 176 pages, 10" x 12" format, soft cover and hard cover editions
- Visually striking presentation with hundreds of maps, photos, illustrations, and other information-rich graphics
- Wide-ranging overview of natural communities and over 400 species of plants, and animals
- Coverage of timely conservation and land management issues



Learn more about the *Atlas*, view sample pages and order your copy today at:

FloridasNaturalHeritage.org