PMLevyCOLPEm Resource

From: Hambrick, Gordon A SAJ [Gordon.A.Hambrick@usace.army.mil]
Sent: Friday, February 03, 2012 11:42 AM
To: Bruner, Douglas
Cc: LevyCOL Resource
Subject: RE: wetland impacts in the FEIS (UNCLASSIFIED)
Attachments: FDEP JD LNP 10-07-2011.pdf; Exhibit A.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Attached is a copy of the FDEP's Notice of Agency Action with Final Report attached. Issued on October 7, 2011. It was sent to our Jax office, and I didn't get it until last month. Only for the 5,378-acre site, as defined by FDEP on page 3 and map (Exhibit A) on page 4 of the final report. The scan of the Notice and final report is in B&W due to file size. I separately scanned Exhibit A in color so you can see. My recollection is that Paul Snead said during one of our meetings/teleconferences sometime in the last several months, that only the facility site, as shown in the final report, would have a formal jurisdictional declaration from FDEP, and there would not be one for transmission lines. If you need more information in regard to FEDP's actions, you'll need to contact Paul or FDEP.
Don

Gordon A. (Don) Hambrick, III
Senior Project Manager
Panama City Permits Section
US Army Corps of Engineers
Jacksonville District
1002 West 23rd Street, Suite 350
Panama City, Florida 32401

Office: 850-763-0717, ext. 25
Fax: 850-872-0231

-----Original Message-----
From: Bruner, Douglas [mailto:Douglas.Bruner@nrc.gov]
Sent: Wednesday, February 01, 2012 5:26 PM
To: Hambrick, Gordon A SAJ
Cc: LevyCOL Resource
Subject: FW: wetland impacts in the FEIS

Don, answer Peyton's question (see below).

From: Doub, Peyton
Sent: Wednesday, February 01, 2012 4:17 PM
To: Bruner, Douglas
Subject: FW: wetland impacts in the FEIS

Doug: Do you know if FDEP has concurred yet with PEF's wetland delineations?

-Peyton

From: Aston, Lara M [mailto:lara.aston@pnnl.gov]
Sent: Wednesday, February 01, 2012 4:17 PM
To: Doub, Peyton
Subject: Re: wetland impacts in the FEIS

I have not heard whether or not FDEP has approved the delineations.would Don H. from the Corps know the answer to that question?

-L

From: "Doub, Peyton" <Peyton.Doub@nrc.gov>
Date: Wed, 1 Feb 2012 12:59:24 -0800
To: Lara Aston <lara.aston@pnnl.gov>
Subject: RE: wetland impacts in the FEIS

Lara:

Do you know whether FDEP ever approved the Levy wetland delineations? Our FEIS says that FDEP approval is still needed. I just wanted to check. Thanks.

-Peyton

From: Aston, Lara M [mailto:lara.aston@pnnl.gov]
Sent: Wednesday, February 01, 2012 12:19 PM
To: Doub, Peyton
Subject: wetland impacts in the FEIS

Peyton,

I'm sorry it's taken me so long to get back to you about the tables that we received a couple of weeks ago. I went ahead and calculated the totals from their tables and the numbers were

the same as what you and I had in Chapter 4 (in the wetland impacts table). If you have any questions, please don't hesitate to call or email me.

Hope all is well with you.

-Lara

_____

Lara M. Aston
Research Scientist
Coastal Ecosystem Research

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Classification: UNCLASSIFIED
Caveats: NONE

Hearing Identifier: Levy_County_COL_Public
Email Number: 982

Mail Envelope Properties (1FB790893E639745BAAAB98FB538B84318B87A)

Subject: RE: wetland impacts in the FEIS (UNCLASSIFIED)
Sent Date: 2/3/2012 11:41:49 AM
Received Date: 2/3/2012 11:42:48 AM
From: Hambrick, Gordon A SAJ

Created By: Gordon.A.Hambrick@usace.army.mil

Recipients:
"LevyCOL Resource" <LevyCOL.Resource@nrc.gov>
Tracking Status: None
"Bruner, Douglas" <Douglas.Bruner@nrc.gov>
Tracking Status: None

Post Office: EIS-MB04CPC.eis.ds.usace.army.mil

Files	**Size**	**Date & Time**
MESSAGE	3234	2/3/2012 11:42:48 AM
FDEP JD LNP 10-07-2011.pdf	2716485	
Exhibit A.pdf	502695	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

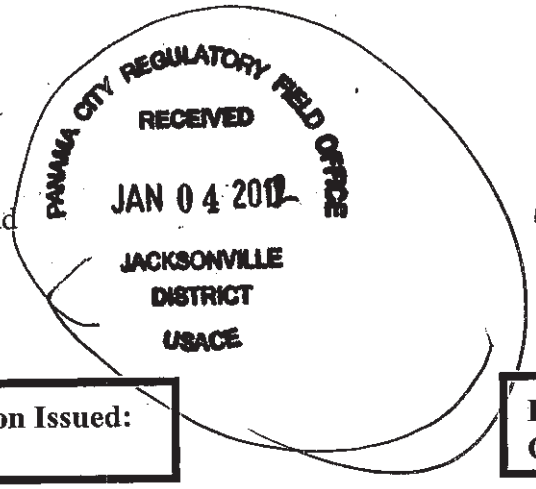
STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of a petition for a Formal Determination of the Landward Extent of Wetlands and Other Surface Waters of the State by:

Levy Nuclear Plant
DEP File Number FD-38-0292370-001
Levy County

Daniel Roderick
Progress Energy Florida
c/o Martha Klien
CH2M Hill
3011 SW Williston Road
Gainesville, FL 32607



Formal Determination Issued: October 07, 2011

Expiration Date: October 07, 2016

Received in Jacksonville District Office in Oct 2011 ↓ provided to Dan Hamburd on 1/4/2012 Panama City Section

NOTICE OF AGENCY ACTION

Enclosed is a Formal Determination of the Landward Extent of Wetlands and Other Surface Waters of the State (File Number FD-38-0292370-001) to Daniel Roderick of Progress Energy Florida, c/o Martha Klein of CH2M Hill, for the property located in; Sections 13, 24, 25, 36, Township 16 South, Range 16 East; Sections 7, 17, 18, 19, 20, 29, 31, 32, Township 16 South, Range 17 East; Section 1, Township 17 South, Range 16 East; Sections 5, 6, Township 17 South, Range 17 East, Levy County. This action is authorized pursuant to Sections 373.414 and 373.421(2), Florida Statutes and Florida Administrative Code Rule 62-343.040. This determination is strictly for purposes of establishing the landward extent of wetlands and other

surface waters of the State and does not relieve you from the responsibility of obtaining a federal permit from the U.S. Army Corps of Engineers, where applicable, and any permits that may be required from your Water Management District or local government.

Any party to this Order has the right to seek judicial review of the application pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the of Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Eric Hickman, Environmental Administrator
Wetland Evaluation and Delineation Section
Office of Submerged Lands and Environmental Resources
Division of Water Resource Management
2600 Blair Stone Road, MS 2500
Tallahassee, Florida 32399-2400
(850) 245-8496

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF AGENCY ACTION and all copies were mailed before the close of business on October 7, 2011 to the persons listed below.

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to
120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby acknowledged.

Clerk _____ Date 10/7/11

Copies furnished to:
w/ enclosures

Jim Maher, FDEP, NE District, Jacksonville
Clark Hull; SWFWMD; 2379 Broad St.; Brooksville, FL 34604-6899
Beverlee Lawrence; USACOE; Atlantic Permits Branch Office; 701 San Marco Blvd. Room 372
Jacksonville, Florida 32207

DEPARTMENT OF ENVIRONMENTAL PROTECTION

FORMAL DETERMINATION OF THE LANDWARD EXTENT OF WETLANDS AND OTHER SURFACE WATERS OF THE STATE

APPLICATION NUMBER FD-38-0292370-001

Levy Nuclear Plant

Daniel Roderick of Progress Energy Florida, 299 First Avenue North, St. Petersburg, Florida 33701, has filed an application (FD-38-0292370-001) pursuant to Sections 373.414 and 373.421(2), Florida Statutes, and Rule 62-343.040, Florida Administrative Code for a Formal Determination of the Landward Extent of Wetlands and Other Surface Waters of the State. The applicant seeks the determination for a 5,378 acre property located in; Sections 13, 24, 25, 36, Township 16 South, Range 16 East; Sections 7, 17, 18, 19, 20, 29, 31, 32, Township 16 South, Range 17 East; Section 1, Township 17 South, Range 16 East; Sections 5, 6, Township 17 South, Range 17 East, Levy County. The application was received on March 05, 2008. The Department, via a letter dated August 08, 2011 advised the applicant that the application was complete pending receipt of five copies of maps delineating the wetlands and other surface waters of the State as determined by the Department on May 03, 2011.

Upon review of information submitted by the applicant and a detailed site evaluation performed by the Department's staff (report enclosed), the landward extent of wetlands and other surface waters of the State subject to the Department's environmental resource permitting procedures at the property has been determined. The Formal Determination of the Landward Extent of Wetlands and Other Surface Waters of the State is shown on **Attachment A** of the final report. The bold black line delineates the boundaries of the area inspected. The red hatched areas on **Attachment A** delineate the wetlands and other surface

waters. The applicant elected to have the formal determination line surveyed, and has provided the Department with five copies of the survey properly certified in accordance with Chapter 472, Florida Statutes.

Notice of the Agency's intent to grant a Formal Determination of the Landward Extent of Wetlands and Other Surface Waters of the State for the Levy Nuclear Plant (FD-38-0292370-001) was published on September 01, 2011 in the Levy County Journal daily newspaper in Levy County, Florida. No petition for hearing has been filed concerning this matter.

The Formal Determination of the Landward Extent of Wetlands and Other Surface Waters of the State is binding for a period of five (5) years from the date of this determination provided physical conditions on the property do not change so as to alter wetland boundaries during this time. The Department may revoke this formal determination if it finds that the applicant has submitted inaccurate information in the application.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Eric Hickman, Environmental Administrator
Wetland Evaluation and Delineation Section
Office of Submerged Lands and Environmental Resources
Division of Water Resource Management
2600 Blair Stone Road, MS 2500
Tallahassee, Florida 32399-2400
(850) 245-8496

FINAL REPORT

For

LEVY NUCLEAR PLANT
FD-38-0292370-001

FORMAL DETERMINATION OF THE LANDWARD EXTENT OF WETLANDS AND OTHER SURFACE WATERS

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Water Resource Management

Office of Submerged Lands and Environmental Resources

Wetland Evaluation and Delineation Section

Received in Jacksonville District Office in Oct 2011

provided to Don Hambrick on 1/4/2012 Section Panama City

Prepared by

John Humphreys, Ecologist

Wetland Evaluation and Delineation Section
Florida Department of Environmental Protection
2600 Blairstone Road, MS 2500
Tallahassee, Florida 32399
(850) 245-8487

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Exhibit B: Soils Map for Levy Nuclear Plant Project Area

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ATTACHMENTS

Attachment A: Aerial Photograph and Certified Survey Delineating Boundaries of Area Inspected and Landward Extent of Wetlands and Other Surface Waters of the State ..... Attached

Formal Determination

The Department of Environmental Protection's Wetland Evaluation and Delineation Section conducted multiple field inspections of the Levy Nuclear Plant project area between March 25, 2008 and May 03, 2011.

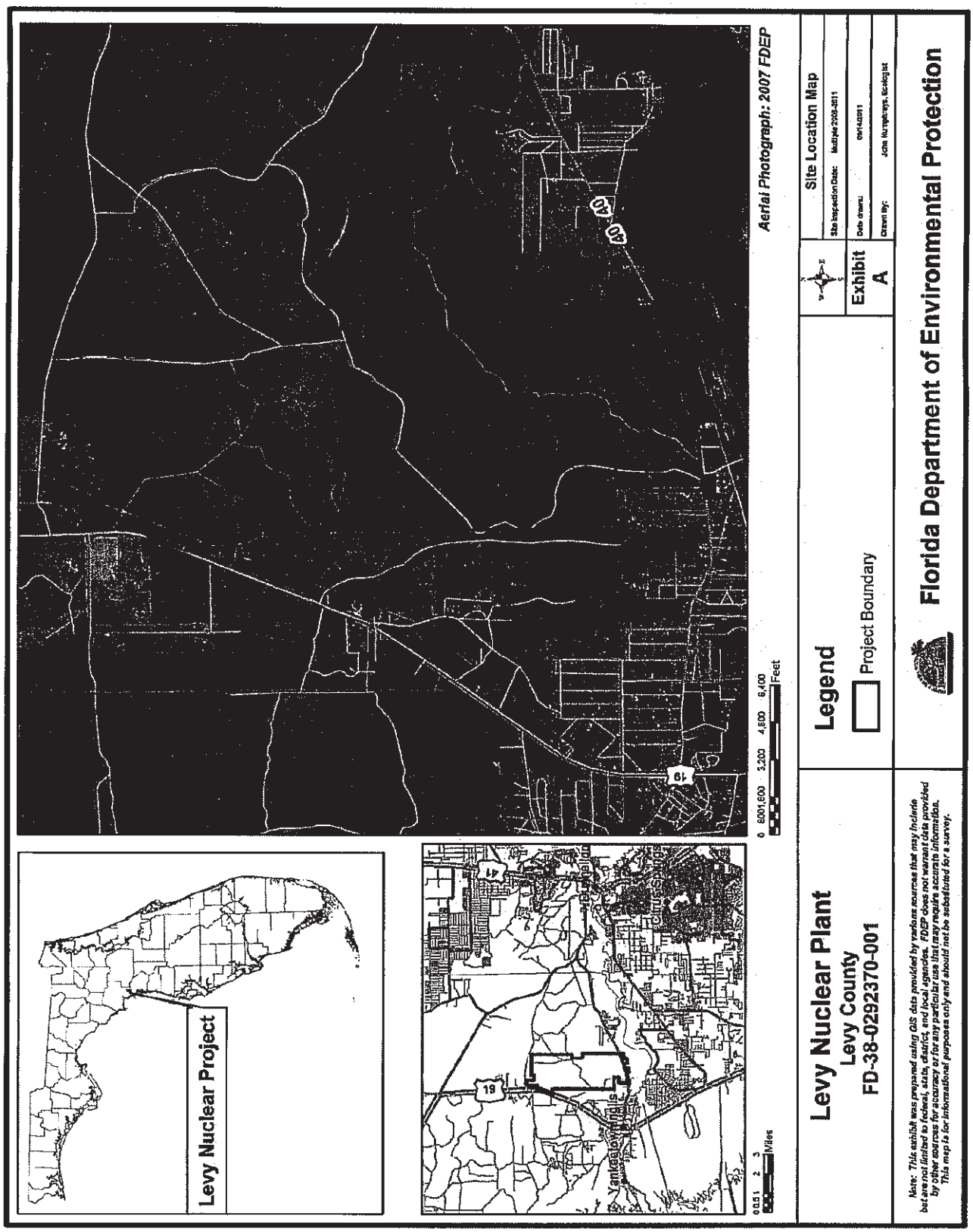
Wetland Evaluation and Delineation Section (WEDS) staff members assisting with field inspections included Eric Hickman, Maynard Sweeley, Charles Bidwell, Jay Kamke, Matthew Harris, Lisl Hinrichs, Guy Anglin (co-author) and John Humphreys (co-author). In addition to WEDS staff, Martha Klein, Gabriel Dupree, Darren Bishop, Tony Davanzo, and Hugo Thouverez of CH2MHILL Incorporated assisted with field inspections as representatives of the petitioner.

The landward extent of waters of the State subject to the wetland resources jurisdiction of the Florida Department of Environmental Protection (FDEP) for the Levy Nuclear Plant project is delineated on the aerial photocopy and certified survey appended as **Attachment A**. The bold black line demarcates the boundary of the area inspected. The red hatched area represents the landward extent of wetlands and other surface waters of the State subject to the wetland resources jurisdiction of the FDEP in accordance with Rule 62-340, Florida Administrative Code (Table 2). The remaining portions of the area inspected are not wetlands or other surface waters of the State within the wetland resources jurisdiction of the FDEP. The wetland boundary line was flagged by the Department and subsequently surveyed by the petitioner.

Site Location

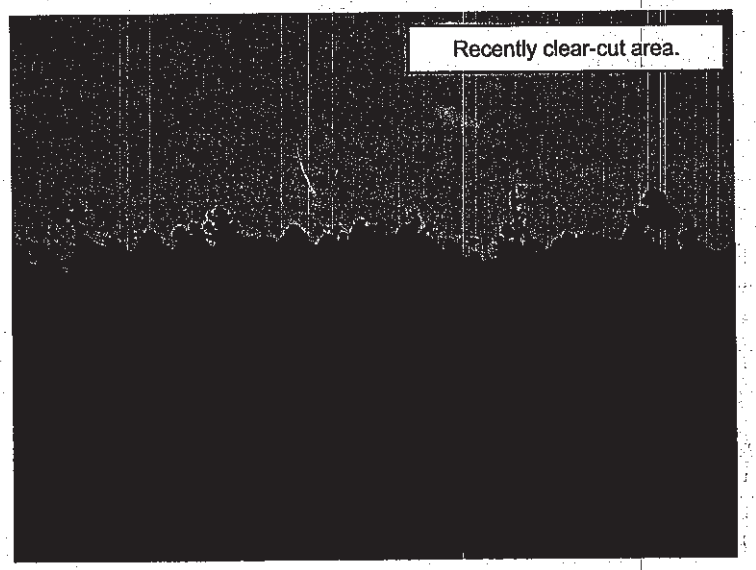
The Levy Nuclear Plant project area occupies approximately 5,378 acres and is located in Sections 13, 24, 25, 36, Township 16 South, Range 16 East; Sections 7, 17, 18, 19, 20, 29, 31, 32, Township 16 South, Range 17 East; Section 1, Township 17 South, Range 16 East; Sections 5, 6, Township 17 South, Range 17 East, Levy County (**Exhibit A**).

Exhibit A
Location of Levy Nuclear Plant property, Levy County, Florida

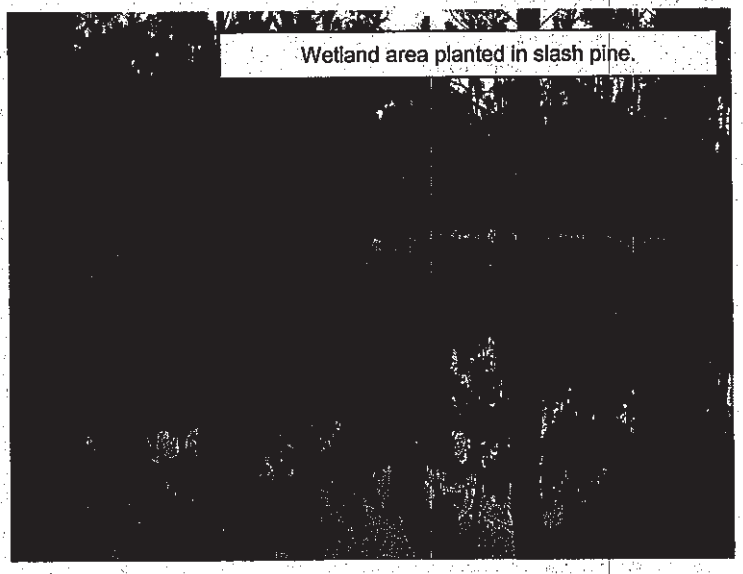


Project Area Description

The Levy Nuclear Plant project area is located within the Gulf Coastal Lowlands Physiographic Province and both the Smyrna-Placid-Samsula and Otela-Candler-Tavares general soil associations of Levy County.


Recently clear-cut area.

Several wetland community types were identified during field inspection of the Levy Nuclear Plant project area. These wetland communities were geographically positioned within a larger matrix of pine-saw palmetto-wiregrass flatwoods. Historically, the project area's flatwoods were dominated by longleaf pine (*Pinus palustris*), saw palmetto (Serenoa repens), and wiregrass (*Aristida stricta*). Plants such as muhleygrass (*Muhlenbergia capillaries)*, winged sumac (*Rhus copallina*), pawpaw (*Asimina reticulata*), dwarf liveoak (*Quercus pumila*), bushy bluestem (*Andropogon glomeratus*), brachenfern (*Pteridium aquilinum*), broom-sedge (*Andropogon* (*virginicus*), gallberry (*Ilex glabra*), vanilla plant (*Carphephorus odoratissimus*), orange milkwort (*Polygala lutea),* yellow-eye grass (*Xyris caroliniana*) and blackroot (*Pterocaulon virgatum*) would have served as subordinate species within these areas. However, like most of the State of Florida, and the Southeastern United States as a whole, the vast majority of longleaf pine flatwoods were harvested and replaced by other pine species. In fact, only a few relic longleaf were noted during site inspection.


Wetland area planted in slash pine.

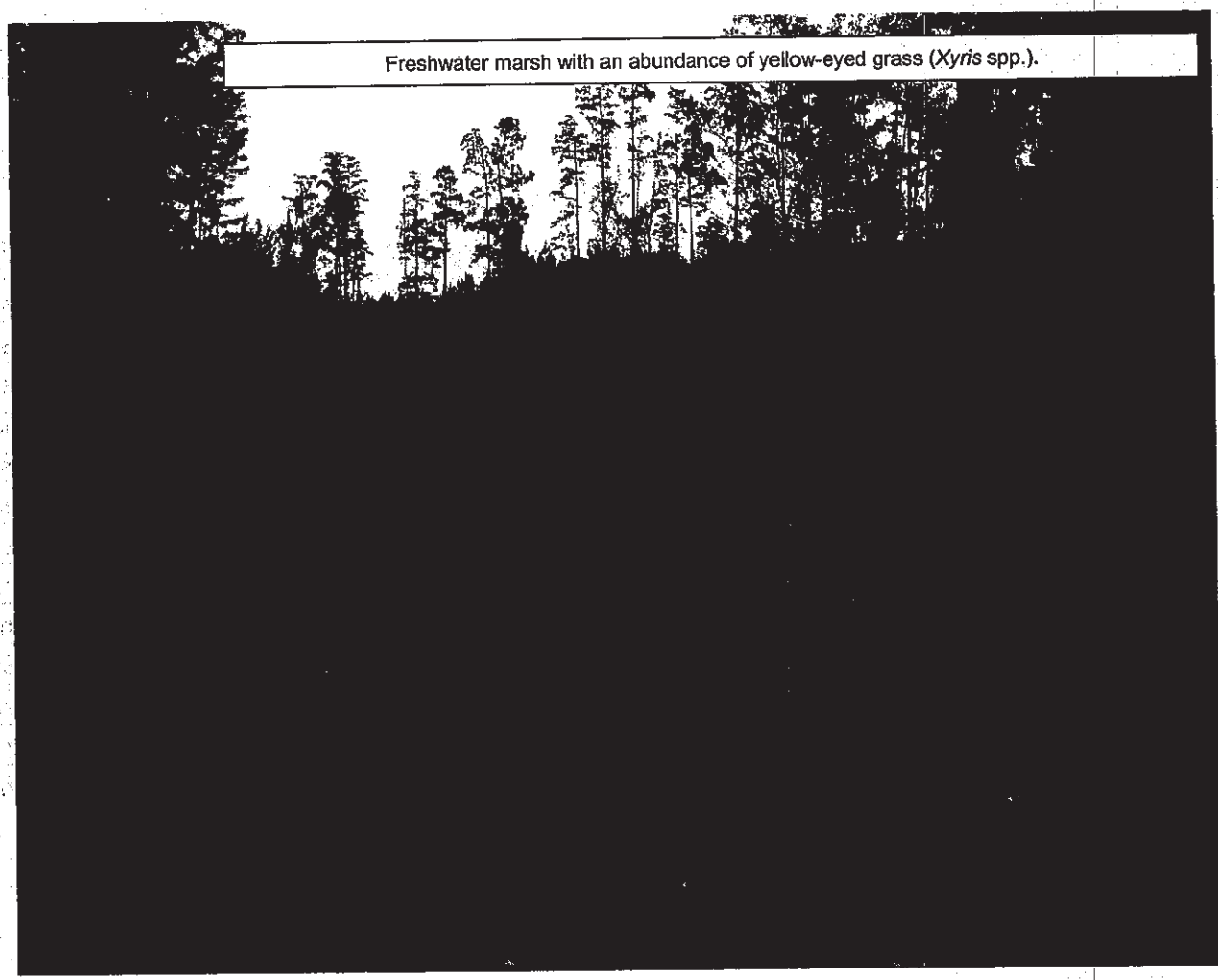
Following past removal of longleaf pine from upland and shallow wetland portions of the Levy Nuclear Plant project area, the site was first mechanically prepared by roller chopping and then bedded and planted with slash pine (*Pinus elliottii*). Although most of the site's uplands were bedded, some areas were prepared and planted without the more intrusive disturbance associated with bedding. These areas retained a character more similar to that of the original longleaf pine flatwoods that dominated the area.

Past mechanical disturbance, compounded by fire exclusion, consequently eliminated most of the site's long-lived perennial grasses such as wiregrass and muhleygrass. These grasses are highly sensitive to mechanical disturbance and had undergone adaptation as to seldom produce seed without seasonal fires; as a result, these groundcover species were the most adversely affected by silvicultural treatments. Most other groundcover components persisted at the project area, although their relative abundance has been altered. The net result has been a greater abundance of early successional species such as gallberry, bushy bluestem, and broom-sedge in both the site's uplands and shallow wetlands.

Wetlands occupied a large portion of the project area. Because most were not associated with well-defined streams, many of these irregularly shaped, canopied communities would best be classified as basin swamps. Shallow wetlands along the edges of these swamps were mostly bedded and planted with slash pine. Historically, edge areas were wet prairies or, when proximal to greater topographical relief, seepage slopes. In their natural condition, wet prairies and ecotonal seeps would have been dominated by graminoids such as wiregrass, muhleygrass, beakrushes (*Rhynchospora* spp.), yellow-eyed grass (*Xyris* spp.), and white nutsedge (*Scleria* spp), as well as many forbes such as yellow milkwort (*Polygala rugelii*), meadowbeauty (*Rhexia petiolata*, R. *alifanis*, R.*virginica*), Lobelia (*Lobelia spp.*), water-primrose (*Ludwigia spp.*), bog buttons (*Eriocaulon* spp.) and pink sundew (*Drosera capillaris*). Observational evidence demonstrated that these areas remained as the most botanically diverse communities on the site. However, most have become dominated by bushy bluestem (*Andropogon glomeratus* var. *glaucopsis*), as has a large portion of the site's pine flatwoods.

Cypress swamp displaying prominent water stain lines.

Deeper canopied wetlands were typically dominated by pond cypress (*Taxodium ascendens)*, slash pine (*Pinus elliottii)*, swamp tupelo (*Nyssa biflora*), dahoon holly (*Ilex cassine*), and sometimes red maple (*Acer rubrum*). The subcanopy was composed primarily of smaller trees of the same species; though, slash pine was not as frequently observed in this vegetative strata. Typical to the hummock restricted groundcover were shrubs such as wax myrtle (*Myrica cerifera*), buttonbush (*Cephalanthus occidentalis*), doghobble (*Leucothoe racemosa*), and highbush blueberry (*Vaccinium corymbosum*). Herbaceous species such as sawgrass (*Cladium jamaicense*), Virginia chainfern (*Woodwardia virginica*), greenbriar (*Smilax laurifolia*), bugleweed (*Lycopus rubellus*), sedge (*Carex glaucescens*), arrowhead (*Sagittaria lacifolia*), maidencane (*Panicum hemitomon*), blackberry (*Rubus argutus*), and marsh thoroughwort (*Eupatorium leptophyllum*) were common to both hummocks and the frequently inundated substrate between hummocks. Evidence of past and recent selective harvest, such as cut cypress stumps, was noted in many of the deeper canopied systems.



Freshwater marsh with an abundance of yellow-eyed grass (*Xyris* spp.).

Soils

During inspection of the project area, numerous soil profiles were examined in effort to identify the presence or absence of hydric soil indicators.

Beyond the physical sampling of soils, a soil survey of Levy County (1996) produced by the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) was utilized as a reference for the project area's soil mapping units.

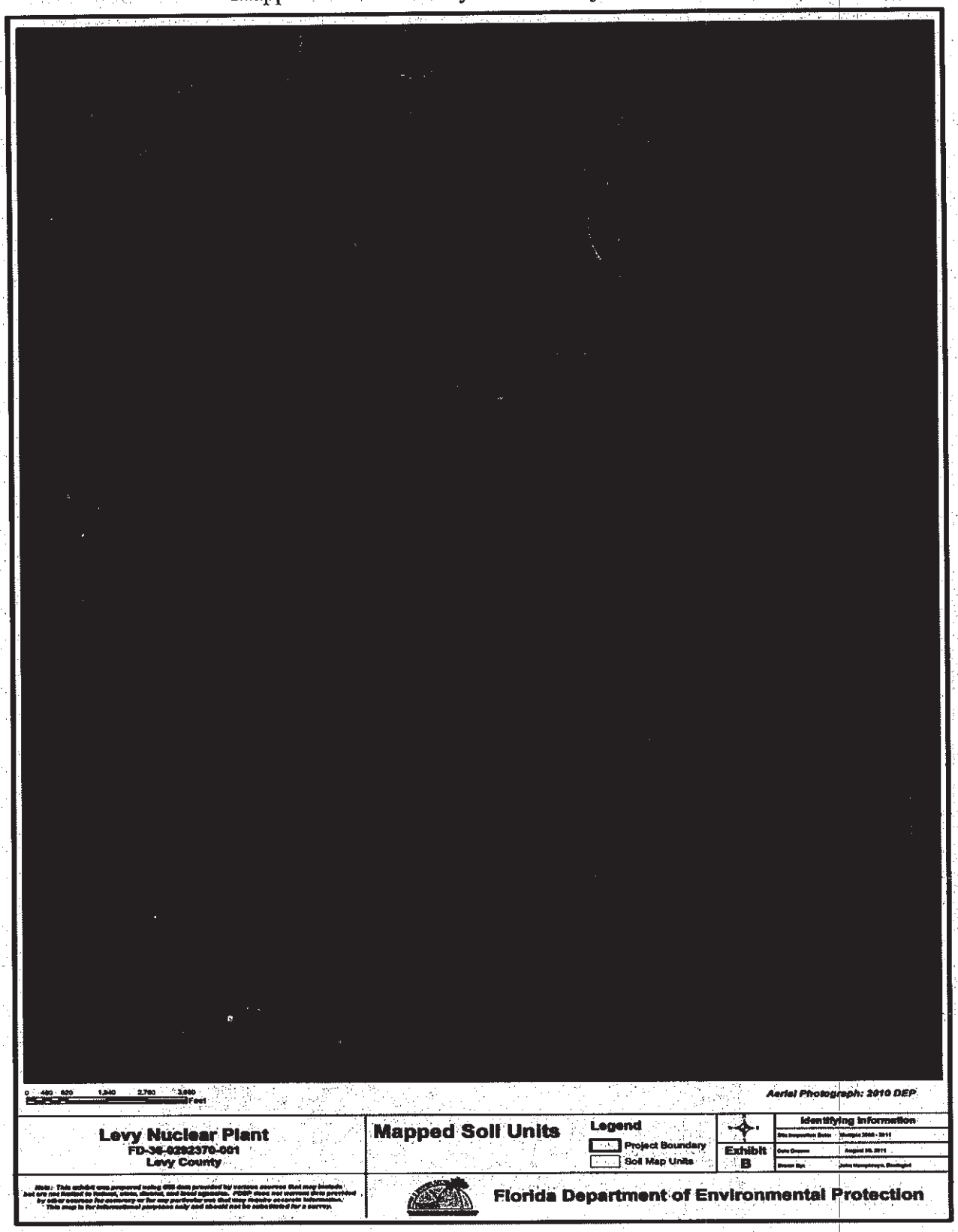
The NRCS soil survey delineated thirteen map units within the project area's boundaries; these soil units are listed with their hydric status in **Table 1**, and they are graphically depicted in **Exhibit B** below.

Table 1
NRCS Soil Map Units on Site

Symbol	Unit Name	Hydric	Drainage	Texture
2	Tavares fine sand, 1 to 5 percent slopes	No	Moderately well drained	fine sand
8	Smyrna fine sand	No	Poorly drained	fine sand
9	Pomona fine sand	No	Poorly drained	fine sand
11	Placid and Samsula soils, depressional	Yes	Very poorly drained	muck
13	Wekiva fine sand	Yes	Poorly drained	fine sand
16	Chobee-Gator complex, frequently flooded	Yes	Very poorly drained	muck
17	Adamsville fine sand, 0 to 5 percent slopes	No	Poorly drained	fine sand
18	Wauchula fine sand	No	Poorly drained	fine sand
23	Zolfo sand	No	Somewhat poorly drained	sand
27	Placid and Popash soils, depressional	Yes	Very poorly drained	fine sand
34	Cassia-Pomello complex	No	Somewhat poorly drained	fine sand
38	Myakka sand	No	Poorly drained	sand
74	Arents, 0 to 5 percent slopes	No	Moderately well drained	sand

Exhibit B

Mapped Soil Units Levy Nuclear Project Area



Hydrology
Generally, hydrological conveyance from the site was south and west to the Gulf of Mexico via direct runoff; however, the southern portion of the site is located within the Withlacoochee Drainage Basin (**Exhibit C**).

The wetland vegetative communities in the southernmost portion of the Levy Nuclear Plant project area, an area from approximately one-half mile north of Highway 40, southward to the Cross Florida barge Canal, exhibited evidence of hydrological stress (see figure below). The canopy strata in this area displayed wetland plant species in poor qualitative condition. The subcanopy and groundcover layers showed evidence of increased migration by upland plant species.

Location of Observed Hydrologic Stress

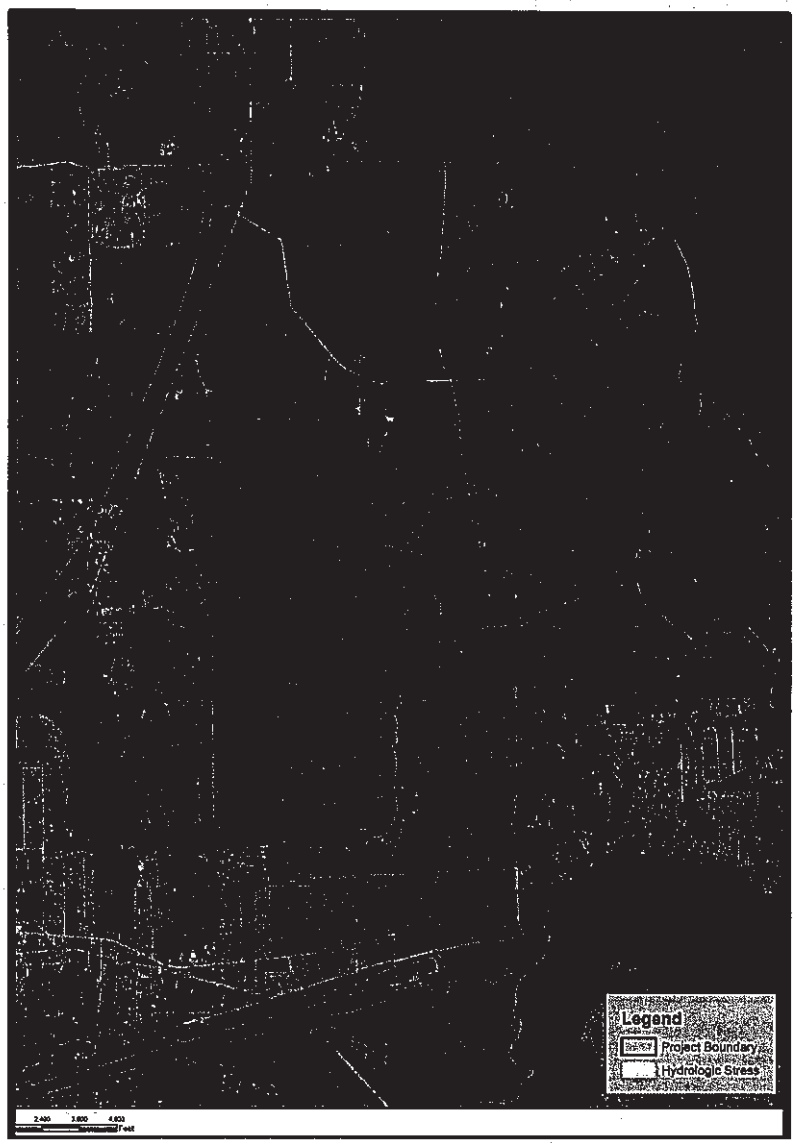
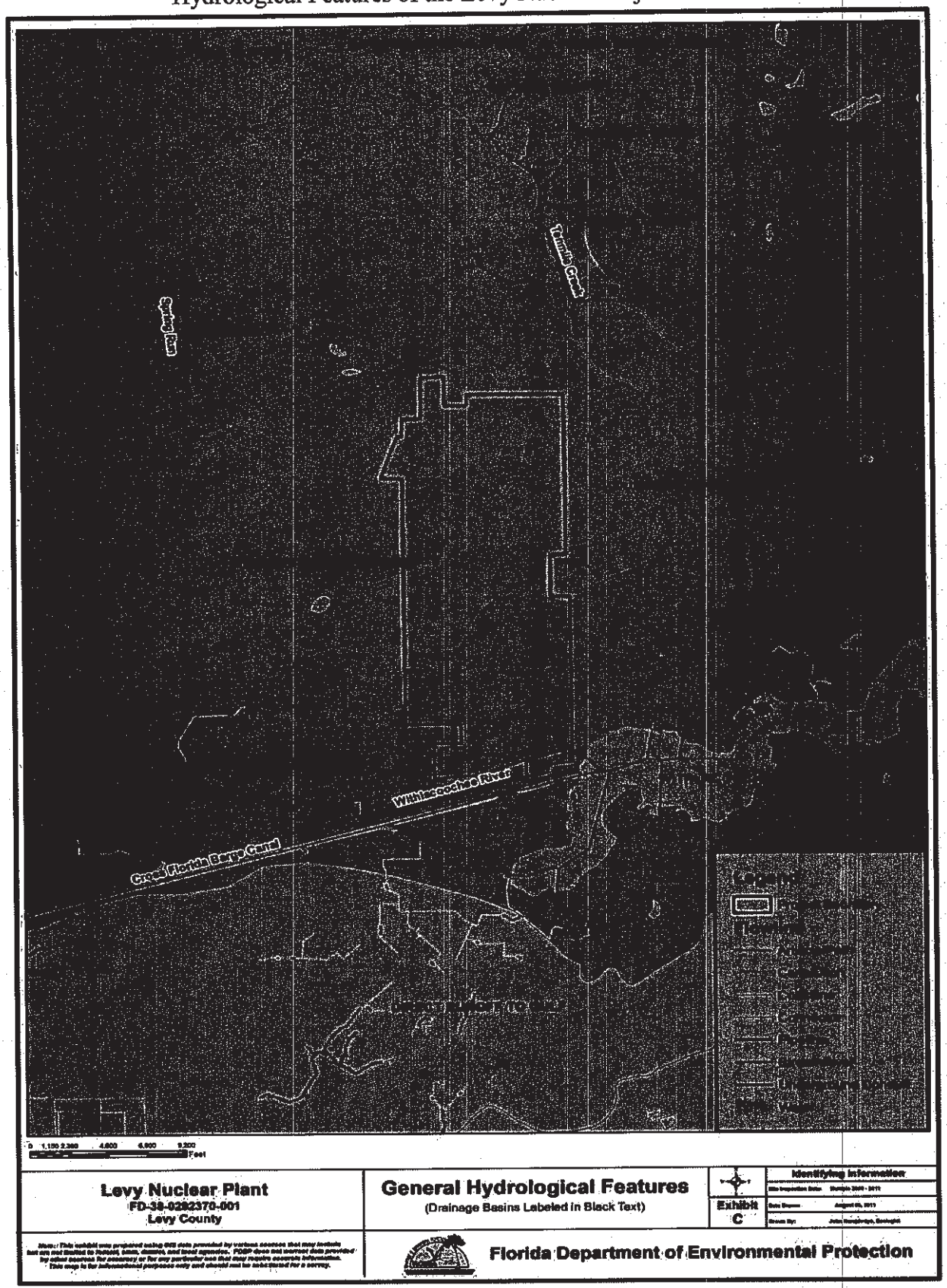


Exhibit C

Hydrological Features of the Levy Nuclear Project Area



Wetland Boundary Delineation

The landward extent of wetlands and other surface waters of the State was established through photographic interpretation and onsite ground reconnaissance. The landward extent of wetlands and other surface waters subject to the wetlands resources jurisdiction of the Florida Department of Environmental Protection for the Levy Nuclear Plant project area is delineated on the aerial photocopy appended as **Attachment A** (Map Pocket). The bold black line shown on the aerial demarcates the surveyed boundary of the area inspected; the red hatched area represents the landward extent of wetlands and other surface waters.

The applicant elected to have the formal determination line surveyed, and has provided the Department with five copies of the survey properly certified in accordance with Chapter 472, Florida Statutes.

[Point Description Data Begins on Next Page]

Point Description Data

SITE 1A --Flag no. TCW 001-14
Plant Community: Pine Flatwoods (cleared)

CANOPY

Scientific Name	Common Name	Indicator status
none		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Baccharis halimifolia	eastern false-willow	FAC
Centella asiatica	coinwort	FACW
Eupatorium leptophyllum	marsh thoroughwort	OBL
Gratiola ramosa	branched hedgehyssop	FACW
Hypericum cistifolium	roundpod St. Johnswort	FACW
Ilex glabra	gallberry	UPL
Lachnanthes caroliana	redroot	FAC
Myrica cerifera	southern bayberry	FAC
Rhynchospora fascicularis var. fascicularis	fascicled beaksedge	FACW
Rubus cuneifolius	sand blackberry	FAC
Scleria triglomerata	whip nutrush	FACW
Serenoa repens	saw palmetto	UPL

Soil Profile Description*

Horizon	Depth	Description
1	0-4	10YR 6/1
2	4-8	10YR 7/1
3	8-12	10YR 6/4

Observed water table depth: None
Hydric: No

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No

Comments: Soils non-hydric, upland plant species > 20%, no evidence of hydrology

SITE 1B -- Flag no. TCW 001-14
Plant Community: Wet Prairie

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Centella asiatica	coinwort	FACW
Eleocharis sp.	spikerush	OBL
Erianthus giganteus	sugarcane plumegrass	OBL
Eryngium baldwinii	Baldwin's coyote-thistle	FAC
Eupatorium leptophyllum	marsh thoroughwort	OBL
Linaria canadensis	Canada toadflax	UPL
Myrica cerifera	southern bayberry	FAC
Panicum rigidulum	red-top panicum	FACW
Rhynchospora elliottii	Elliott's beaksedge	FACW
Rhynchospora fascicularis var. fascicularis	fascicled beaksedge	FACW
Rubus argutus	sawtooth blackberry	FAC
Sagittaria graminea var. graminea	grassy arrowhead	OBL
Solidago fistulosa	marsh goldenrod	FACW
Viola lanceolata ssp. vittata	bog white violet	OBL
Woodwardia virginica	chainfern	FACW

Soil Profile Description

Horizon	Depth	Description
1	0-4	10YR 2/1 (Mucky Mineral)
2	4-8	10YR 2/1
3	8-12+	10YR 7/1

Observed water table depth: Not observed
Hydric: Yes

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test, Hydrologic indicators observed: algal mats.

SITE 2 --Flag no. TCW-002-13
Plant Community: Cypress Dome

CANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Pinus elliottii var. elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Myrica cerifera	southern bayberry	FAC
Persea palustris	swamp bay	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL

GROUND COVER

Scientific Name	Common Name	Indicator status
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Carex glaucescens	clustered sedge	FACW
Centella asiatica	coinwort	FACW
Hypericum myrtifolium	myrtleleaf St. Johnswort	FACW
Juncus sp.	rush	
Lachnanthes caroliana	redroot	FAC
Ludwigia sp.	ludwigia; water-primrose	
Panicum hemitomon	maidencane	OBL
Rhynchospora cephalantha	clustered beakrush	OBL
Rhynchospora fascicularis	fascicled beaksedge	FACW
Smilax laurifolia	laurel greenbrier	vine
Woodwardia virginica	chainfern	FACW

Soil Profile Description*

Horizon	Depth	Description
1	0-6	10YR 2/1 Dark Surface
2	4-8	10YR 7/1 sand
3	8-22+	10YR 8/1

Observed water table depth: Not observed
Hydric: Yes

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes., passes the A-test

Comments: Hydrologic indicators observed: algal mats

SITE 3A -- Flag no. URW-009-38
Plant Community: Pine Flatwoods

CANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Gaylussacia frondosa var. nana	blue huckleberry	FAC
Ilex glabra	gallberry	UPL
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Pteridium aquilinum	western brackenfern	UPL
Serenoa repens	saw palmetto	UPL
Vaccinium stamineum	deerberry	UPL

Soil Profile Description*
Observed water table depth: Not observed
Hydric: No soil pit, soils disturbed by silvicultural treatments

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Jurisdiction
Wetland: No, vegetation dominated by upland species

Comments: None

SITE 3B -- Flag no. URW009-38
Plant Community: Wet prairie (between pine flatwoods and Cypress dome)

CANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Ilex glabra	gallberry	UPL
Myrica cerifera	southern bayberry	FAC
Osmunda cinnamomea	cinnamon fern	FACW
Woodwardia virginica	chainfern	FACW
Scleria triglomerata	whip nutrush	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Toxicodendron radicans	eastern poison ivy	UPL
Vaccinium myrsinites	shiny blueberry	UPL
Panicum dichotomum	panicum	FACW
Gaylussacia frondosa var. nana	blue huckleberry	FAC
Lyonia lucida	fetterbush	FACW

Soil Profile Description*
Observed water table depth: Not observed
Hydric: No soil pit, soils disturbed by silvicultural treatments

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Jurisdiction
Wetland: Yes

Comments:
FACW species dominant, >80%. Hydrologic indicator noted (algal mats). This site is below a topographic break that appears to separate uplands from wetlands. Considering topography and dominance by FACW vegetation, both parties conducting the inspection agree that reasonable scientific judgment places this site within the wetland boundary.

SITE 3C --Flag no. URW-009-38
Plant Community: Cypress dome

CANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Liquidambar sp.	sweetgum	FACW
Persea palustris	swamp bay	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Ilex cassine var cassine	dahoon holly	OBL
Liquidambar sp.	sweetgum	FACW
Persea palustris	swamp bay	OBL
Taxodium ascendens	pond cypress	OBL

GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Aristida stricta	wiregrass; pineland three-awn grass	FAC
Carex glaucescens	clustered sedge	FACW
Centella asiatica	coinwort	FACW
Eriocaulon decangulare	tenangle pipewort	OBL
Hypericum cistifolium	roundpod St. Johnswort	FACW
Hypericum galioides	bedstraw St. Johnswort	FACW
Lachnanthes caroliana	redroot	FAC
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Pinus elliottii var. elliottii	slash pine	UPL
Polygala lutea	orange milkwort	FACW
Quercus laurifolia	laurel oak	FACW
Rhynchospora fascicularis var. fascicularis	fascicled beaksedge	FACW
Rhynchospora sp.	beakrush	
Syngonanthus sp.	syngonanthus	
Woodwardia virginica	chainfern	FACW
Xyris brevifolia	shortleaf yelloweyed grass	OBL
Xyris elliottii	Elliott's yelloweyed grass	OBL

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Soil Profile Description*
Observed water table depth: Not observed
Hydric: No soil data recorde.

Jurisdiction
Wetland: Yes

Comments: Passes A-test vegetation with Well-defined hydrologic indicators: buttressed trees, hummocks, and stain lines.

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SITE 4A--Flag no. TCW-21-24
Plant Community: Pine flatwoods

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Persea palustris	swamp bay	OBL
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Serenoa repens	saw palmetto	UPL
Ilex glabra	gallberry	UPL
Woodwardia virginica	chainfern	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Lyonia lucida	fetterbush	FACW
Eupatorium rotundifolium	roundleaf thoroughwort	FAC
Dichanthelium sp.	rosette grass	UPL

Soil Profile Description*

Horizon	Depth	Description
1	0-2	10YR 2/2 fibric
2	2-6.5	10 YR 3/1 sand
3	6.5-8	10 YR 4/1 sand
4	8-12+	10 YR 6/1 sand, with [redox] 10 YR 3/3 at 8"

Observed water table depth: No
Hydric: No

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No

Comments: Dominated by upland vegetation, soils not hydric

SITE 4B--Flag no. TCW-21-24
Plant Community: Wet Prairie (planted to slash pine)

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Pinus elliottii var. elliottii	slash pine	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum var. drummondii	Drummond's maple	UPL
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Centella asiatica	coinwort	FACW
Eupatorium leptophyllum	marsh thoroughwort	OBL
Eupatorium mohrii	Mohr's thoroughwort	FAC
Gratiola ramosa	branched hedgehyssop	FACW
Hypericum fasciculatum	marsh St. John's-wort	OBL
Ilex glabra	gallberry	UPL
Lachnanthes caroliana	redroot	FAC
Lachnocaulon anceps	white-head bogbutton	FACW
Rhexia virginica	handsome Harry	FACW
Rhynchospora gracilenta	slender beaksedge	FACW
Rhynchospora microcephala	bunched beaksedge	FACW
Rubus argutus	sawtooth blackberry	FAC
Solidago fistulosa	marsh goldenrod	FACW
Vaccinium corymbosum	highbush blueberry	FACW
Woodwardia virginica	chainfern	FACW
Xyris elliottii	Elliott's yelloweyed grass	OBL
Xyris platylepis	tall yelloweyed grass	OBL

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Soil Profile Description*

Horizon	Depth	Description
1	0-2	10YR 2/2 sand, dark surface, 75% coated
2	2-9	10YR 2/1 sand, dark surface, 75% coated
3	9-12+	10YR 5/1

Observed water table depth: No water observed in this pit
Hydric: Yes, >4" dark surface

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes A-test

SITE 5 --Flag no. URW-011-3
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Nyssa sylvatica var. biflora	swamp tupelo	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Quercus laurifolia	laurel oak	FACW
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Nyssa sylvatica var. biflora	swamp tupelo	OBL
Persea palustris	swamp bay	OBL
Quercus laurifolia	laurel oak	FACW
Taxodium ascendens	pond cypress	OBL

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GROUND COVER

Scientific Name	Common Name	Indicator status
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Smilax bona-nox	saw greenbrier	vine
Toxicodendron radicans	eastern poison ivy	UPL
Rubus argutus	sawtooth blackberry	FAC
Woodwardia virginica	chainfern	FACW
Rhynchospora miliacea	millet beakrush	OBL
Cladium jamaicense	sawgrass	OBL
Smilax walteri	coral greenbrier	vine
Acer rubrum var. drummondii	Drummond's maple	UPL
Cephalanthus sp.	buttonbush	
Eriocaulon decangulare	tenangle pipewort	OBL
Eriocaulon compressum	flattened pipewort	OBL
Galium tinctorium	stiff marsh bedstraw	FACW
Mikania scandens	climbing hempvine	UPL
Hydrocotyle umbellata	manyflower marshpennywort	FACW
Parthenocissus quinquefolia	Virginia creeper	vine
Lycopus rubellus	taperleaf waterhorehound	OBL
Pluchea sp.	camphor-weed	FACW
Centella asiatica	coinwort	FACW
Hypericum mutilum	dwarf St. Johnswort	FACW
Bacopa monnieri	herb of grace	OBL

Soil Profile Description*
No soils data taken

Observed water table depth : Not observed
Hydric : NA

Jurisdiction
Wetland: Yes

Comments: Passes A-test with hydrologic indicators: lichen lines, large hummocks, buttressed tree trunks

SITE 6A--Flag no. W2U2-9
Plant Community: Pine flatwoods

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Ilex glabra	gallberry	UPL
Serenoa repens	saw palmetto	UPLS
Asimina reticulata	netted pawpaw	UPL
Myrica cerifera	southern bayberry	FAC
Amphicarpum muhlenbergianum	blue maidencane	FACW
Quercus hemisphaerica var. hemisphaerica	oak	UPL
Pterocaulon virgatum	pterocaulon	UPL

Soil Profile Description*

Horizon	Depth	Description
1	0-2	10YR 3/2
2	2-5	10 YR 3/1 sand 65% coated
3	5-12+	10 YR 4/1 sand 55% coated

Observed water table depth: None
Hydric: No

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No

Comments: Dominated by upland vegetation and soil is non-hydric

SITE 6B--Flag no. W2U2-9
Plant Community: Basin swamp (ecotone)

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Aletris obovata	southern colicroot	FAC
Amphicarpum muhlenbergianum	blue maidencane	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Aristida stricta	wiregrass	FAC
Berchemia scandens	Alabama supplejack	vine
Bumelia reclinata	bumelia	FAC
Centella asiatica	coinwort	FACW
Cirsium lecontei	Leconte's thistle	FACW
Coreopsis gladiata	southeastern tickseed	FACW
Diospyros virginiana	common persimmon	FAC
Eleocharis sp.	spikerush	OBL
Erigeron vernus	early whitetop fleabane	FACW
Eriocaulon decangulare	tenangle pipewort	OBL
Eryngium baldwinii	Baldwin's coyote-thistle	FAC
Eryngium yuccifolium	rattlesnake master	FACW
Gratiola ramosa	branched hedgehyssop	FACW
Helianthus heterophyllus	wetland sunflower	FACW
Hypericum fasciculatum	marsh St. John's-wort	OBL
Liatris spicata	spiked gayfeather	FAC
Lobelia sp.	lobelia	
Myrica cerifera	southern bayberry	FAC
Panicum ensifolium	panic grass	OBL
Physalis sp.	groundcherry	UPL
Pluchea sp.	camphor-weed	FACW
Pluchea sp.	camphor-weed	FACW
Rhynchospora sp.	beakrush	
Sabal palmetto	cabbage palm	FAC
Scleria sp.	nutrush	FACW
Serenoa repens	saw palmetto	UPL
Viola lanceolata	lance-leaf violet	OBL
Xyris elliottii	Elliott's yelloweyed grass	OBL

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Soil Profile Description*

Horizon	Depth	Description
1	0-2	10 YR 3/1 sand
2	2-4	10YR 4/1 sand
3	4-8	10 YR4/2 sand, [redox] at 4.5 10YR 5/6 ">2%
4	8-12+	10 YR5/3 sand

Observed water table depth: Not observed
Hydric: Yes, sandy redox

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes
Comments: Passes the A-test; bedded and planted to slash pine

SITE 6C--Flag no. W2U2-9
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW

GROUND COVER

Scientific Name	Common Name	Indicator status
Ilex cassine var. cassine	dahoon	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Myrica cerifera	southern bayberry	FAC
Lyonia lucida	fetterbush	FACW
Cladium jamaicense	sawgrass	OBL
Osmunda regalis	royal fern	OBL
Toxicodendron radicans	eastern poison ivy	UPL
Smilax walteri	coral greenbrier	vine
Smilax laurifolia	laurel greenbrier	vine
Woodwardia virginica	chainfern	FACW
Ipomoea sp.	morningglory	vine
Eriocaulon decangulare	tenangle pipewort	OBL
Eriocaulon compressum	flattened pipewort	OBL

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Soil Profile Description*
No soil profile recorded

Observed water table depth : Not observed
Hydric : NA

Jurisdiction
Wetland: Yes

Comments: Passes the A-test; pristine wetland, little evidence of disturbance

SITE 7A --Flag no. W007-8
Plant Community: Pine flatwoods

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Leucothoe racemosa	swamp doghobble	FACW
Pteridium aquilinum	western brackenfern	UPL
Eupatorium mohrii	Mohr's thoroughwort	FAC
Lachnanthes caroliana	redroot	FAC

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Soil Profile Description*

Horizon	Depth	Description
1	0-.5	fibric
2	.5-4.5	10YR 3/1sand 65% coated
3	4.5-7.5	10YR 5/2 sand [redox] 7.5 YR at 2.5\" to >12\"
4	7.5-12+	10YR 4/2 sand

Observed water table depth: Not observed
Hydric: Yes, sandy redox

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No
Comments: Upland vegetation>20%; Soil disturbed by silvicultural treatments, hydric indicators re-established

SITE 7B--Flag no. W007-8
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
Ilex cassine var. cassine	dahoon	OBL
Nyssa sylvatica var. biflora	swamp tupelo	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Ilex cassine var. cassine	dahoon	OBL
Nyssa sylvatica var. biflora	swamp tupelo	OBL
Taxodium ascendens	pond cypress	OBL

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GROUND COVER

Scientific Name	Common Name	Indicator status
Carex glaucescens	clustered sedge	FACW
Cephalanthus occidentalis	buttonbush	OBL
Cladium jamaicense	sawgrass	OBL
Eupatorium leptophyllum	marsh thoroughwort	OBL
Leucothoe racemosa	swamp doghobble	FACW
Lycopus rubellus	taperleaf waterhorehound	OBL
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Panicum hemitomon	maidencane	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Rubus argutus	sawtooth blackberry	FAC
Sagittaria lancifolia	bulltongue arrowhead	OBL
Smilax laurifolia	laurel greenbrier	vine
Woodwardia virginica	chainfern	FACW

Soil Profile Description*

Site inundated approximately 15 inches at time of inspection

Observed water table depth: NA
Hydric: NA

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* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test; in addition to inundation, strong hydrologic indicators: buttressing, hummocks, cypress knees.

SITE 7C --Flag no. W007-8
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
None		

GROUND COVER

Scientific Name	Common Name	Indicator status
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Baccharis halimifolia	eastern false-willow	FAC
Bidens mitis	smallfruit beggar-ticks	OBL
Centella asiatica	coinwort	FACW
Dichromena latifolia	sandswamp whitetop	OBL
Drosera capillaris	pink sundew	FACW
Eleocharis vivipara	viviparous spikerush	OBL
Eriocaulon decangulare	tenangle pipewort	OBL
Gratiola hispida	hispid hyssop	FAC
Gratiola uniflora	hedgehyssop	FACW
Hypericum fasciculatum	marsh St. John's-wort	OBL
Hypericum mutilum	dwarf St. Johnswort	FACW
Juncus sp.	rush	
Juncus trigonocarpus	redpod rush	OBL
Lachnanthes caroliana	redroot	FAC
Lachnocaulon anceps	white-head bogbutton	FACW
Lindernia grandiflora	savannah false pimpernel	FACW
Ludwigia linifolia	southeastern primrosewillow	OBL
Lycopus rubellus	taperleaf waterhorehound	OBL
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Osmunda cinnamomea	cinnamon fern	FACW
Pluchea sp.	camphor-weed	FACW
Polygonum sp.	smartweed	OBL
Rhexia nashii	maid Marian	FACW
Rhynchospora fascicularis	fascicled beaksedge	FACW
Spartina bakeri	sand cordgrass	FACW
Viola lanceolata	lance-leaf violet	OBL
Xyris platylepis	tall yelloweyed grass	OBL

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Soil Profile Description*

Horizon	Depth	Description
1	0-4.5	10YR 2/2 mucky fine sand (mixed by hogs)
2	4.5-7.5	10YR 4/4 sand [redox] 10YR 4/6>2%, 5"-12"
3	7.5->12	10YR 5/3

Observed water table depth: Soil saturated to surface, filled soil pit in approximately10 minutes
Hydric: Inconclusive due to mixing by hogs.

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test

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SITE 8A --Flag no. LRW-005-03C
Plant Community: Pine flatwoods

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
None		

GROUND COVER

Scientific Name	Common Name	Indicator status
Amphicarpum muhlenbergianum	blue maidencane	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Carex longii	Long's sedge	FACW
Erechtites hieraciifolia	fireweed	FAC
Eupatorium compositifolium	yankeeweed	FAC
Gaylussacia frondosa var. nana	blue huckleberry	FAC
Hypericum cistifolium	roundpod St. Johnswort	FACW
Ilex cassine var. cassine	dahoon	OBL
Lachnanthes caroliana	redroot	FAC
Lyonia lucida	fetterbush	FACW
Panicum ensifolium	panic grass	OBL
Phytolacca americana	American pokeweed	UPL
Rhexia petiolata	fringed meadowbeauty	FACW
Serenoa repens	saw palmetto	UPL
Vicia acutifolia	four-leaf vetch	FACW

Soil Profile Description*

Horizon	Depth	Description
1	0-7	10 YR 2/2 sand (recently mixed)
2	7-12+	10YR 6/1) sand

Observed water table depth: Not observed
Hydric: Inconclusive due to mixing

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No, upland species >20%

Comments: Area appears to have been recently mechanically prepared and bedded in preparation for planting pines

SITE 8B--Flag no.LRW-005-03C
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
Ilex cassine var. cassine	dahoon	OBL
Nyssa sylvatica var. biflora	swamp tupelo	OBL
Pinus elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Fraxinus caroliniana	Carolina ash	OBL
Ilex cassine var. cassine	dahoon	OBL
Nyssa sylvatica var. biflora	swamp tupelo	OBL

GROUND COVER

Scientific Name	Common Name	Indicator status
Aronia arbutifolia	red chokeberry	FACW
Boehmeria cylindrica	small-spike false-nettle	OBL
Carex glaucescens	clustered sedge	FACW
Carex longii	Long's sedge	FACW
Cephalanthus occidentalis	buttonbush	OBL
Leucothoe racemosa	swamp doghobble	FACW
Lycopus rubellus	taperleaf waterhorehound	OBL
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Triadenum virginicum	Virginia marsh St. Johnswort	OBL
Vaccinium corymbosum	highbush blueberry	FACW
Woodwardia virginica	chainfern	FACW

Soil Profile Description*

Horizon	Depth	Description
1	0-4	10YR3/2 sand
2	4-6	10YR 4/1 sand
3	6-12+	10YR 5/1 sand

Observed water table depth: 7 inches below surface in soil pit after 5 minutes.
Hydric: Inconclusive due to disturbance by hogs.

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test; canopied wetland inundated approximately 2 feet at time of inspection. Hydrologic indicators: hummocks, looped roots, buttressed trees

SITE 9A --Flag no. LRW-6-U16
Plant Community: Pine flatwoods.

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Amphicarpum muhlenbergianum	blue maidencane	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Centella asiatica	coinwort	FACW
Gratiola hispida	hispid hyssop	FAC
Ilex glabra	gallberry	UPL
Lyonia lucida	fetterbush	FACW
Osmunda cinnamomea	cinnamon fern	FACW
Quercus pumila	running oak	UPL
Rhexia virginica	handsome Harry	FACW
Serenoa repens	saw palmetto	UPL
Xyris brevifolia	shortleaf yelloweyed grass	OBL

Soil Profile Description*

Horizon	Depth	Description
1	0-3	10YR 3/2 mucky fine sand (mixed)
2	3-5.5	10YR 3/1
3	5.5-12	10YR 5/2 matrix with10YR7/1 stripping

Observed water table depth: Not observed
Hydric: Yes

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No

Comments: More than 20% upland plants in groundcover

SITE 9B --Flag no. LRW-6-U16
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii	slash pine (planted)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Aronia arbutifolia	red chokeberry	FACW
Centella asiatica	coinwort	FACW
Cephalanthus occidentalis	buttonbush	OBL
Eupatorium capillifolium	dogfennel	FAC
Gratiola hispida	hispid hyssop	FAC
Hypericum cistifolium	roundpod St. Johnswort	FACW
Hypericum tetrapetalum	fourpetal St. Johnswort	FAC
Juncus marginatus	shore rush	FACW
Lachnanthes caroliana	redroot	FAC
Lachnocaulon anceps	white-head bogbutton	FACW
Myrica cerifera	southern bayberry	FAC
Nyssa sylvatica var. biflora	swamp tupelo	OBL
Osmunda cinnamomea	cinnamon fern	FACW
Pluchea foetida	stinking camphorweed	FACW
Rhexia virginica	handsome Harry	FACW
Serenoa repens	saw palmetto	UPL
Vaccinium corymbosum	highbush blueberry	FACW
Woodwardia virginica	chainfern	FACW

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Soil Profile Description*

Horizon	Depth	Description
1	0-2	10YR 2/2
2	3-9.5	10YR 6/1 sand [redox] 10YR 4/4>2%, 5"-12"

Observed water table depth: Not Observed
Hydric: Yes, [redox] .2% beginning in 6 ", >4 " thick

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the B-test

SITE 9C --Flag no. LRW-6-U16
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
Ilex cassine var. cassine	dahoon	OBL
*Nyssa sylvatica var. biflora*swamp	tupelo	OBL
Pinus elliottii var. elliottii	slash pine	UPL
Taxodium ascendens	pond cypress	OBL
Taxodium distichum	bald cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine	UPL
Ilex cassine var. cassine	dahoon	OBL
*Nyssa sylvatica var. biflora*swamp	tupelo	OBL
Taxodium ascendens	pond cypress	OBL
Taxodium distichum	bald cypress	OBL

[CONTINUED NEXT PAGE]

GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Cephalanthus occidentalis	buttonbush	OBL
Cladium jamaicense	sawgrass	OBL
Itea virginica	virginia willow	OBL
Leucothoe racemosa	swamp doghobble	FACW
Lycopus rubellus	taperleaf waterhorehound	OBL
Lycopus rubellus	taperleaf waterhorehound	OBL
Lyonia ligustrina var. foliosiflora	maleberry	FAC
Lyonia lucida	fetterbush	FACW
Myrica cerifera	southern bayberry	FAC
Osmunda cinnamomea	cinnamon fern	FACW
Persea palustris	swamp bay	OBL
Rosa palustris	swamp rose	OBL
Saururus cernuus	lizard's tail	OBL
Smilax laurifolia	laurel greenbrier	vine
Smilax walteri	coral greenbrier	vine
Toxicodendron radicans	eastern poison ivy	UPL
Triadenum virginicum	Virginia marsh St. Johnswort	OBL
Vaccinium corymbosum	highbush blueberry	FACW
Woodwardia virginica	chainfern	FACW

Soil Profile Description*
No soils data collected; inundated to approximate 18"

Observed water table depth: NA
Hydric: NA

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* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test; high quality wetland. No evidence of recent disturbance or alteration of vegetation or hydrology. Selected cypress removal occurred early in the 19th century as evidenced by occasional cypress stumps. Three to four foot long cypress slabs are occasionally encountered, suggesting that these logs were hand squared into railroad cross-ties. Cross-ties were likely removed using mules or oxen, resulting in little soil disturbance.

SITE 10A --Flag no. TCW-30-108
Plant Community: Cypress dome

CANOPY (sparse)

Scientific Name	Common Name	Indicator status
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Taxodium ascendens	pond cypress	OBL

GROUND COVER

Scientific Name	Common Name	Indicator status
Canna flaccida	bandanna of the Everglades	OBL
Carex glaucescens	clustered sedge	FACW
Centella asiatica	coinwort	FACW
Cephalanthus occidentalis	buttonbush	OBL
Cyperus lecontei	Le Conte's flatsedge	FACW
Eupatorium mohrii	Mohr's thoroughwort	FAC
Gratiola pilosa	shaggy hedgehyssop	FACW
Ludwigia linifolia	southeastern primrosewillow	OBL
Lycopus rubellus	taperleaf waterhorehound	OBL
Lyonia lucida	fetterbush	FACW
Panicum ensifolium	panic grass	OBL
Panicum hemitomon	maidencane	OBL
Pluchea odorata var. odorata	sweetscent	FACW
Proserpinaca pectinata	combleaf mermaidweed	OBL
Rhynchospora inundata	horned beakrush	OBL
Rhynchospora mixta	mingled beakrush	OBL
Sagittaria graminea	grassy arrowhead	OBL
Smilax auriculata	earleaf greenbrier	vine
Utricularia sp.	bladderwort	OBL
Woodwardia areolata	chainfern	OBL
Xyris platylepis	tall yelloweyed grass	OBL

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Soil Profile Description*

Horizon	Depth	Description
1	0-2	Fibric
2	2-3	10YR 2/2, Muck/Mucky texture
3	3-4	10YR 2/1

Observed water table depth: Not observed
Hydric: Yes, muck presence

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test and D-test; Recently burned wetland. *Panicum hemitomon* flowering profusely.

SITE 10B --Flag no. TCW-30-108
Plant Community: Pine flatwoods

CANOPY

Scientific Name	Common Name	Indicator status
None		

SUBCANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii	slash pine (planted, dead from fire)	UPL

GROUND COVER

Scientific Name	Common Name	Indicator status
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Asimina reticulata	netted pawpaw	UPL
Centella asiatica	coinwort	FACW
Gaylussacia frondosa var. nana	blue huckleberry	FAC
Ilex glabra	gallberry	UPL
Myrica cerifera	southern bayberry	FAC
Osmunda cinnamomea	cinnamon fern	FACW
Panicum sp.	panicum	
Polygala rugelii	yellow milkwort	FACW
Rhexia nashii	maid Marian	FACW
Serenoa repens	saw plametto	UPL

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Soil Profile Description*

Horizon	Depth	Description
1	0-3	10YR 2/2 mucky fine sand, 65 % coated
2	3-7.5	10YR 5/2 sandy
3	7.5->12+	10YR 5/2 depletions 10YR 6/1 at 7 "

Observed water table depth: Not observed
Hydric: Inconclusive due to mixing.

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No
Comments: More than 20% upland species in groundcover

SITE 11A --Flag no. W2-25A
Plant Community: Basin swamp

CANOPY

Scientific Name	Common Name	Indicator status
Pinus elliottii var. elliottii	slash pine (planted)	UPL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Quercus nigra	water oak	FACW

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GROUND COVER

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Asimina reticulata	netted pawpaw	UPL
Dichanthelium sp.	rosette grass	UPL
Eupatorium mohrii	Mohr's thoroughwort	FAC
Gaylussacia frondosa var. nana	blue huckleberry	FAC
Ilex glabra	gallberry	UPL
Lyonia lucida	fetterbush	FACW
Pteridium aquilinum	western brackenfern	UPL
Rhus copallinum	flameleaf sumac	UPL
Rhynchospora sp.	beakrush	
Rubus cuneifolius	sand blackberry	FAC
Serenoa repens	saw palmetto	UPL
Vaccinium myrsinites	shiny blueberry	UPL
Vitis rotundifolia	muscadine	vine
Xyris platylepis	tall yelloweyed grass	OBL

Soil Profile Description*

Horizon	Depth	Description
1	2.5-0	duff
2	0-6.5	10YR 4/1 <70 % coated
3	6.5-12+	10YR 5/1

Observed water table: Not observed
Hydric: Inconclusive due to mixing

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: No.

Comments: More than 20% upland species in the groundcover

SITE 11B --Flag no. W2-25A
Plant Community:

CANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Taxodium ascendens	pond cypress	OBL

SUBCANOPY

Scientific Name	Common Name	Indicator status
Acer rubrum	red maple	FACW
Ilex cassine var. cassine	dahoon	OBL
Salix caroliniana	coastal plain willow	OBL
Taxodium ascendens	pond cypress	OBL

GROUND COVER

Scientific Name	Common Name	Indicator status
Ampelopsis arborea	peppervine	vine
Andropogon glomeratus var. glaucopsis	purple bluestem	FACW
Baccharis halimifolia	eastern false-willow	FAC
Bidens mitis	smallfruit beggar-ticks	OBL
Carex glaucescens	clustered sedge	FACW
Centella asiatica	coinwort	FACW
Cephalanthus occidentalis	buttonbush	OBL
Chloris sp.	windmill grass	UPL
Conoclinium coelestinum	mistflower	FAC
Erianthus giganteus	sugarcane plumegrass	OBL
Eriocaulon decangulare	tenangle pipewort	OBL
Eupatorium capillifolium	dogfennel	FAC
Hypericum fasciculatum	marsh St. John's-wort	OBL
Hypericum galioides	bedstraw St. Johnswort	FACW
Hyptis alata	musky mint	FACW
Juncus sp.	rush	
Lachnanthes caroliana	redroot	FAC
Ludwigia microcarpa	smallfruit primrosewillow	OBL
Lyonia lucida	fetterbush	FACW

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Myrica cerifera	southern bayberry	FAC
Panicum hemitomon	maidencane	OBL
Panicum sp.	panicum	
Persea palustris	swamp bay	OBL
Phyla nodiflora	turkey tangle fogfruit	FAC
Pinus elliottii	slash pine	UPL
Pluchea rosea	rosy camphorweed	FACW
Rhynchospora cephalantha	bunched *beaksedge*	OBL
Rhynchospora sp.	beakrush	
Taxodium ascendens	pond cypress	OBL
Triadenum virginicum	Virginia marsh St. Johnswort	OBL
Woodwardia virginica	chainfern	FACW

Soil Profile Description*

Horizon	Depth	Description
1	2-0	fibric
2	2-3	10YR 5/1
3	3-12+	10YR 10 YR6/1 with striped matrix, 10YR7/1, and Mottles of 10YR5/4. E horizon appears generally depleted.

Observed water table: Not observed
Hydric: Yes, depleted matrix beginning in upper 6"

* All depths are in inches and all colors were determined on moist soil.

Jurisdiction
Wetland: Yes

Comments: Passes the A-test

TABLE 2
Wetland Delineation Tests

The following are abbreviated versions of the wetland delineation tests of Section 62-340.300, F.A.C.

"A Test" [62-340.300(2)(a), F.A.C.] A positive wetland test requires that the aerial extent of obligate plant species is greater than that of the upland plants in the appropriate stratum and hydric soils or hydrologic indicators are present.

"B Test" [62-340.300(2)(b), F.A.C.] A positive wetland test requires that the aerial extent of obligate and facultative wet plant species in the appropriate stratum is greater than 80% of the plants in that stratum and hydric soils or hydrologic indicators are present.

"C Test" [62-340.300(2)(c), F.A.C.] A positive wetland test requires an affirmative demonstration of specific soil conditions for areas that are not pine flatwoods, improved pastures or drained areas.

"D Test" [62-340.300(2)(d), F.A.C.] A positive wetland test requires one or more hydrologic indicators and hydric soils.

"Altered Site Test" [62-340.300(3), F.A.C.]

Note: See Tables 3 and 4 for a list of the Hydrologic and Hydric Soil Indicators.

TABLE 3
Hydrologic Indicators

The following is an abbreviated version of the various hydrological indicators pursuant to Section 62-340.500, F.A.C.

1. Algal mats
2. Aquatic mosses or liverworts on trees or substrates
3. Aquatic plants
4. Presence of adventitious roots
5. Drift lines and rafted debris
6. Elevated lichen lines
7. Evidence of aquatic fauna
8. Hydrologic data
9. Morphological plant adaptations
10. Secondary flow channels
11. Sediment deposition
12. Presence of vegetated hummocks or tussocks
13. Water marks

TABLE 4
Hydric Soil Indicators

The following is an abbreviated version of the hydric soil indicators developed by the U.S.D.A.- S.C.S. (Now known as the Natural Resources Conservation Service) for Florida in 1992. A complete explanation of the hydric soil indicators above can be obtained from Florida Soil Conservation Service, (1992). See References.

All Soils
1. Hydrogen Sulfide
2. Stratified Layers
3. Organic Bodies
4. Mucky Mineral
5. Muck Presence (S. FL. only)
6. 1 cm Muck (N. FL. only)

Loamy and Clayey Soils
1. Loamy Gleyed Matrix
2. Depleted Matrix
3. Thick Dark Surface (S. FL only)
4. Iron/Manganese Masses (N. FL. only)
5. Marl (S. FL. only)
6. Umbric Surface

Sandy Soils
1. Sandy Gleyed Matrix
2. Sandy Redox
3. Stripped Matrix
4. Dark Surface

TABLE 5
Wetland Definition pursuant to 62-340.200, F.A.C.

"Wetlands," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

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Exhibit A
Location of Levy Nuclear Plant property, Levy County, Florida