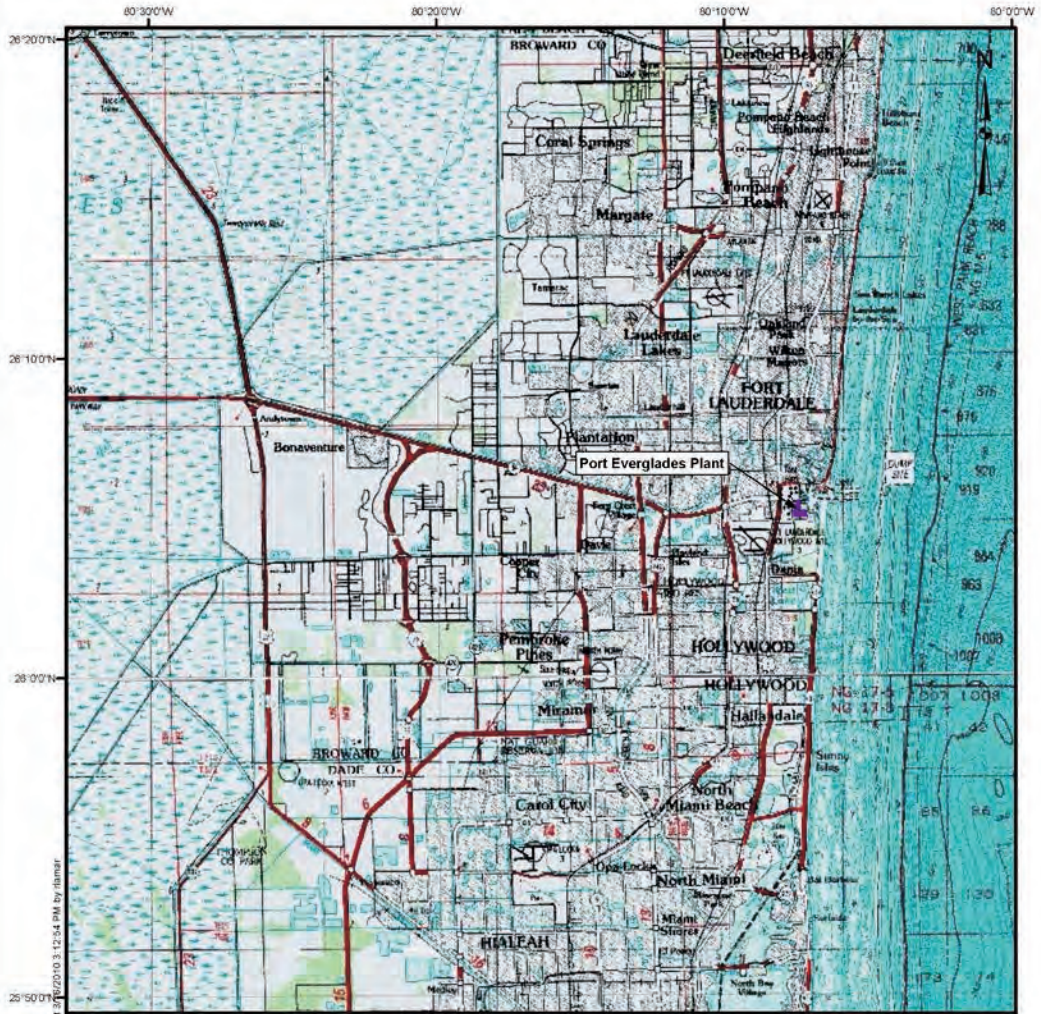


***Environmental and Land Use Information:
Supplemental Information
Preferred Site #4: Port Everglades Plant***

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LEGEND

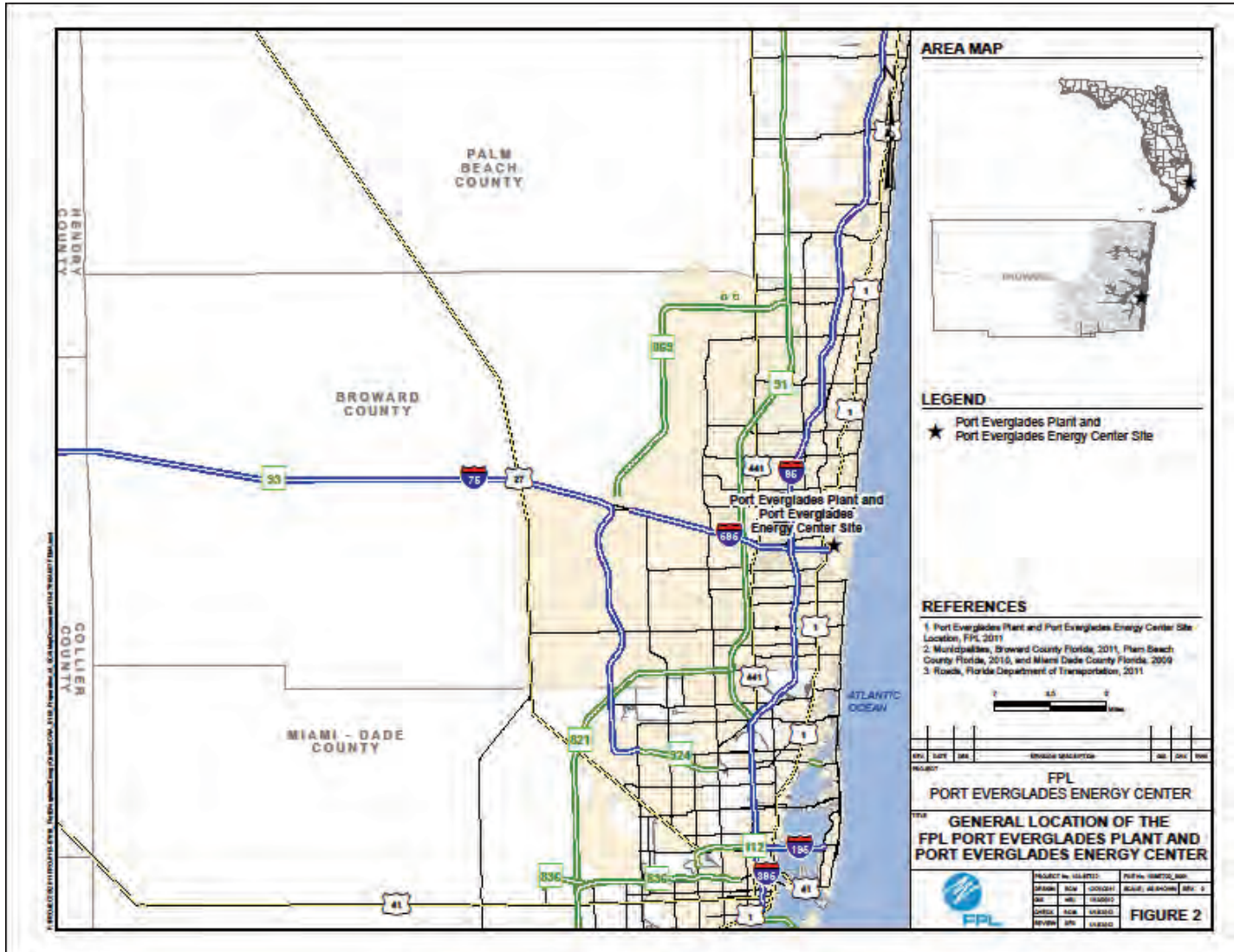
Port Everglades Plant

REFERENCES

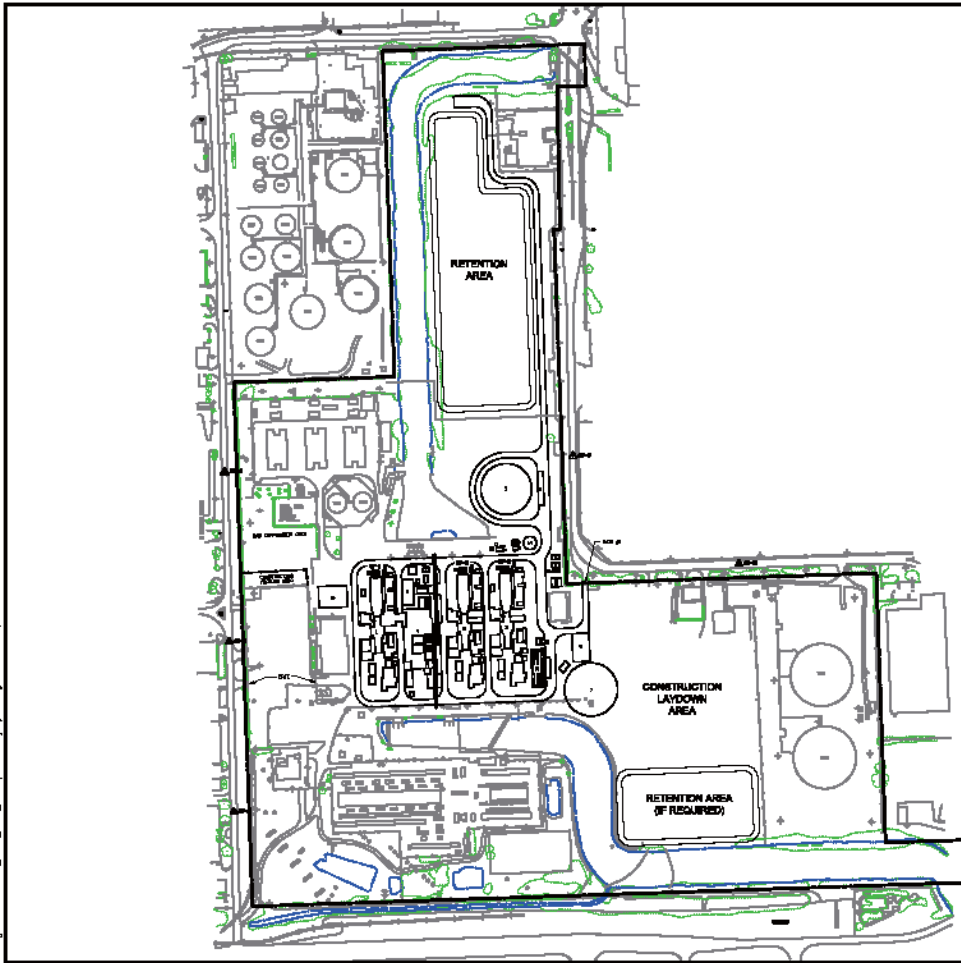
1. Port Everglades Plant, FPL, 2011

24,000 0 Feet

REV	DATE	DES	REVISION DESCRIPTION	DES	CHK	RVW	
PROJECT							
FPL PORT EVERGLADES PLANT							
TITLE							
USGS LOCATION MAP							
		PROJECT No:	103-87722	FILE No:	10387722_A641		
		DESIGN	KFK	1/18/2011	SCALE:	AS SHOWN	
		DWG	NRL	3/8/2011	REV:	0	
		CHECK	XXX	8/13/2008	FIGURE 1		
REVIEW	XXX	8/13/2008					



Drawing File: 15087722L_B002_FPLDC_ConceptualFacilitiesLayout.dwg Jun 31, 2012 - 9:17am



LEGEND

- PROPERTY LINE
- WATER
- VEGETATION / BRUSH

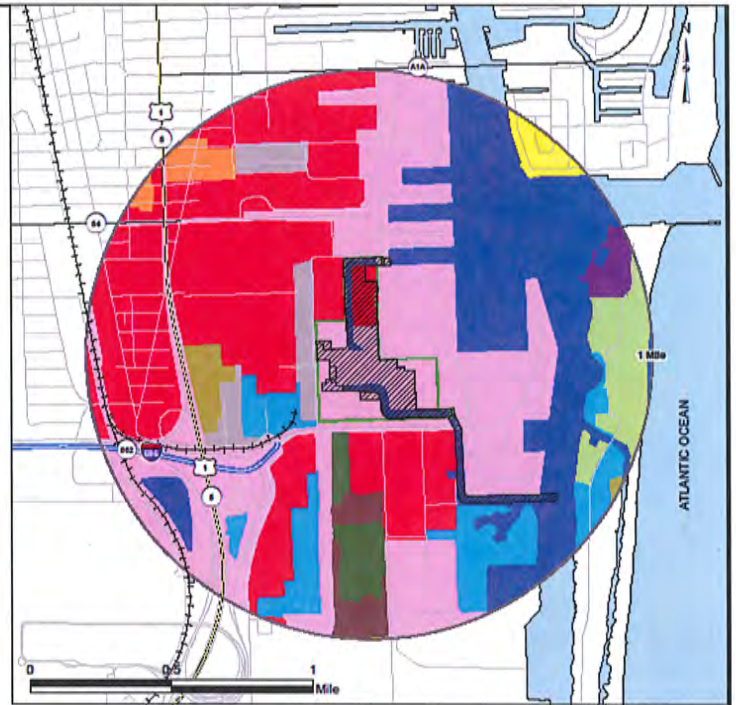
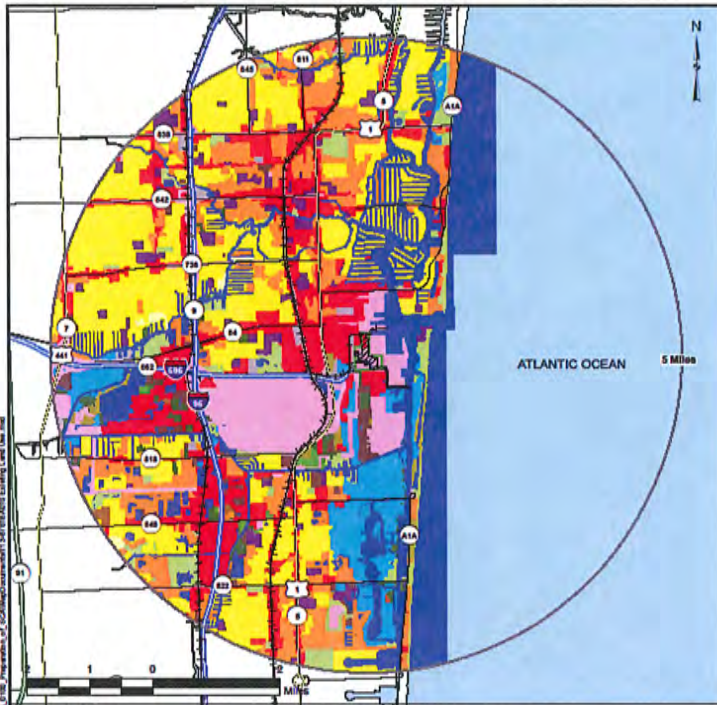
FACILITIES LEGEND				
ITEM NO.	DESCRIPTION	NORTH	EAST	REFERENCE LOCATION
1	CONSTRUCTION TURBINE NO. 0A			
2	CONSTRUCTION TURBINE NO. 0B			
3	CONSTRUCTION TURBINE NO. 0C			
4	STEAM TURBINE 3			
5	CONTROL/HYDROELECTRIC SHELTER			
6	FUEL TRUCK UNLOADING			
7	RETIRED/OLD'S WATER STORAGE TANK			
8	SEWAGE WATER TREATMENT TRAILER PARKING			
9	FUEL STORAGE TANK			
10	SPRINGER STORAGE TANK & TRANSFER PUMP			
11	AUX BOILER			
12	H2 BULK STORAGE			
13	AIR COMPRESSORS & RECEIVERS			
14	FIRE WATER STORAGE TANK			
15	FIRE PUMP SHELTER			
16	DRY STORAGE			

REFERENCES

1.) BASE MAP TAKEN FROM CADD FILE ORIGINALLY PREPARED BY BLACK & VEATCH TITLED "FLORIDA POWER & LIGHT, PORT EVERGLADES PLANT, SITE - ARRANGEMENTS, OVERALL SITE PLOT PLAN", DRAWING No. AND CADD FILE NAME 174101-05-0001, REVISION 0, DATED 08/18/11.



NO.	DATE	DESCRIPTION	DESIGN	CHKD	APP
PROJECT: FPL PORT EVERGLADES ENERGY CENTER					
TITLE: CONCEPTUAL FACILITIES LAYOUT					
PROJECT No. 10-07043		FILE No. 15087722L_B002			
DESIGN	RL	08/01/11	SCALE	AS SHOWN	REV. 0
CHKD	ML	12/15/09			
CHKD	DK	12/15/09			
REVISED	DP	12/15/09			
			FIGURE 3		



LEGEND

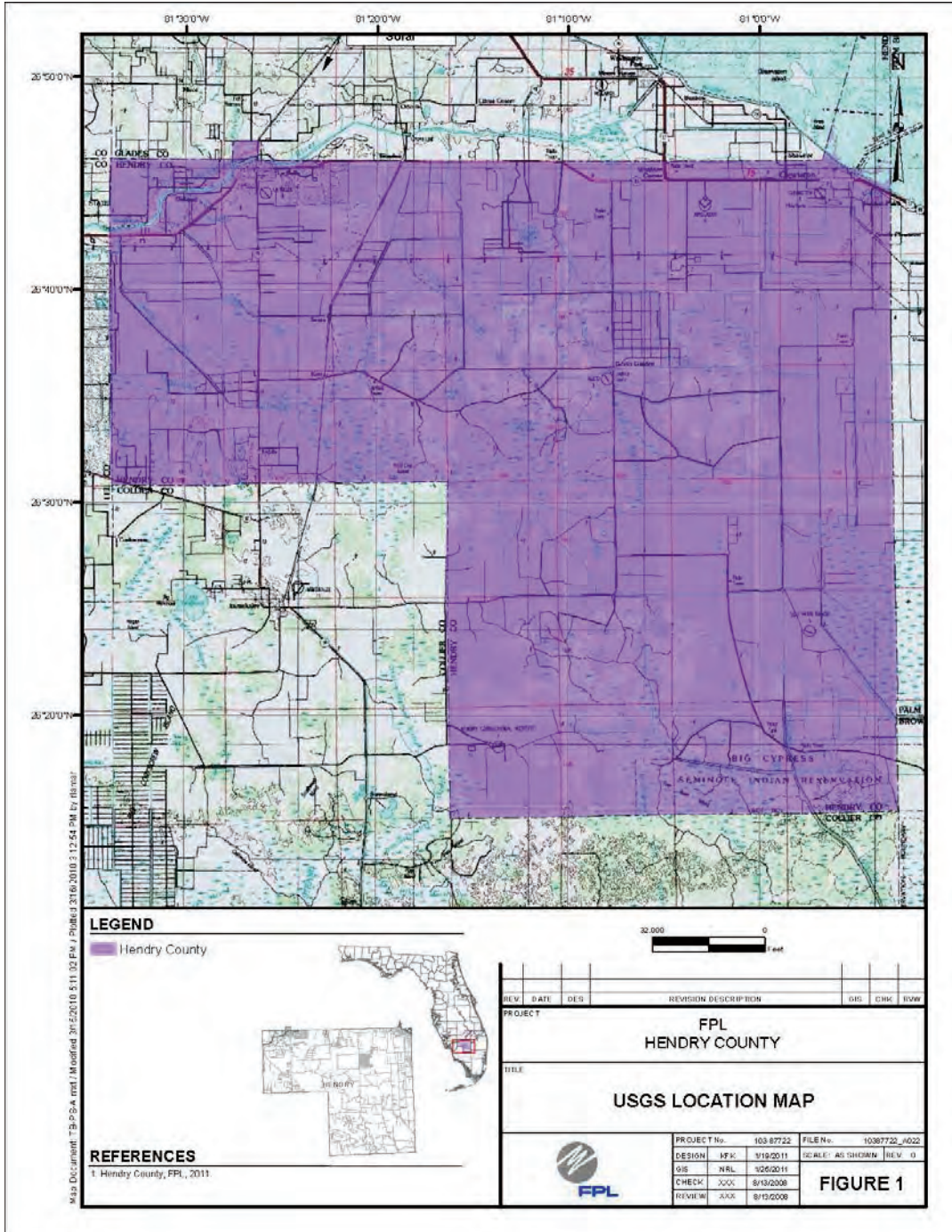
Port Everglades Plant Property	Recreational
Port Everglades Energy Center Site	Open Land
Existing Land Use (SFWMD based on FLUCCS Level II)	Agriculture
Low Density Urban	Rangeland
Medium Density Urban	Upland Forests
High Density Urban	Water
Commercial	Wetlands
Industrial	Barren Land
Mining	Transportation, Communication, Utilities
Institutional	

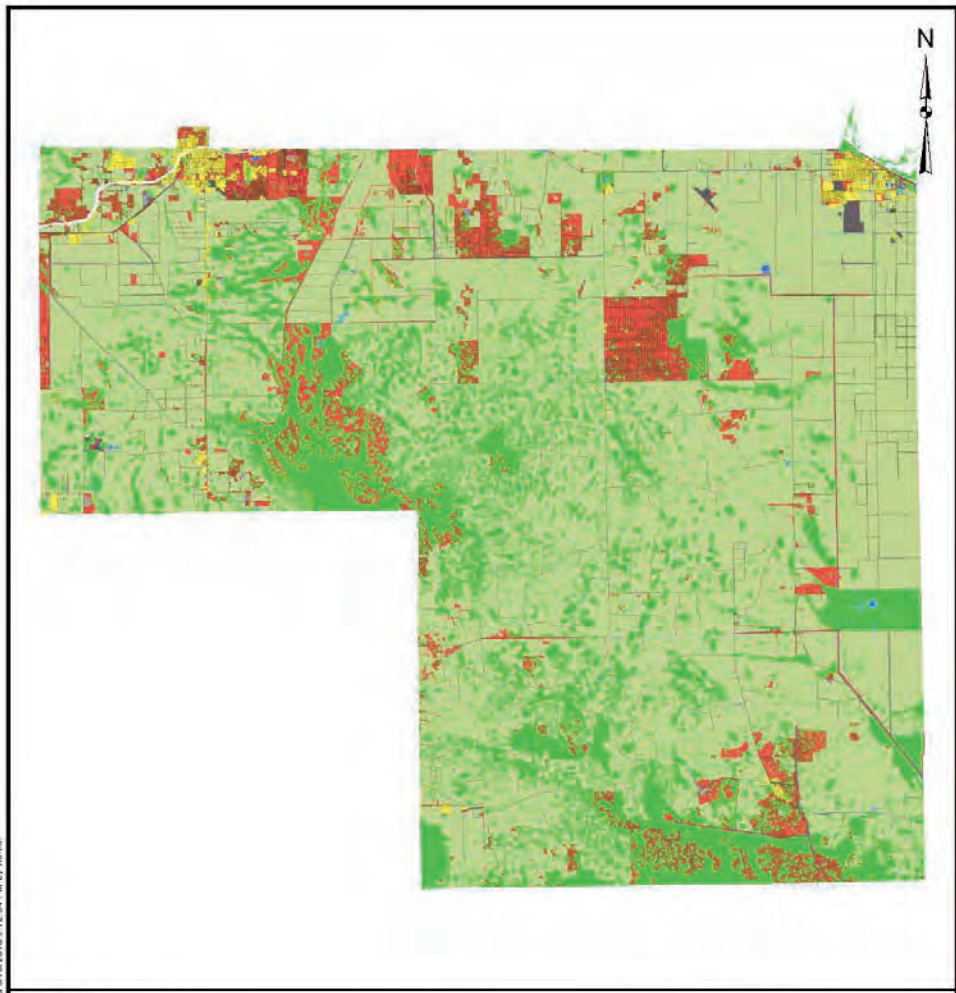
- REFERENCES**
1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL, 2011
 2. Existing Land Use, South Florida Water Management District Florida Land Use, Cover and Form Classification System Level II, 2008

REV	DATE	DES	REVISION DESCRIPTION	ISS	CHK	APPV	
PROJECT: FPL PORT EVERGLADES ENERGY CENTER							
TITLE: EXISTING LAND USE							
		PROJECT No. 15247723	FILE No. 15247723_B03				
		DESIGN: BCM	12/01/2014	SCALE: AS SHOWN	REV. 6		
		DES: T. SFL	03/20/15				
		CHECK: BCM	11/20/15				
		REVIEW: SFL	11/20/15	FIGURE 4			

***Environmental and Land Use Information:
Supplemental Information
Preferred Site #5: Hendry County***

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Map Document: B:\p\sa\m\l\modified 3/1/2010 5:11:02 PM - Project 316\2010 3:12:54 PM by rbsnet

LEGEND

- Roads
- 100 - URBAN AND BUILT-UP
- 200 - AGRICULTURE
- 300 - RANGELAND
- 400 - UPLAND FORESTS
- 500 - WATER
- 600 - WETLANDS
- 700 - BARREN LAND
- 800 - TRANSPORTATION, COMMUNICATION AND UTILITIES

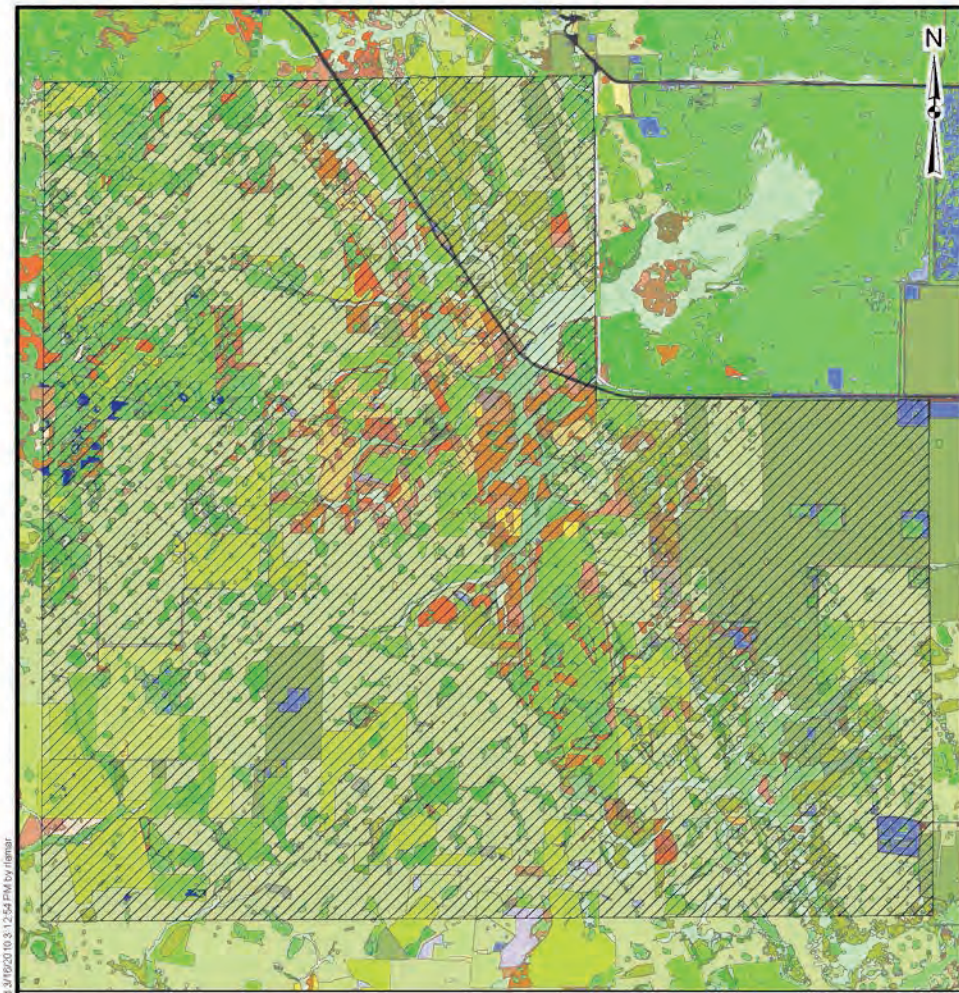
REFERENCES

- 1 Hendry County, FPL, 2011
- 2 Land Use, SFWMD FLUCCS, 2004-05

REV	DATE	DES	REVISION DESCRIPTION	DIS	CHK	HOW
PROJECT						
FPL HENDRY COUNTY						
TITLE						
LAND USE / LAND COVER						
		PROJECT No.	103-87722	FILE No.	10387722_004	
DESIGN	MPA	DATE	3/19/2011	SCALE:	AS SHOWN	REV: 0
GIS	NRL	DATE	3/26/2011			
CHECK	JXC	DATE	8/13/2008	FIGURE 2		
REVIEW	JXC	DATE	8/13/2008			

***Environmental and Land Use Information:
Supplemental Information
Preferred Site #6: Northeast Okeechobee County***

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Map Document: TB:PSA.mxd / Modified: 3/15/2010 5:11:02 PM / Plotted: 3/18/2010 3:12:54 PM by: ramar

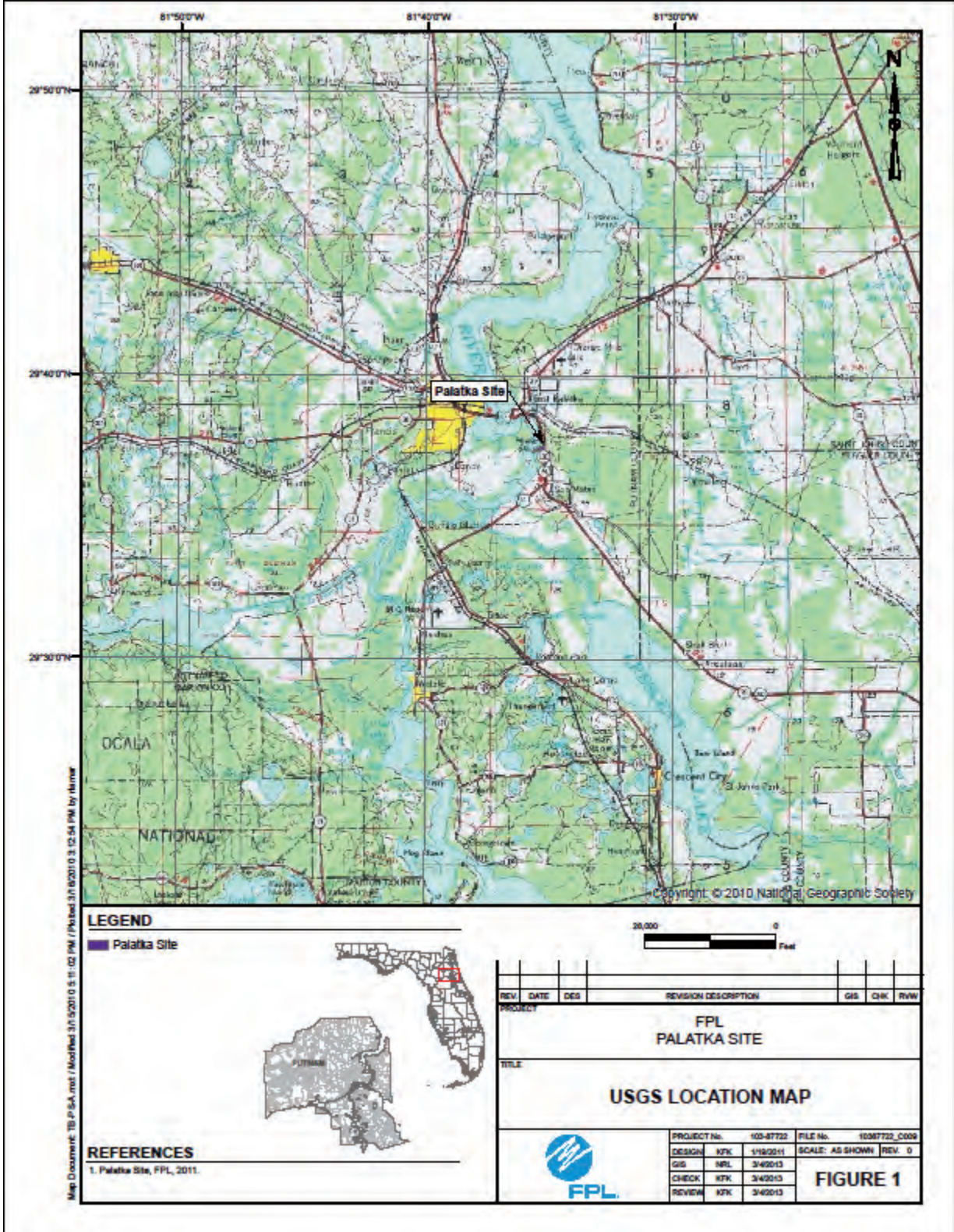
LEGEND		
027 - Unincorporated County	102 - Woodlands	511 - Bay Swamps
103 - Residential, Low Density	103 - Specialty Farms	512 - Mixed Wetland Habitats
104 - Multi-Family Residential	104 - Horse Farms	513 - Wetland and Shrubbery
105 - Forest Single Family Lots	105 - Pasture	514 - Wetland/Coastal Forests
106 - Mobile Home (Camp)	106 - Aquaculture	515 - Canals
107 - Forest Single Family Units	107 - Fallow-Crop Land	516 - Forest Pine
108 - Mobile Home Units	108 - Bunkers/Camp Sites	517 - Mangrove Red Mangrove Forest
109 - Commercial and Industrial	109 - Truck and Busland	518 - Hybrid Pine Forests
110 - Other Light Industrial	110 - Mixed Pine/Shortland	519 - Mixed Pine/Jack Pine
111 - Railroad	111 - Pine Plantation	520 - Mangrove Freshwater Marsh
112 - Land and Open Space	112 - Oak Pine	521 - Freshwater Marshes
113 - Water Storage	113 - Upland Barrenland Forests	522 - Saw Palmetto
114 - Wetland Ponds	114 - Rubber Plantation	523 - Emergent Aquatic Vegetation
115 - Wetland Marsh	115 - Law Oak	524 - Swampy Aquatic Vegetation
116 - Park and Zone	116 - Cabbage Palm	525 - Pine Palm
117 - Airport/Pasture	117 - Hardwood/Softwood Mixed	526 - Disturbed Land
118 - Unincorporated Pasture	118 - Contoured Pasture	527 - Reported to transition based on the frequency of field activity
119 - Pine Open	119 - Forest/Highland Marsh	528 - Sedge Meadow
120 - Pine Open	120 - Swamp and Wetland	529 - Artificial
121 - Canal/Drain	121 - Channelized Drain (Stream, Wetland)	530 - Pipeline and Highway
122 - Canal/Drain	122 - Canal	531 - Electrical Power Transmission Lines
123 - Canal/Drain	123 - Marsh/Lake	532 - Other Unlabeled Forest
124 - Canal/Drain	124 - Pasture	

- REFERENCES**
1. Northeast Okeechobee County FPL, 2011
 2. Land Use, SFVMD & S-RMD, 2004-05

REV	DATE	DES	REVISION DESCRIPTION	DES	CHK	APP
PROJECT						
FPL NORTHEAST OKEECHOBEE COUNTY						
TITLE						
LAND USE / LAND COVER						
			PROJECT No.	103-87722	FILE No.	10NR7722_A05
			DESIGN	JFK	12/9/2011	SCALE AS SHOWN (REV. 0)
			CHECK	JKC	8/7/2008	FIGURE 2
			REVIEW	JKC	8/7/2008	

***Environmental and Land Use Information:
Supplemental Information
Preferred Site #7: Palatka Site***

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Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp, GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

LEGEND

	211. Irrigated Pastures	830. Reservoir
Land Use / Land Cover	212. Unirrigated Pastures	811. Bay Beaches
020. Residential Low Density	213. Woodland Pastures	817. Sand/Water Wetlands
021. Urban Medium Density	214. River Channels	421. Cypress
022. Residential Medium Density	218. Field Crops	420. Hybrid Pine Plantations
023. Residential Medium Density	221. Citrus Groves	830. Wetland Forested Wetland
024. Residential Medium Density	222. Agricultural Forests	841. Pasture/Meadow
025. Residential Medium Density	223. Mixed Forest	842. Wet Forest
026. Residential Medium Density	224. Wetland (Dry Prairie)	844. Wetland Aquatic Vegetation
027. Residential Medium Density	225. Shrub and Grassland	848. Wetland Hydro Recharge
028. Residential Medium Density	226. Mixed Hardwood	740. Disturbed Land
029. Residential Medium Density	411. Pine Plantations	844. Roads and Highways
030. Residential Medium Density	434. Wetland/Coastal Wetland	830. Communication
031. Residential Medium Density	441. Cottonwood Plantations	831. Electric Power Facilities
032. Residential Medium Density	810. Wetland and Waterways	832. Electric Power Transmission Lines
033. Residential Medium Density	820. Lakes	838. Other Treated Ponds

REFERENCES

1. Palatka Site, FPL, 2011.
2. Land Use / Land Cover, SJRWMD, 2009.



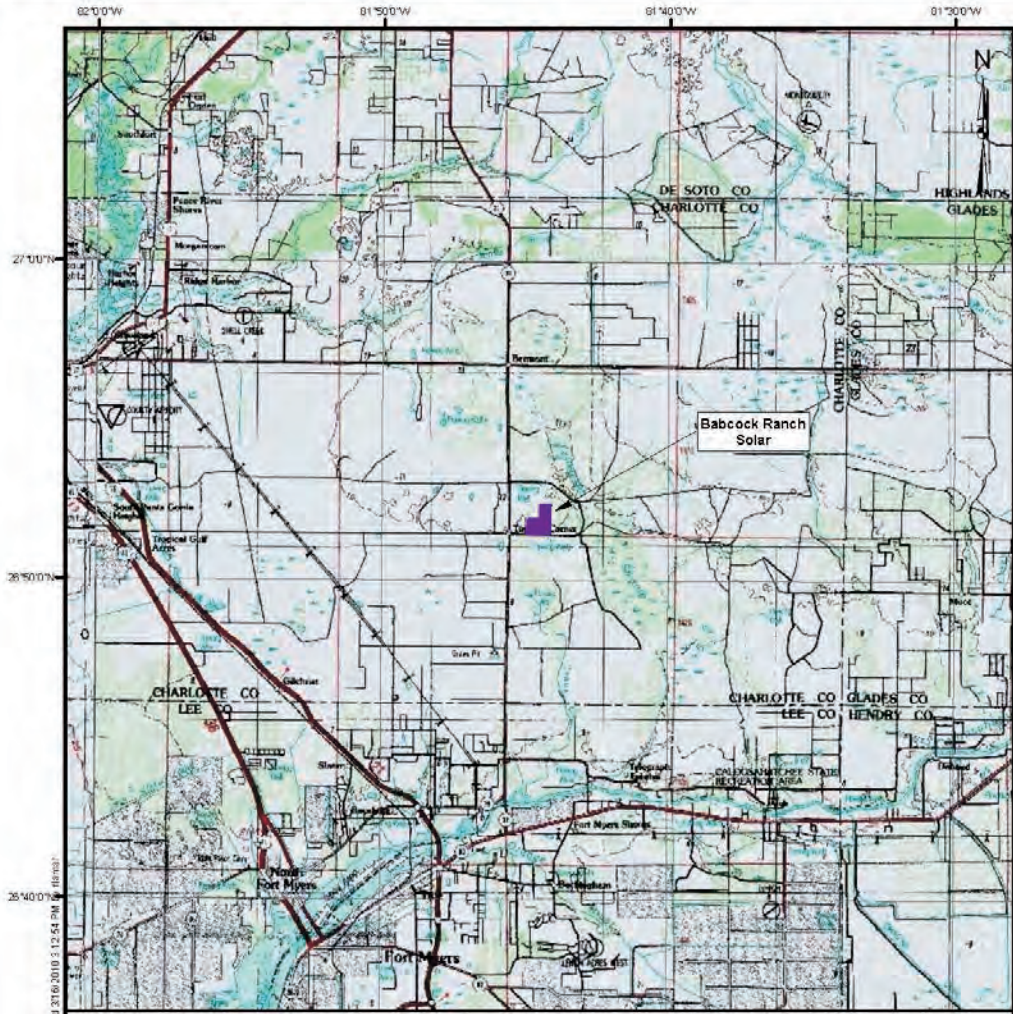
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PROJECT																									
FPL PALATKA SITE																									
TITLE																									
LAND USE / LAND COVER MAP																									
<table border="1" style="float: right;"> <tr> <td>PROJECT No.</td> <td>103-47722</td> <td>FILE No.</td> <td>10347722_0010</td> </tr> <tr> <td>DESIGN</td> <td>KFK</td> <td>1/16/2011</td> <td>SCALE: AS SHOWN</td> </tr> <tr> <td>GIS</td> <td>NRL</td> <td>3/4/2013</td> <td>REV. 0</td> </tr> <tr> <td>CHECK</td> <td>KFK</td> <td>3/4/2013</td> <td rowspan="2" style="text-align: center; vertical-align: middle;">FIGURE 3</td> </tr> <tr> <td>REVIEW</td> <td>KFK</td> <td>3/4/2013</td> </tr> </table>							PROJECT No.	103-47722	FILE No.	10347722_0010	DESIGN	KFK	1/16/2011	SCALE: AS SHOWN	GIS	NRL	3/4/2013	REV. 0	CHECK	KFK	3/4/2013	FIGURE 3	REVIEW	KFK	3/4/2013
PROJECT No.	103-47722	FILE No.	10347722_0010																						
DESIGN	KFK	1/16/2011	SCALE: AS SHOWN																						
GIS	NRL	3/4/2013	REV. 0																						
CHECK	KFK	3/4/2013	FIGURE 3																						
REVIEW	KFK	3/4/2013																							

Document Path:

***Environmental and Land Use Information:
Supplemental Information***

Potential Site #1: Babcock Ranch

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LEGEND


 Babcock Ranch Solar



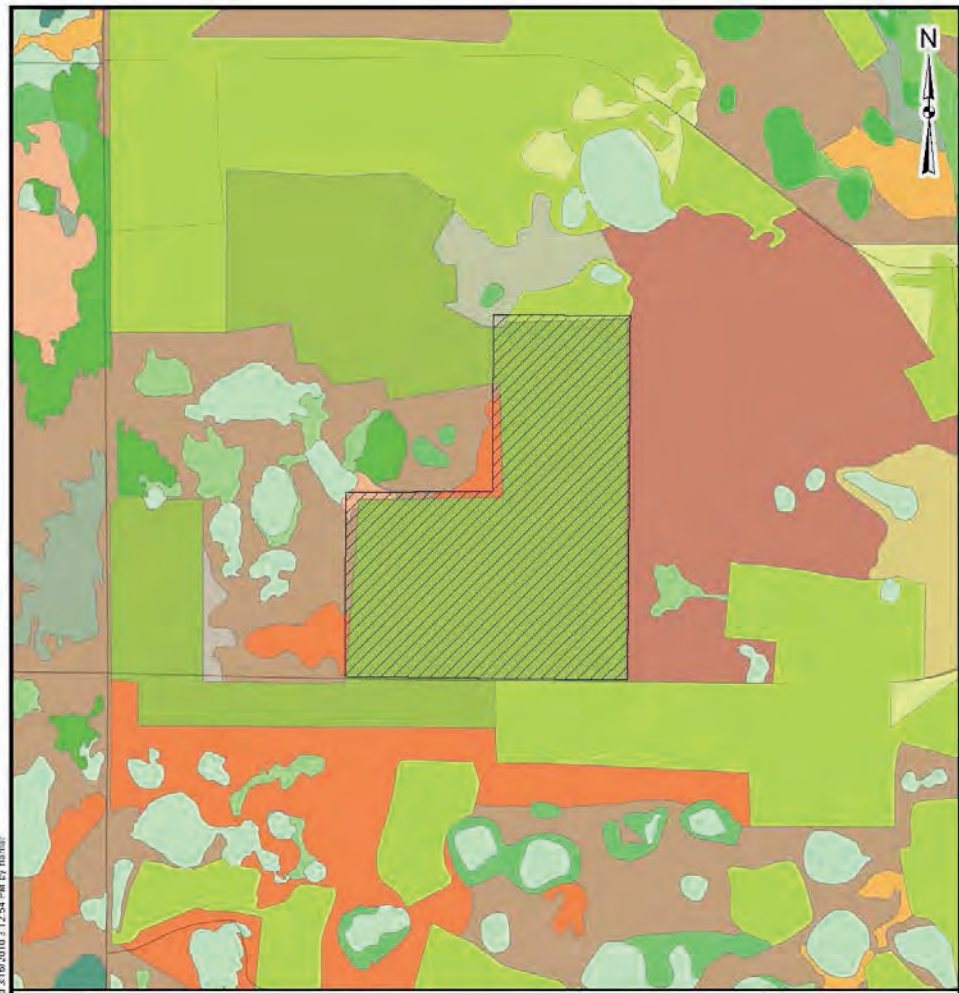
REFERENCES

1. Babcock Ranch Solar, FPL, 2011



REV	DATE	DESC	REVISION DESCRIPTION	DRG	DATE	BY	
PROJECT							
FPL BABCOCK RANCH SOLAR							
TITLE							
USGS LOCATION MAP							
		PROJECT No.	103-87722	FILE No.	10387722_018		
		DESIGN	WFA	3/18/2011	SCALE:	AS SHOWN	REV: 0
		DWG	NRL	2/22/2011			
		CHECK	XXX	8/10/2008			
REVIEW	XXX	8/19/2008					
FIGURE 1							

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LEGEND

Roads	441 - Coniferous Plantations
Babcock Ranch Solar	443 - Forest Regeneration Areas
211 - Improved Pastures	525 - Marshy Lakes
212 - Unimproved Pastures	617 - Mixed Wetland Hardwoods
213 - Woodland Pastures	621 - Cypress
215 - Field Crops	624 - Cypress Pine-Cabbage Palm
310 - Herbaceous (Dry Prairie)	625 - Hydric Pine Flatwoods
320 - Shrub and Brushland	630 - Wetland Forested Mixed
321 - Palmetto Prairies	641 - Freshwater Marshes
330 - Mixed Rangeland	643 - Wet Prairies
411 - Pine Flatwoods	

REFERENCES

- 1 Babcock Ranch Solar, FPL, 2011
- 2 Land Use, SPWMD FLUCCS, 2004-05

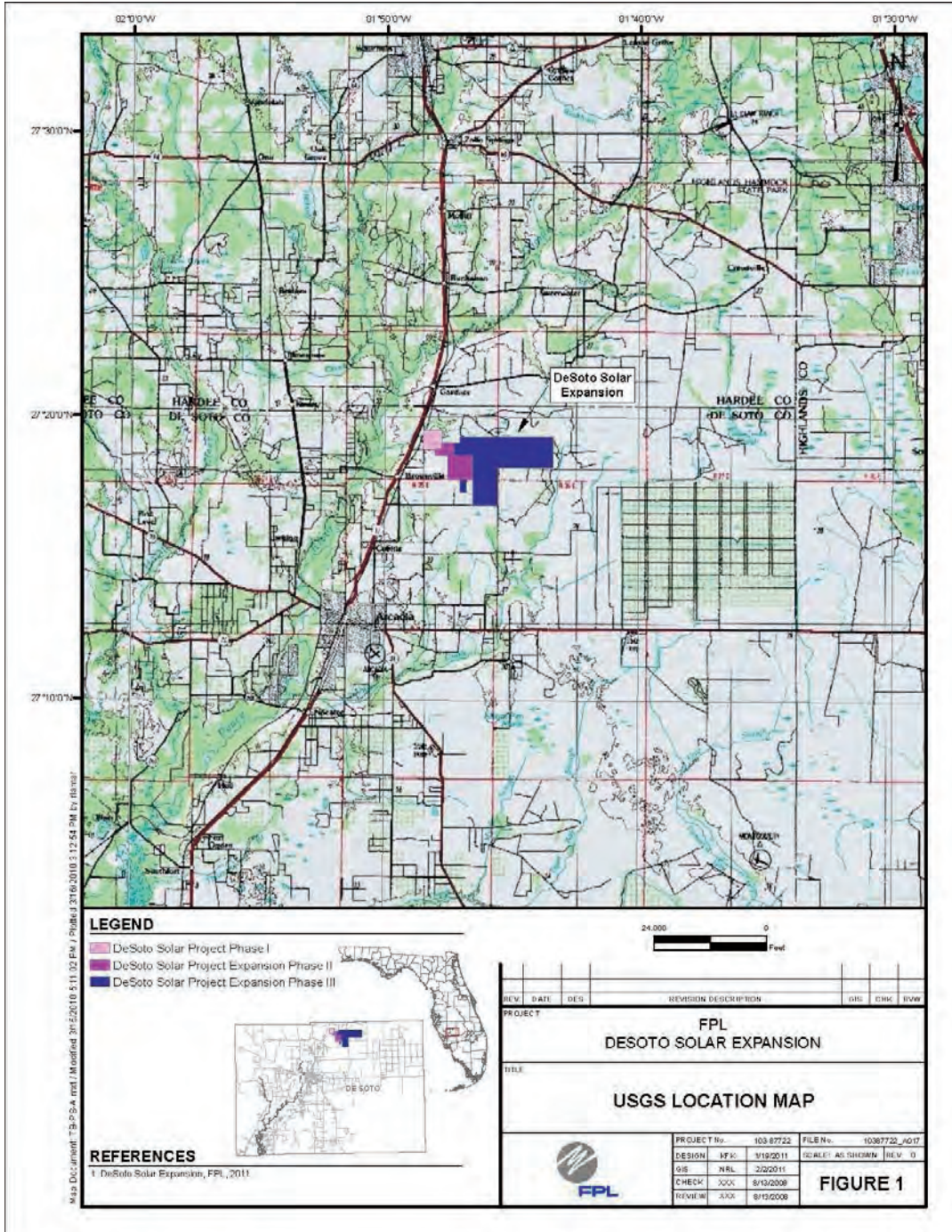


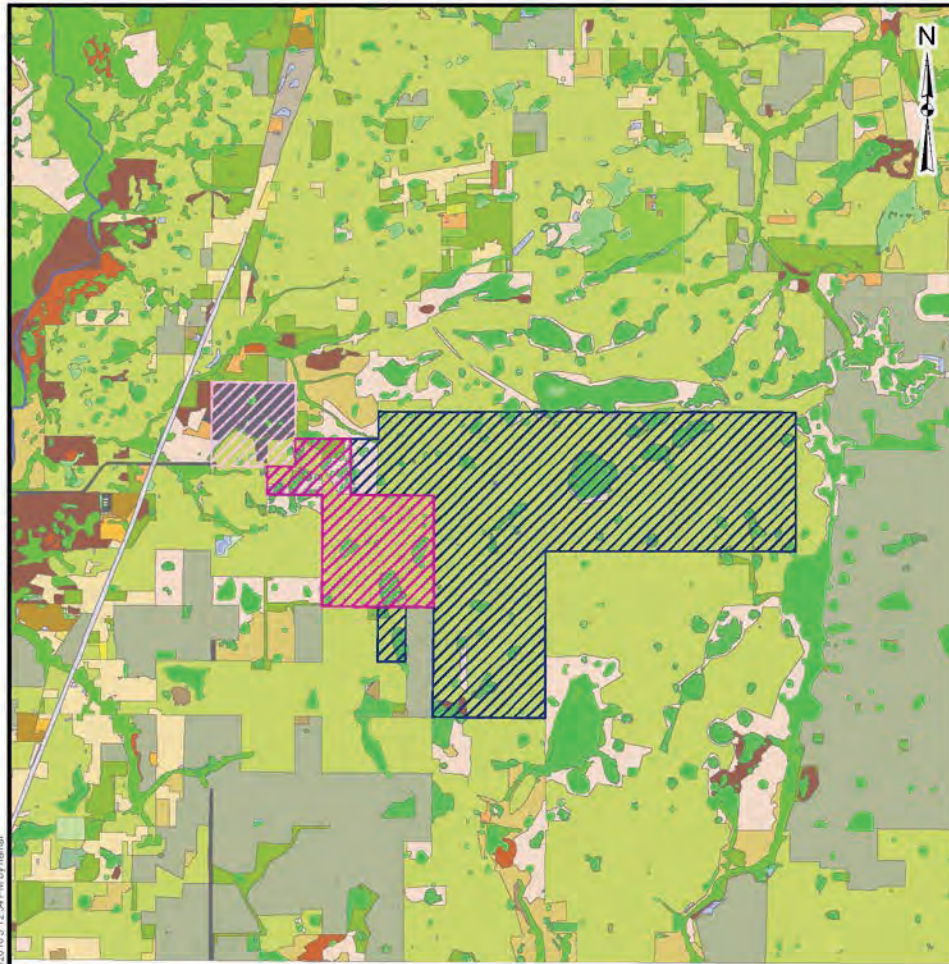
REV	DATE	DES	REVISION DESCRIPTION	DIS	CHK	HOW
PROJECT						
FPL BABCOCK RANCH SOLAR						
TITLE						
LAND USE / LAND COVER						
		PROJECT No.	103-87722	FILE No.	10387722_028	
		DESIGN	MPK	3/18/2011	SCALE:	AS SHOWN
		DWG	NRL	2/22/2011	REV	0
		CHECK	JXX	8/13/2008	FIGURE 2	
REVIEW	JXX	8/13/2008				

***Environmental and Land Use Information:
Supplemental Information***

Potential Site #2: Desoto Solar Expansion

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LEGEND

	DeSoto Solar Project Phase I		330 - MIXED PRAIRIELAND
	DeSoto Solar Project Expansion Phase II		410 - UPLAND CONIFEROUS FOREST
	DeSoto Solar Project Expansion Phase III		414 - PINE FLATWOODS
	110 - RESIDENTIAL LOW DENSITY - 2 DWELLING UNIT		434 - HARDWOOD CONIFER MIXED
	120 - RESIDENTIAL MED DENSITY 10-15 DWELLING UNIT		440 - TREE PLANTATIONS
	130 - RESIDENTIAL HIGH DENSITY		510 - STREAMS AND WATERWAYS
	140 - COMMERCIAL AND SERVICES		520 - LAKES
	150 - INDUSTRIAL		520 - WETLANDS
	181 - GOLF COURSES		615 - STARBU AND LAKE SWAMPS (BOTTOMLAND)
	180 - OPENLAND		620 - WETLAND CONIFEROUS FORESTS
	210 - CROPLAND AND PASTURELAND		621 - CROPPED
	220 - TREE CROPS		630 - WETLAND FORESTED MIXED
	240 - BURNED AND WINDBROGS		641 - FRESHWATER MARSHES
	250 - SPECIALTY FARMS		643 - WET PRAIRIES
	291 - TROPICAL FISH FARMS		644 - EMERGENT AQUATIC VEGETATION
	260 - OTHER OPENLANDS-RURAL		650 - INTERMEDIATE PONDS
	310 - HERBACEOUS		810 - TRANSPORTATION
	320 - SHRUB AND BRUSHLAND		820 - UTILITIES

REFERENCES

- 1 DeSoto Solar Expansion, FPL, 2011
- 2 Land Use, SWFWMD, 2009.

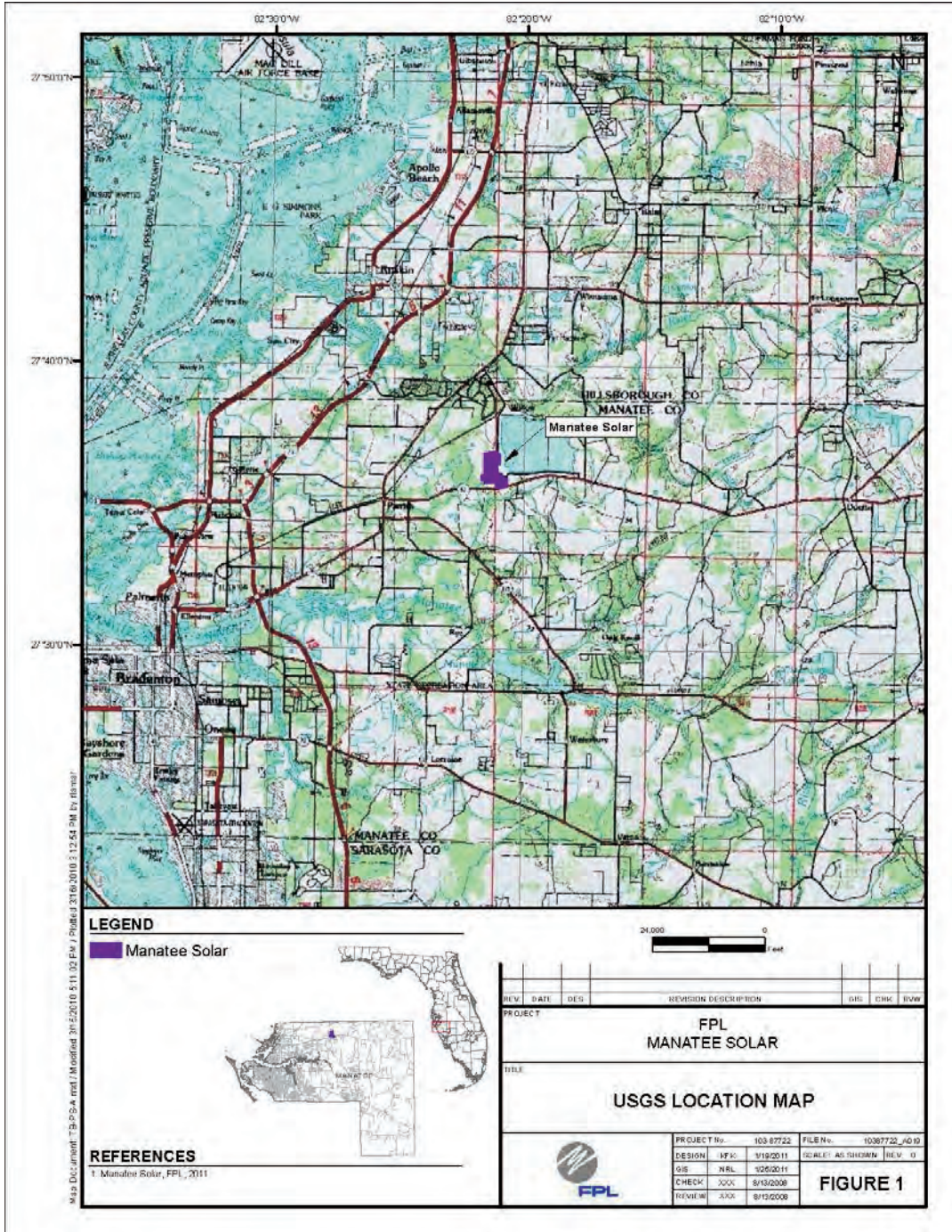


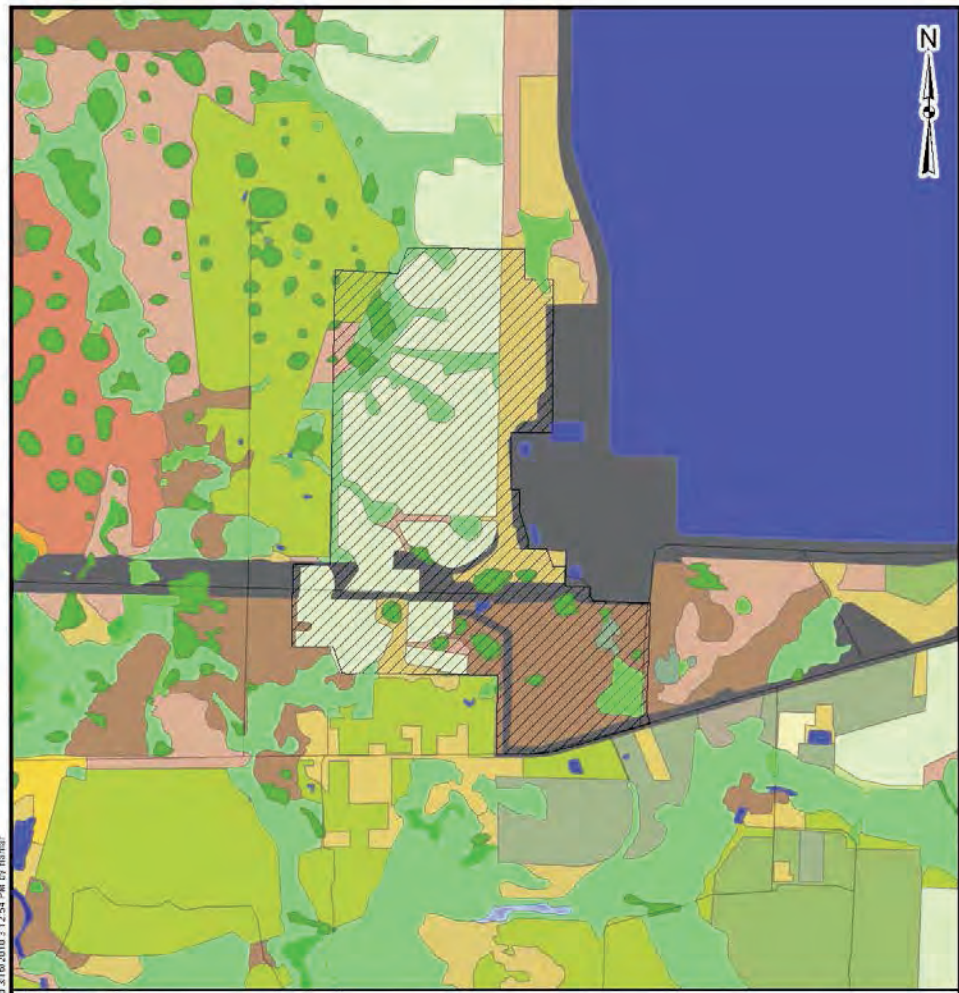
REV.	DATE	DES.	REVISION DESCRIPTION	GIS	CHK.	R/W
PROJECT: FPL DESOTO SOLAR EXPANSION						
TITLE: LAND USE / LAND COVER						
PROJECT No. 103-87722		FILE No. 10387722_409				
DESIGN	EFK	1/19/2011	SCALE: AS SHOWN	REV.	0	
GIS	NRL	2/2/2011				
CHECK	3XX	8/13/2009	FIGURE 2			
REVIEW	333	8/13/2009				

***Environmental and Land Use Information:
Supplemental Information***

Potential Site #3: Manatee Plant Site

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LEGEND

ROAD	411 - PINE FLATWOODS
Manatee 100	454 - HARDWOOD CONIFER MIXED
110 - RESIDENTIAL LOW DENSITY 1-2 DWELLING UNIT	440 - TREE PLANTATIONS
120 - RESIDENTIAL MED DENSITY 2-5 DWELLING UNIT	510 - STREAMS AND WATERWAYS
150 - INDUSTRIAL	520 - LAKES
160 - OPEN LAND	530 - RESERVOIRS
210 - CROPLAND AND PASTURELAND	610 - STREAM AND LAKE SWAMPS (BOTTOMLAND)
214 - ROW CROPS	621 - CYPRESS
220 - TREE CROPS	720 - WETLAND FORESTED MIXED
240 - NURSERIES AND VINEYARDS	641 - FRESHWATER MARSHES
260 - OTHER OPEN LANDS - RURAL	642 - WET PRAIRIES
300 - SHRUB AND BRUSHLAND	644 - EMERGENT AQUATIC VEGETATION
320 - MIXED RANGELAND	650 - UTILITIES

REFERENCES

- 1 Manatee Solar, FPL, 2011
- 2 Land Use, SWFWMD, 2009

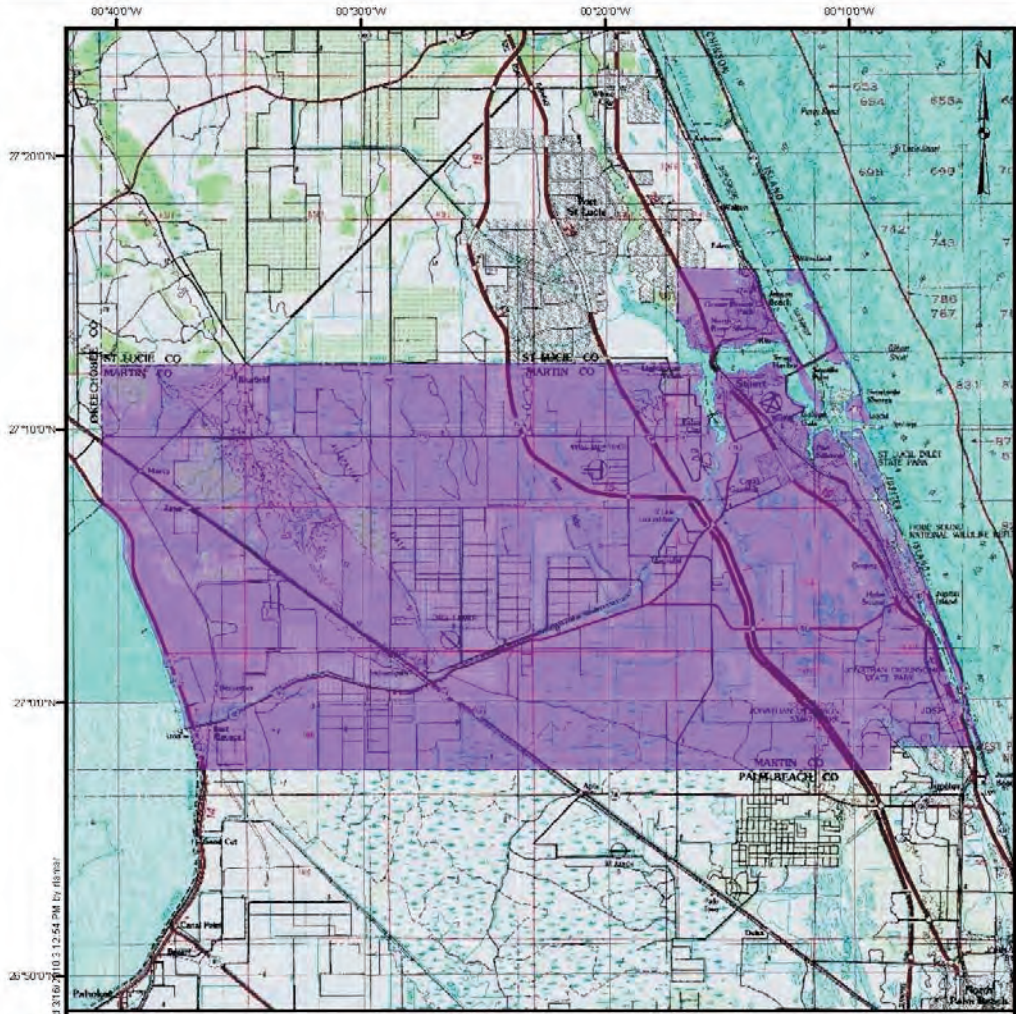


REV	DATE	DES	REVISION DESCRIPTION	DIS	CHK	APP
PROJECT						
FPL MANATEE SOLAR						
TITLE						
LAND USE / LAND COVER						
		PROJECT No.	103-87722	FILE No.	10387722_031	
		DESIGN	MPK	3/18/2011	SCALE:	AS SHOWN
		GIS	NRL	3/26/2011	REV:	0
		CHECK	JXX	8/13/2008	FIGURE 2	
REVIEW	JXX	8/13/2008				

***Environmental and Land Use Information:
Supplemental Information***

Potential Site #4: Martin County

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LEGEND

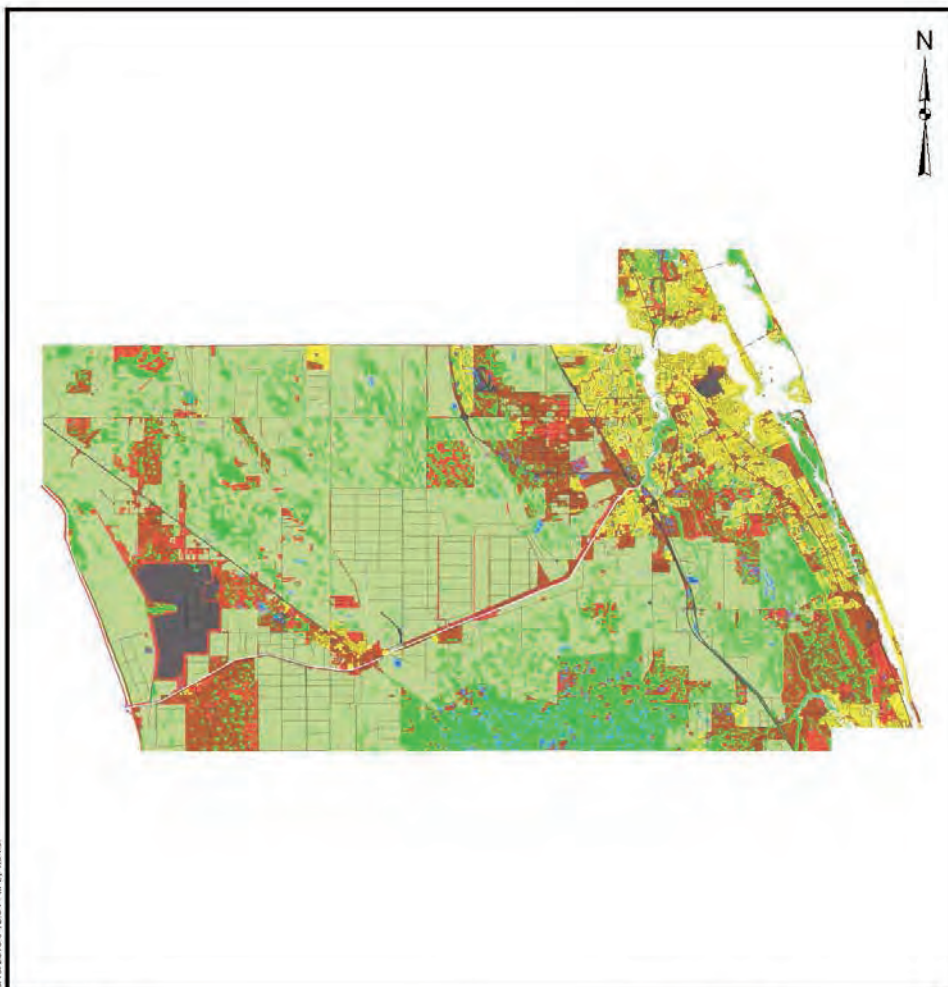
Martin County

REFERENCES

1. Martin County, FPL, 2011

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1 mi

REV	DATE	DES	REVISION DESCRIPTION	DRG	CHK	ENGR
PROJECT FPL MARTIN COUNTY						
TITLE USGS LOCATION MAP						
		PROJECT No. 103-87722	FILE No. 10387722_0026			
DESIGN	JFY	1/19/2011	SCALE: AS SHOWN	REV	0	
DRAWN	NFL	1/25/2011				
CHECK	JCC	8/13/2008				
VIEWED	XXX	8/13/2008				
FIGURE 1						



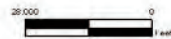
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LEGEND

- Roads
- 100 - URBAN AND BUILT-UP
- 200 - AGRICULTURE
- 300 - RANGELAND
- 400 - UPLAND FORESTS
- 500 - WATER
- 600 - WETLANDS
- 700 - BARREN LAND
- 800 - TRANSPORTATION, COMMUNICATION AND UTILITIES

REFERENCES

- 1. Martin County, FPL, 2011
- 2. Land Use, SFWMD, 2004-05

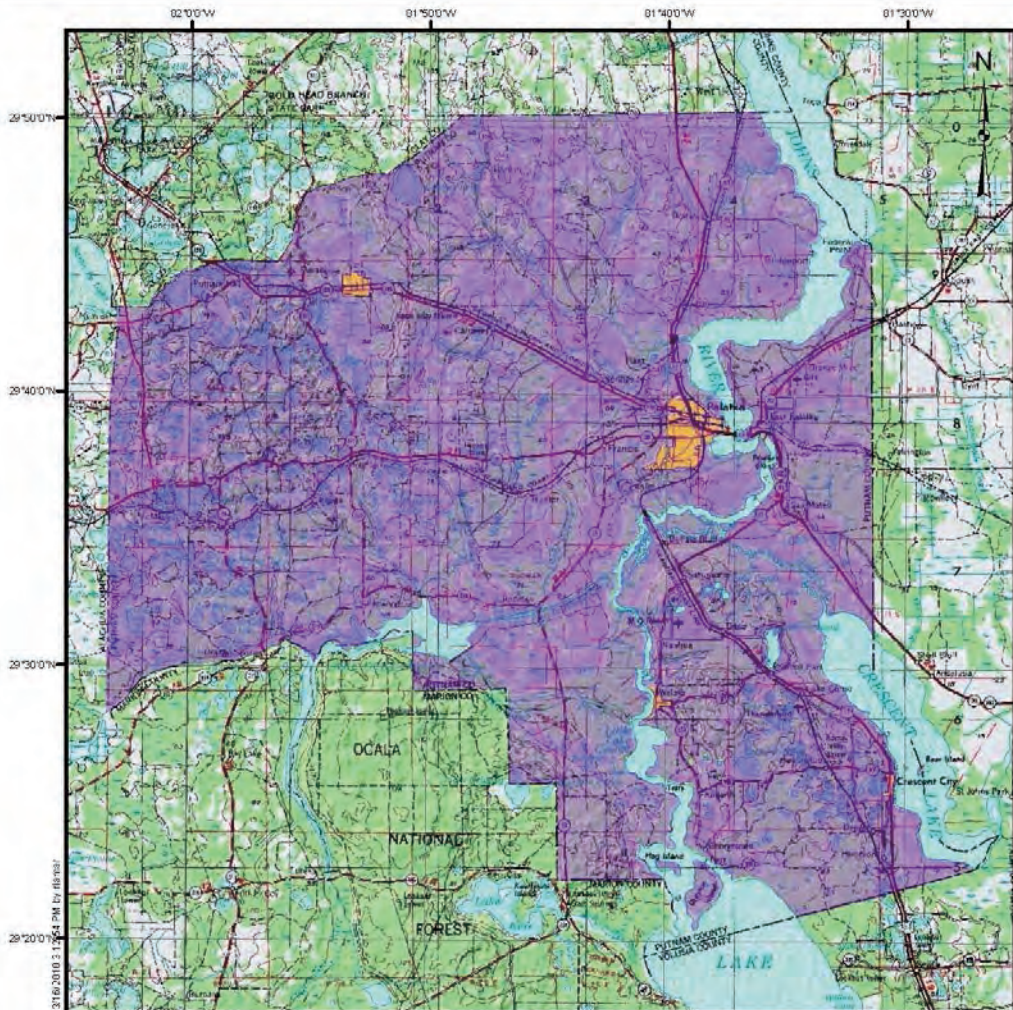


REV	DATE	DES.	REVISION DESCRIPTION	CHKD	CHKD	DATE	
PROJECT							
FPL MARTIN COUNTY							
TITLE							
LAND USE / LAND COVER							
		PROJECT No.	103-87722	FILE No.	10387722_A036		
		DESIGN	JFY	1/19/2011	SCALE:	AS SHOWN	
		DRAWN	NFL	1/26/2011	REV	0	
		CHECK	JCC	8/13/2008	FIGURE 2		
VIEWER	AAA	8/13/2008					

***Environmental and Land Use Information:
Supplemental Information***

Potential Site #5: Putnam County

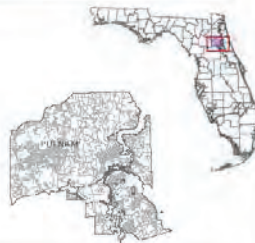
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LEGEND

Putnam County



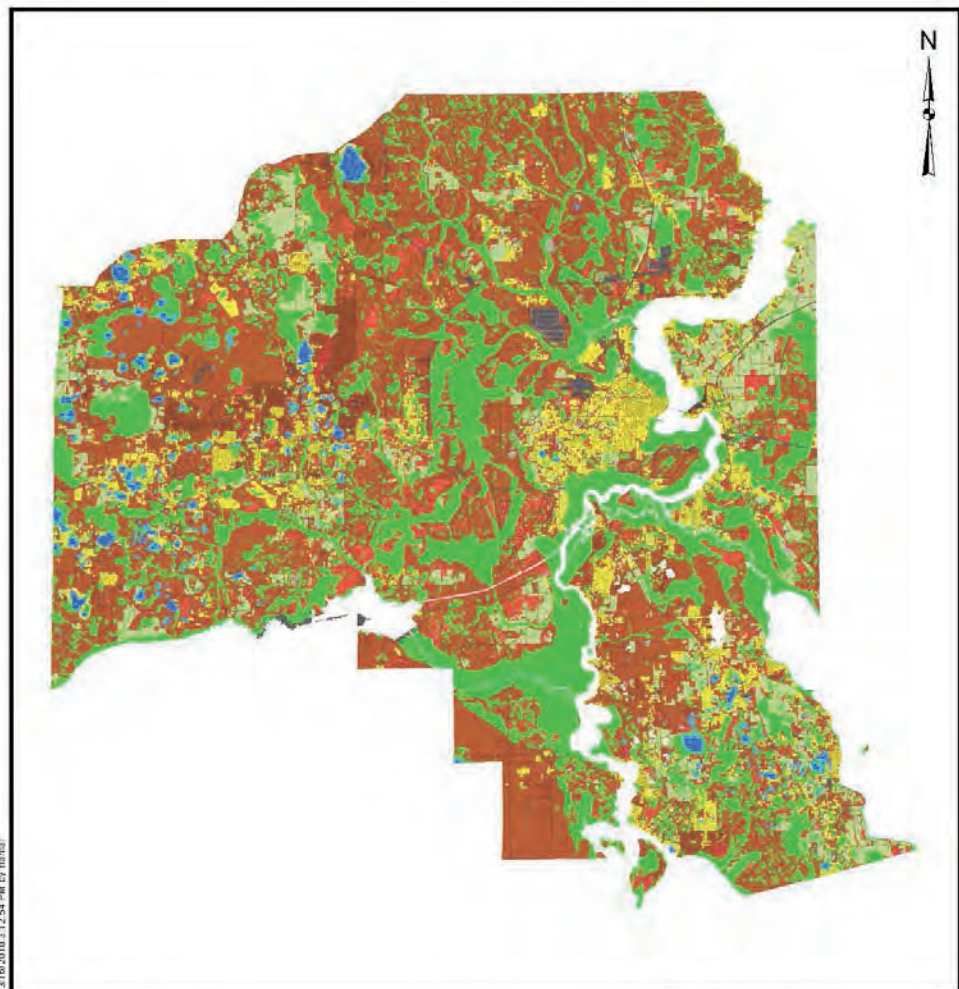
REFERENCES

1. Putnam County, FPI, 2011



REV	DATE	DES.	REVISION DESCRIPTION	DATE	CHK.	BY	
PROJECT							
FPL PUTNAM COUNTY							
TITLE							
USGS LOCATION MAP							
		PROJECT No.	103-87722	FILE No.	10387722_A021		
		DESIGN	JFY	019/2011	SCALE: AS SHOWN	REV: 0	
		DRAWN	NFL	1/25/2011			
		CHECK	JCC	8/13/2008			
VIEW	XXX	8/13/2008					

FIGURE 1



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LEGEND

—	Roads
■	100 - URBAN AND BUILT UP
■	200 - AGRICULTURE
■	300 - RANGELAND
■	400 - UPLAND FORESTS
■	500 - WATER
■	600 - WETLANDS
■	700 - BARREN LAND
■	800 - TRANSPORTATION, COMMUNICATION AND UTILITIES

REFERENCES

1	Putnam County, FPL, 2011
2	Land Use, SJRWMD, 2004

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CHAPTER V

Other Planning Assumptions & Information

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Introduction

The Florida Public Service Commission (FPSC), in Docket No. 960111-EU, specified certain information that was to be included in an electric utility's Ten Year Power Plant Site Plan filing. Among this specified information was a group of 12 items listed under a heading entitled "Other Planning Assumptions and Information." These 12 items basically concern specific aspects of a utility's resource planning work. The FPSC requested a discussion or a description of each of these items.

These 12 items are addressed individually below as separate "Discussion Items".

Discussion Item # 1: Describe how any transmission constraints were modeled and explain the impacts on the plan. Discuss any plans for alleviating any transmission constraints.

FPL's resource planning work considers two types of transmission limitations/constraints: external limitations and internal limitations. External limitations deal with FPL's ties to its neighboring systems. Internal limitations deal with the flow of electricity within the FPL system.

The external limitations are important since they affect the development of assumptions for the amount of external assistance that is available to the FPL system as well as the amount and price of economy energy purchases. Therefore, these external limitations are incorporated both in the reliability analysis and economic analysis aspects of resource planning. The amount of external assistance which is assumed to be available is based on the projected transfer capability to FPL from outside its system as well as historical levels of available assistance. In the loss of load probability (LOLP) portion of its reliability analyses, FPL models this amount of external assistance as an additional generator within FPL's system which provides capacity in all but the peak load months. The assumed amount and price of economy energy are based on historical values and projections from production costing models.

Internal transmission limitations are addressed by identifying potential geographic locations for potential new generating units that minimize adverse impacts to the flow of electricity within FPL's system. The internal transmission limitations are also addressed by developing the direct costs for siting new units at different locations, by evaluating the cost impacts created by the new unit/unit location combination on the operation of existing units in the FPL system, and/or by evaluating the costs of transmission additions that may be needed to address regional concerns regarding an imbalance between load and generation in a given region. Both of these site- and system-related

transmission costs are developed for each different unit/unit location option or groups of options. In addition, transfer limits for capacity and energy that can be imported into the Southeastern Florida region (Miami-Dade and Broward Counties) of FPL's system are also developed for use in FPL's production costing analyses. (A further discussion of the Southeastern Florida region of FPL's system, and the need to maintain a regional balance between generation and transmission contributions to meet regional load, is found in Chapter III.)

FPL's annual transmission planning work determines transmission additions needed to address limitations and to maintain/enhance system reliability. FPL's planned transmission facilities to interconnect and integrate generating units in FPL's resource plans, including those transmission facilities that must be certified under the Transmission Line Siting Act, are presented in Chapter III.

Discussion Item # 2: Discuss the extent to which the overall economics of the plan were analyzed. Discuss how the plan is determined to be cost-effective. Discuss any changes in the generation expansion plan as a result of sensitivity tests to the base case load forecast.

FPL typically performs economic analyses of competing resource plans using as an economic criterion FPL's levelized system average electric rates (i.e., a Rate Impact Measure or RIM approach). In addition, for analyses in which DSM levels are not changed, FPL uses the equivalent criterion of the cumulative present value of revenue requirements for the FPL system.⁹

The load forecast that is presented in FPL's 2013 Site Plan was developed in February 2013. The only load forecast sensitivities analyzed during 2012/early 2013 were high load forecast sensitivities developed solely to analyze the quality of FPL's future reserves and the projected frequency at which load control might be implemented. These analyses are on-going.

Discussion Item # 3: Explain and discuss the assumptions used to derive the base case fuel forecast. Explain the extent to which the utility tested the sensitivity of the base case plan to high and low fuel price scenarios. If high and low fuel price sensitivities were performed, explain the changes made to the base case fuel price forecast to generate the

⁹ FPL's basic approach in its resource planning work is to base decisions on a lowest electric rate basis. However, when DSM levels are considered a "given" in the analysis (i.e., when only new generating options are considered), the lowest electric rate basis approach and the lowest system cumulative present value of revenue requirements basis approach, yield identical results in terms of which resource options are more economic. In such cases FPL evaluates resource options on the simpler-to-calculate (but equivalent) lowest cumulative present value system revenue requirements basis.

sensitivities. If high and low fuel price scenarios were performed as part of the planning process, discuss the resulting changes, if any, in the generation expansion plan under the high and low fuel price scenario. If high and low fuel price sensitivities were not evaluated, describe how the base case plan is tested for sensitivity to varying fuel prices.

The basic assumptions FPL used in deriving its fuel price forecasts are discussed in Chapter III of this document. FPL used three fuel cost, and three environmental compliance cost, forecasts in analyses supporting its 2012 nuclear cost recovery filing.

The high and low fuel cost forecasts are derived from a calculation of the historical volatility of the 12-month forward price for one year ahead. From this range of volatility, a reasonable value from the high end of the range is applied to the medium fuel cost forecast to develop a high fuel cost forecast. Similarly, a reasonable value from the low end of the range is applied to the medium fuel cost forecast to develop a low fuel cost forecast.

The resource plan presented in this Site Plan is based, in part, on those prior analyses. For that reason, this resource plan has not been further tested for different fuel cost forecasts.

Discussion Item # 4: Describe how the sensitivity of the plan was tested with respect to holding the differential between oil/gas and coal constant over the planning horizon.

As described above in the answer to Discussion Item # 3, FPL used up to three fuel cost forecasts in its 2012/early 2013 resource planning analyses. While these forecasts did not represent a constant cost differential between oil/gas and coal, a variety of fuel cost differentials were represented in these forecasts.

Discussion Item # 5: Describe how generating unit performance was modeled in the planning process.

The performance of existing generating units on FPL's system was modeled using current projections for scheduled outages, unplanned outages, capacity output ratings, and heat rate

information. Schedule 1 in Chapter I and Schedule 8 in Chapter III present the current and projected capacity output ratings of FPL's existing units. The values used for outages and heat rates are generally consistent with the values FPL has used in planning studies in recent years.

In regard to new unit performance, FPL utilized current projections for the capital costs, fixed and variable operating & maintenance costs, capital replacement costs, construction schedules, heat rates, and capacity ratings for all construction options in its resource planning work. A summary of this information for the new capacity options FPL currently projects to add over the reporting horizon for this document is presented on the Schedule 9 forms in Chapter III.

Discussion Item # 6: Describe and discuss the financial assumptions used in the planning process. Discuss how the sensitivity of the plan was tested with respect to varying financial assumptions.

During much of its 2012 resource planning work, FPL's financial assumptions were: i) a capital structure of 40.88% debt and 59.12% equity; (ii) a 5.50% cost of debt; (iii) a 10.0% return on equity; and (iv) an after-tax discount rate of 7.29%. Starting in late 2012, and continuing in 2013, FPL's financial assumptions have been based on the outcome of FPL's most recent base rate case and include: i) a capital structure of 40.38% debt and 59.62% equity; (ii) a 4.79% cost of debt; (iii) a 10.5% return on equity; and (iv) an after-tax discount rate of 7.45%. No sensitivities of these financial assumptions were used in FPL's 2012/early 2013 resource planning work.

Discussion Item # 7: Describe in detail the electric utility's Integrated Resource Planning process. Discuss whether the optimization was based on revenue requirements, rates, or total resource cost.

FPL's integrated resource planning (IRP) process is described in detail in Chapter III of this document.

The standard basis for comparing the economics of competing resource plans in FPL's basic IRP process is the impact of the plans on FPL's electricity rate levels with the objective generally being to minimize FPL's projected levelized system average electric rate (i.e., a Rate Impact Measure or RIM approach). As discussed in response to Discussion Item # 2, both the electricity rate perspective and the cumulative present value of system revenue requirement perspective are identical yield identical results in terms of which resource options are more economic when DSM levels are unchanged between competing resource plans. Therefore, in planning work in which

DSM levels were unchanged, the equivalent, but simpler-to-calculate, cumulative present value of revenue requirements perspective was utilized.

Discussion Item # 8: Define and discuss the electric utility’s generation and transmission reliability criteria.

FPL uses two system reliability criteria in its resource planning work that addresses generation, purchase, and DSM options. One of these is a minimum 20% Summer and Winter reserve margin. The other reliability criterion is a maximum of 0.1 days per year loss-of-load-probability (LOLP). These two reliability criteria are discussed in Chapter III of this document.

In regard to transmission reliability analysis work, FPL has adopted transmission planning criteria that are consistent with the planning criteria established by the Florida Reliability Coordinating Council (FRCC). The FRCC has adopted transmission planning criteria that are consistent with the Reliability Standards established by the North American Electric Reliability Council (NERC). The *NERC Reliability Standards* are available on the internet site (<http://www.nerc.com/>).

In addition, FPL has developed a *Facility Connection Requirements* (FCR) document as well as a *Facility Rating Methodology* document that are also available on the internet under the FPL OATT Documents directory at <https://www.oatioasis.com/FPL/index.html>.

Generally, FPL limits its transmission facilities to 100% of the applicable thermal rating. The normal and contingency voltage criteria for FPL stations are provided below:

<u>Voltage Level (kV)</u>	<u>Normal/Contingency</u>	
	<u>Vmin (p.u.)</u>	<u>Vmax (p.u.)</u>
69, 115, 138	0.95/0.95	1.05/1.07
230	0.95/0.95	1.06/1.07
500	0.95/0.95	1.07/1.09
Turkey Point (*)	1.01/1.01	1.06/1.06
St. Lucie (*)	1.00/1.00	1.06/1.06

(*) Voltage range criteria for FPL’s Nuclear Power Plants

There may be isolated cases for which FPL may have determined that it is acceptable to deviate from the general criteria stated above. There are several factors that could influence these criteria,

such as the overall number of potential customers that may be impacted, the probability of an outage actually occurring, or transmission system performance, as well as others.

Discussion Item # 9: Discuss how the electric utility verifies the durability of energy savings for its DSM programs.

The projected impacts of FPL's DSM programs on demand and energy consumption are revised periodically. Engineering models, calibrated with current field-metered data, are updated at regular intervals. Participation trends are tracked for all of FPL's DSM programs in order to adjust impacts each year for changes in the mix of efficiency measures being installed by program participants. For its load management programs, FPL conducts periodic tests of the load control equipment to ensure that the equipment is functioning correctly. These tests, plus actual, non-test load management events, also allows FPL to gauge the MW reduction capabilities of its load management programs on an on-going basis.

Discussion Item # 10: Discuss how strategic concerns are incorporated in the planning process.

The Executive Summary and Chapter III provide a discussion of a variety of system concerns/issues that influence FPL's resource planning process. Please see those chapters for a discussion of those concerns/issues.

In addition to these system concerns/issues, there are other strategic factors FPL typically considers when choosing between resource options. These include the following: (1) technology risk; (2) environmental risk, and (3) site feasibility. The consideration of these factors may include both economic and non-economic aspects.

Technology risk is an assessment of the relative maturity of competing technologies. For example, a prototype technology, which has not achieved general commercial acceptance, has a higher risk than a technology in wide use and, therefore, assuming all else equal, is less desirable.

Environmental risk is an assessment of the relative environmental acceptability of different generating technologies and their associated environmental impacts on the FPL system, including environmental compliance costs. Technologies regarded as more acceptable from an

environmental perspective for FPL's resource plan are those which minimize environmental impacts for the FPL system as a whole through highly efficient fuel use, state of the art environmental controls, generating technologies that do not utilize fossil fuels (such as nuclear and photovoltaics), etc.

Site feasibility assesses a wide range of economic, regulatory, and environmental factors related to successfully developing and operating the specified technology at the site in question. Projects that are more acceptable have sites with few barriers to successful development.

All of these factors play a part in FPL's planning and decision-making, including its decisions to construct capacity or to purchase power.

Discussion Item # 11: Describe the procurement process the electric utility intends to utilize to acquire the additional supply-side resources identified in the electric utility's ten-year site plan.

As shown in this 2013 Site Plan, FPL's resource plan currently projects the following major supply-side resource additions: the completion of the nuclear uprates project, the modernizations at Cape Canaveral, Riviera, and Port Everglades, the upgrading of CTs in numerous CCs throughout FPL's system, the EcoGen PPA, and Turkey Point Unit 6.

In regard to these capacity additions for which a need determination has already been approved, the nuclear uprates and Turkey Point Unit 6, do not lend themselves to a request for proposal (RFP) approach involving bids from third parties who would build new nuclear generation capacity. In addition, nuclear capacity additions are exempted from the Commission's Bid Rule by section 403.519 (4) (c). For these nuclear projects, FPL's procurement activities are conducted to ensure the best combination of quality and cost for the delivered products. Furthermore, the modernization projects at Cape Canaveral, Riviera, and Port Everglades received Commission waivers from the Bid Rule due to attributes specific to modernization projects (such as use of existing land, water, transmission, etc.) plus other economic benefits to FPL's customers. These waivers from the Bid Rule were granted in Order No. PSC-08-0591-FOF-EI for Cape Canaveral and Riviera and in Order No. PSC-11-0360-PAA-EI for Port Everglades.

CT upgrades are currently taking place at various CC units throughout the FPL system. FPL was approached by the original equipment manufacturer (OEM) of the CTs regarding the possibility of upgrading these units. Following negotiations with the OEM, and economic analyses that showed

that upgrading was cost-effective for FPL's customers, the decision was made to proceed with the CT upgrades. That process is underway and is scheduled to be completed in 2015.

The EcoGen PPA was the result of negotiations between EcoGen and FPL.

Identification of self-build options, beyond those units already approved by the FPSC and Governor and Siting Board or units for which FPL may be then seeking approval, in future FPL Site Plans will not be an indication that FPL has pre-judged any capacity solicitation it may conduct. The identification of future generating units is required of FPL in its Site Plan filings and represents those alternatives that appear to be FPL's best, most cost-effective self-build options at the time. FPL reserves the right to refine its planning analyses and to identify other self-build options. Such refined analyses have the potential to yield a variety of self-build options, some of which might not require an RFP. If an RFP is issued for Supply options, FPL reserves the right to choose the best alternative for its customers, even if that option is not an FPL self-build option.

Discussion Item # 12: Provide the transmission construction and upgrade plans for electric utility system lines that must be certified under the Transmission Line Siting Act (403.52 – 403.536, F. S.) during the planning horizon. Also, provide the rationale for any new or upgraded line.

- (1) FPL has identified the need for a new 230 kV transmission line that required certification under the Transmission Line Siting Act which was issued in April 2006. The new line is to be completed in two phases connecting FPL's St. Johns Substation to FPL's Pringle Substation (shown on Table III.E.1 in Chapter III). Phase 1 was completed in May 2009 and consisted of a new line connecting Pringle to a new Pellicer Substation. Phase 2 is planned to connect St. Johns to Pellicer and is scheduled to be completed by December 2017. The construction of this line is necessary to serve existing and future customers in the Flagler and St. Johns areas in a reliable and effective manner.
- (2) FPL has identified the need for a new 230 kV transmission line (by December 2014) that required certification under the Transmission Line Siting Act which was issued on November 2008. The new line will connect FPL's Manatee Substation to FPL's proposed Bob White Substation (also shown on Table III.E.1 in Chapter III). The construction of this line, scheduled to be completed in 2014, is necessary to serve existing and future customers in the Manatee and Sarasota areas in a reliable and effective manner.

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