FPL

P.O. Box 029100, Miami, FL 33102-9100

VIA HAND DELIVERY

ORIGINAL

April 1, 1998

Ms. Blanca S. Bayo
Florida Public Service Commission
Director, Division of Records and Reporting
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Dear Ms. Bayo:

In accordance with Chapter 186 Section 186.801 (Ten Year Site Plans) of the Florida Statutes, enclosed for filing are twenty-five (25) copies of Florida Power & Light Company's Appendix to its Ten Year Power Plant Site Plan. This appendix co tains schedules 1-10, various maps, and other information that Staff has requested in supplemental filings in previous years. This appendix is a supplement to Florida Power & Light Company's Ten Year Site Plan filed on March 23, 1998 as a separate document.

If you have any questions, please do not hesitate to contact me at (305) 552-3643.

Sincerely,

Samuel S. Waters
Director, Regulatory Affairs

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CAF ___ Enclosures
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03767 APR-1 98

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FPL

Appendix

to

Ten Year Power Plant Site Plant

April, 1998

DOCUMENT NUMBER-DATE
03767 APR-1 98
FPSC RECORDS/REPORTING

FPL

Appendix to:

Ten Year Power Plant Site Plan

1998-2007

Submitted To:

Florida Public
Service Commission

Miami, Florida
April, 1998

Table of Contents

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FPL List of Abbreviations Used in FPL Forms		
Reference	*Abbreviation*	*Definition*
Unit Type	IC	Internal Combustion
	NP	Nuclear Power
	ST	Steam Unit
	GT	Gas Turbine
	CT	Combustion Turbine
	CC	Combined Cycle
	BIT	Bituminous Coal
Fuel Type	UR	Uranium
	NG	Natural Gas
	FO6	#4,#5,#6 Oil (Heavy)
	FO2	#1, #2 or Kerosene Oil (Distillate)
	BIT	Bituminous Coal
	NO	None
	ORI	Orimulsion
Fuel Transportation	TK	Truck
	RR	Railroad
	PL	Pipeline
	WA	Water
	No	None
Air Pollution Control	LNB	Low No, Burners
Cooling Method Type	OTS	Once Through - Saline
	CP	Cooling Pond
Unit/Site Status	P	Planned Unit
	A	Generation Unit Capability Increased (Rerated or Relicensed)

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Overview of the Appendix

This document contains additional information for Florida Power & Light Company's (FPL) 1998 Ten Year Power Plant Site Plan (Site Plan) filing to the Florida Public Service Commission (FPSC). The filing consists of two documents: the Site Plan document and this Appendix.

The Site Plan document presents a detailed account of FPL's 1997 planning work and the results of that work. The Site Plan document's information is presented in 4 chapters:

I. Description of Existing Resources
II. Forecast of Electric Power Demand
III. Projection of Incremental Resource Additions
IV. Environmental and Land Use Information

Much of the information contained in the Site Plan document, especially in Chapters II and IV, is presented in a text-only format.

The FPSC specified in Docket No. 960111-EU what information is to be provided in a utility's Site Plan filing beginning with the 1998 filing. Some of this specified information is either new or in a different format compared to what has been requested in previous Site Plan filings.

FPL is presenting much of this specified information in this Appendix. The information presented in the Appendix is in a format which ties back to the 4 chapters in the Site Plan document. The titles for Chapters I-IV in the Appendix are the same as those in the Site Plan document, and the information presented in each of the first 4 chapters of the Appendix directly relates to the subject addressed in the corresponding chapter in the Site Plan document. The information presented in each of the first 4 chapters of the Appendix is in the form of Schedules and Figures.

The information presented in Chapter V of the Appendix pertains to a set of 12 information requests which were included in the FPSC's list of specified information. These 12 information requests basically ask for a discussion or description of various aspects of a utility's resource planning work. Consequently, each of these 12 items is addressed separately in Chapter V as a "Discussion Item".

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I. Description of Existing Resources:

Supplemental Information

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Schedule 1
Exisitng Generating Facilties
As of December 31, 1997

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								Alt					
						Fuel		Fuel	Commercial	Expected	Gen Max	Net Capability 1/	
	Unit		Unit	Fuel		Transport		Days	In-Service	Retirement	Nameplate	Summer	Winter
Plant Name	No.	Location	Type	Pri	Alt	Pri	Alt	Use	Month/Year	Month/Year	KW	MW	MW
Turkey Point		Dade County 27/57S/40E									2,338,100	2,208	2,260
	1		ST	FO6	NG	WA	PL	Unknown	Apr-67	Unknown	402,050	410	411
	2		ST	FO6	NG	WA	PL	Unknown	Apr-68	Unknown	402,050	400	403
	3		NP	UR	No	TK	No	Unknown	Nov-72	Unknown	760,000	693	717
	4		NP	UR	No	TK	No	Unknown	Jun-73	Unknown	760,000	693	717
	1-5		IC	FO2	No	TK	No	Unknown	Dec-67	Unknown	14,000	12	12
Cutler		Dade County 27/55S/40E									236,500	215	217
	5		ST	NG	No	PL	No	Unknown	Nov-54	Unknown	74,500	71	72
	6		ST	NG	No	PL	No	Unknown	Jul-55	Unknown	162,000	144	145
Lauderdale		Broward County 30/50S/42E									1,863,972	1,736	1,982
	4		CC	NG	FO2	PL	PL	Unknown	Oct-57	Unknown	521,250	430	475
	5		CC	NG	FO2	PL	PL	Unknown	Apr-58	Unknown	521,250	430	475
	1-12		GT	NG	FO2	PL	PL	Unknown	Aug-70	Unknown	410,736	438	516
	13-24		GT	NG	FO2	PL	PL	Unknown	Aug-72	Unknown	410,736	438	516
Port Everglades		City of Hollywood 23/50S/42E									1,665,086	1,665	1,749
	1		ST	FO6	NG	WA	PL	Unknown	Jun-60	Unknown	225,250	221	222
	2		ST	FO6	NG	WA	PL	Unknown	Apr-61	Unknown	225,000	222	223
	3		ST	FO6	NG	WA	PL	Unknown	Jul-64	Unknown	402,050	389	391
	4		ST	FO6	NG	WA	PL	Unknown	Apr-65	Unknown	402,050	395	397
	1-12		GT	NG	FO2	PL	PL	Unknown	Aug-71	Unknown	410,736	438	516

1/ These ratings are peak capability

Schedule 1
Exisitng Generating Facilties
As of December 31, 1997

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						Fuel		Alt Fuel	Commercial	Expected	Gen Max	Net Capability 1/	
	Unit		Unit	Fuel		Transport		Days	In-Service	Retirement	Nameplate	Summer	Winter
Plant Name	No.	Location	Type	Pri.	Alt.	Pri.	Alt.	Use	Month/Year	Month/Year	KW	MW	MW
Riviera		City of Riviera Beach 33/42S/43E									620,840	580	584
	3		ST	FO6	NG	WA	PL	Unknown	Jun-62	Unknown	310,420	290	292
	4		ST	FO6	NG	WA	PL	Unknown	Mar-63	Unknown	310,420	290	292
Martin		Martin County 29/29S/38E									2,950,000	2,490	2,634
	1		ST	NG	FO6	PL	PL	Unknown	Dec-80	Unknown	863,000	814	821
	2		ST	NG	FO6	PL	PL	Unknown	Jun-81	Unknown	863,000	816	833
	3		CC	NG	FO2	PL	PL	Unknown	Feb-94	Unknown	612,000	430	490
	4		CC	NG	FO2	PL	PL	Unknown	Apr-94	Unknown	612,000	430	490
St. Lucie		St. Lucie County 16/36S/41E									1,553,000	1,553	1,579
	1		NP	UR	No	TK	No	Unknown	May-76	Unknown	839,000	839	853
	2	2/	NP	UR	No	TK	No	Unknown	Jun-83	Unknown	714,000	714	726
Cape Canaveral		Brevard County 19/24S/36F									804,100	810	816
	1		ST	FO6	NG	WA	PL	Unknown	Apr-65	Unknown	402,050	405	408
	2		ST	FO6	NG	WA	PL	Unknown	May-69	Unknown	402,050	405	408
Sanford		Volusia County 18/19S/30E									1,022,450	926	938
	3		ST	FO6	NG	WA	PL	Unknown	May-59	Unknown	150,250	153	155
	4		ST	FO6	NG	WA	PL	Unknown	Jul-72	Unknown	436,100	383	387
	5		ST	FO6	No	WA	No	Unknown	Jul-73	Unknown	436,100	390	394

1/ These ratings are peak capability

2/ Total capability is 839/853 MW. Capabilities shown represent the company's share of the unit and exclude the Orlando Utilities Commission (OUC) and Florida Municipal Power Agency (FMPA) combined portion of 14.89551%

Schedule 1
Exisitng Generating Facilties
As of December 31, 1997

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						Fuel		Alt Fuel	Commercial	Expected	Gen Max	Net Capability 1/	
Plant Name	Unit No.	Location	Unit Type	Fuel Pri.	Fuel Alt.	Transport Pri.	Transport Alt.	Days Use	In-Service Month/Year	Retirement Month/Year	Nameplate KW	Summer MW	Winter MW
Putnam		Putnam County 16/10S/27E									580,000	498	594
	1		CC	NG	FO2	PL	WA	Unknown	Apr-78	Unknown	290,000	249	297
	2		CC	NG	FO2	PL	WA	Unknown	Aug-77	Unknown	290,000	249	297
Ft. Myers		Lee County 35/43S/25E									1,302,250	1,170	1,327
	1		ST	FO6	No	WA	No	Unknown	Nov-58	Unknown	156,250	147	148
	2		ST	FO6	No	WA	No	Unknown	Jul-69	Unknown	402,000	397	400
	1-12		GT	FO2	No	WA	No	Unknown	May-74	Unknown	744,000	626	779
Manatee		Manatee County 18/33S/20E									1,726,600	1,638	1,652
	1		ST	FO6	No	WA	No	Unknown	Oct-76	Unknown	863,300	819	826
	2		ST	FO6	No	WA	No	Unknown	Dec-77	Unknown	863,300	819	826
St. Johns River Power Park 2/		Duval County 12/15/28E (RPC4)									250,000	260	260
	1		BIT	BIT	No	RR	No	Unknown	Mar-87	Unknown	125,000	130	130
	2		BIT	BIT	No	RR	No	Unknown	May-88	Unknown	125,000	130	130
Scherer3/		Monroe, GA									891,000	667	667
	4		BIT	BIT	No	RR	No	Unknown	Jul-89	Unknown	891,000	667	667
									Total System as of December 31, 1997 =			**16,416**	**17,257**

1/ These ratings are peak capability

2/ The net capability ratings represent Florida Power & Light Company's share of St. Johns River Park Unit No 1 and No. 2, excluding Jacksonville Electric Authority (JEA) share of 80%. SJRPP receives coal by water (WA) in addition to rail.

3/ These ratings represent Florida Power & Light Company's share of Scherer Unit No. 4, adjusted for transmission losses.

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II. Forecast of Electric Power Demand:

Supplemental Information

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Schedule 2.1
History and Forecast of Energy Consumption
And Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Rural & Residential				Commercial		
Year	Population**	Members per Household	GWH	Average*** No. of Customers	Average KWH Consumption Per Customer	GWH	Average*** No. of Customers	Average KWH Consumption Per Customer
1988	5,789,169	2.21	30,083	2,618,088	11,490	23,912	314,358	76,066
1989	5,949,893	2.19	32,308	2,715,989	11,895	25,688	327,277	78,490
1990	6,088,140	2.17	33,488	2,801,209	11,955	26,543	337,133	78,732
1991	6,211,996	2.17	34,617	2,863,198	12,090	27,232	343,834	79,200
1992	6,314,005	2.17	34,198	2,911,807	11,745	26,991	350,269	77,058
1993	6,380,715	2.14	36,360	2,975,479	12,220	28,508	358,679	79,481
1994	6,516,879	2.15	38,716	3,037,629	12,745	29,946	366,409	81,729
1995	6,639,165	2.14	40,556	3,097,192	13,094	30,719	374,005	82,135
1996	6,754,084	2.14	41,302	3,152,625	13,101	31,211	380,860	81,949
1997	6,864,676	2.14	41,849	3,209,298	13,040	32,942	388,906	84,704
1998 *	6,985,689	2.14	43,425	3,268,776	13,285	32,903	397,215	82,834
1999 *	7,106,923	2.13	44,769	3,330,720	13,441	33,915	406,053	83,524
2000 *	7,225,958	2.13	45,804	3,391,839	13,504	34,867	414,715	84,075
2001 *	7,342,057	2.13	46,780	3,451,777	13,552	35,746	423,058	84,494
2002 *	7,455,888	2.12	47,692	3,510,837	13,584	36,565	431,179	84,802
2003 *	7,568,887	2.12	48,651	3,569,692	13,629	37,390	439,264	85,120
2004 *	7,682,533	2.12	49,675	3,629,042	13,688	38,230	447,403	85,449
2005 *	7,797,664	2.11	50,710	3,689,281	13,745	39,104	455,813	85,790
2006 *	7,914,250	2.11	51,797	3,750,400	13,811	40,023	464,457	86,172
2007 *	8,031,254	2.11	52,861	3,811,913	13,867	40,977	473,357	86,567

* Forecasted values for these years reflect the Most Likely of three economic scenarios and are to be used only where singular forecast is required.

** Population represents only the area served by FPL.

*** Average No. of Customers is the annual average of the twelve month values.

Schedule 2.2
History and Forecast of Energy Consumption
And Number of Customers by Customer Class

(1)		(10)	(11)	(12)	(13)	(14)	(15)	(16)
			Industrial		Railroads	Street &	Other Sales to	Total*** Sales to
			Average** No. of	Average KWH Consumption	& Railways	Highway Lighting	Public Authorities	Ultimate Consumers
Year		GWH	Customers	Per Customer	GWH	GWH	GWH	GWH
1988		4,132	17,923	230,542	75	310	651	59,163
1989		4,210	17,640	238,662	80	323	692	63,301
1990		4,065	16,657	244,044	82	331	712	65,221
1991		4,090	15,348	266,493	81	345	733	67,098
1992		4,054	14,788	274,135	77	353	721	66,393
1993		3,889	14,866	261,602	79	330	665	69,830
1994		3,845	15,568	246,658	85	353	684	73,608
1995		3,883	15,140	256,481	84	358	648	76,248
1996		3,792	14,783	256,515	83	368	577	77,334
1997		3,894	14,761	263,830	84	383	702	79,854
1998	*	3,348	14,940	257,564	88	389	636	81,289
1999	*	3,874	15,092	256,692	88	399	644	83,689
2000	*	3,879	15,192	255,332	89	409	650	85,698
2001	*	3,879	15,242	254,494	90	420	655	87,570
2002	*	3,880	15,254	254,360	90	430	659	89,316
2003	*	3,886	15,256	254,719	90	436	659	91,112
2004	*	3,891	15,253	255,097	90	442	659	92,987
2005	*	3,892	15,244	255,314	90	449	659	94,904
2006	*	3,896	15,230	255,811	90	456	659	96,921
2007	*	3,905	15,219	256,587	90	462	659	98,954

*These Forecasted values reflect the Most Likely of three economic scenarios and are to be used only where a singular forecast is required.
**Average No.of Customers is the annual average of the twelve month values.
***GWH=Column 4 + Column 7 + Column 10 + Column 13 + Column 14 + Column 15.

Schedule 2.3
History and Forecast of Energy Consumption
And Number of Customers by Customer Class

(1)		(17)	(18)	(19)	(20)	(21)
Year		Sales for Resale GWH	Utility Use & Losses GWH	Net*** Energy For Load GWH	Other Customers**	Total Average**** Number of Customers
1988		729	4,824	64,716	3,294	2,953,663
1989		854	5,800	69,956	3,530	3,064,436
1990		882	4,926	71,029	3,819	3,158,817
1991		716	5,346	73,160	4,076	3,226,455
1992		702	6,002	73,097	4,374	3,281,238
1993		958	4,987	75,776	3,086	3,352,110
1994		1,400	5,368	80,377	2,560	3,422,187
1995		1,437	6,277	83,962	2,460	3,488,796
1996		1,353	5,984	84,671	2,480	3,550,748
1997		1,228	5,770	86,852	2,520	3,615,485
1998	*	1,357	6,229	88,875	2,551	3,683,482
1999	*	1,053	6,387	91,129	2,591	3,754,456
2000	*	1,057	6,539	93,294	2,632	3,824,378
2001	*	1,080	6,681	95,331	2,671	3,892,748
2002	*	1,104	6,815	97,235	2,710	3,959,980
2003	*	1,133	6,952	99,197	2,748	4,026,960
2004	*	1,164	7,096	101,247	2,788	4,094,486
2005	*	1,199	7,243	103,346	2,828	4,163,166
2006	*	1,237	7,395	105,553	2,868	4,232,955
2007	*	1,279	7,554	107,787	2,908	4,303,397

* Forecasted values reflect the Most Likely of the three scenarios and are to be used only where a singular forecast is required.

** Average Number of Customers is the annual average of the twelve month values.

*** GWH = Column 16 + Column 17 + Column 18

**** Total = Column 5 + Column 8 + Column 11 + Column 20

Schedule 3.1
History and Forecast of Summer Peak Demand
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Residential Load Management	Residential Conservation	C/I Load Management	Comm./Ind Conservation	Net Firm Demand
1988	12,382	209	12,173	0	7	44	45	10	12,330
1989	13,425	267	13,158	0	29	76	85	18	13,311
1990	13,754	290	13,464	0	85	110	127	30	13,542
1991	14,123	281	13,842	0	160	121	177	38	13,786
1992	14,661	223	14,438	0	234	151	248	51	14,179
1993	15,266	397	14,869	0	311	182	320	79	14,635
1994	15,179	409	14,770	0	392	220	354	125	14,433
1995	16,172	435	15,737	0	466	259	391	193	15,315
1996	16,064	364	15,700	0	531	339	414	296	15,119
1997	16,613	380	16,233	0	615	440	432	341	15,508
1998	17,086	445	16,641	0	660	79	438	83	15,846
1999	17,172	158	17,014	0	709	122	458	96	15,787
2000	17,504	161	17,343	0	7[illegible]	162	479	126	15,985
2001	17,822	174	17,648	0	79[illegible]	199	482	181	16,168
2002	18,129	206	17,923	0	833	233	485	249	16,329
2003	18,469	239	18,230	0	873	268	488	317	16,523
2004	18,818	272	18,546	0	887	280	489	339	16,823
2005	19,170	304	18,866	0	887	280	489	339	17,175
2006	19,532	338	19,194	0	887	280	489	339	17,537
2007	19,901	372	19,529	0	887	280	489	339	17,906

Historical Values (1988 - 1997):
Cols. (2) - (4) are actual values for historical summer peaks. As such, they incorporate the effects of conservation (Cols. (7&9)), and MAY incorporate the effects of load control IF load control was operated on these peak days. Therefore, Col. (2) represents the actual Net Firm Demand.
Cols. (5) - (9) represent actual DSM capabilities starting from January 1988.
Note that the values for FPL's former Interruptible Rate are incorporated into Col. (8), which also includes CILC and GS-LC.
Col. (10) represents a HYPOTHETICAL "Net Firm Demand" if the load control values had definitely been exercised on the peak. Col. (10) is derived by the formula: (10) = (2) -(6) -(8).

Projected Values (1998 - 2007):
Cols. (2) - (4) represent FPL's forecasted peak w/o incremental conservation or cumulative load control. The effects of conservation implemented prior to 1997 are incorporated into the forecast.
Cols. (5) - (9) represent all incremental conservation and cumulative load control. These values in are projected August values and are based on projections with a 1/97 starting point.
Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by using the formula: (10) = (2) - (5) - (6) - (7) - (8) - (9).

Schedule 3.2
History and Forecast of Winter Peak Demand
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Firm Wholesale	Retail	Interruptible	Residential Load Management	Residential Conservation	Comm./Ind Load Management	Comm./Ind Conservation	Net Firm Demand
1987/88	12,372	379	11,993	0	1	38	0	10	12,371
1988/89	12,876	417	12,459	0	9	68	68	17	12,799
1989/90	13,988	648	13,340	0	35	101	94	29	13,859
1990/91	11,988	328	11,540	0	102	135	144	32	11,622
1991/92	13,319	105	13,214	0	174	170	193	38	12,952
1992/93	12,964	102	12,862	0	242	195	275	48	12,447
1993/94	12,594	278	12,316	0	317	231	342	67	11,935
1994/95	16,563	635	15,928	0	393	265	360	93	15,810
1995/96	18,096	698	18,096	0	459	310	406	143	17,231
1996/97	16,490	119	16,371	0	731	368	418	154	15,341
1997/98	17,755	454	17,300	0	799	41	431	7	16,477
1998/99	17,845	149	17,696	0	866	85	448	13	16,453
1999/00	18,230	173	18,057	0	925	86	464	19	16,736
2000/01	18,622	191	18,431	0	976	104	464	24	17,054
2001/02	19,027	224	18,803	0	1,028	124	464	36	17,375
2002/03	19,426	258	19,168	0	1,079	144	464	47	17,692
2003/04	19,823	292	19,531	0	1,127	163	464	58	18,011
2004/05	20,223	325	19,898	0	1,127	163	464	58	18,411
2005/06	20,630	359	20,271	0	1,127	163	464	58	18,818
2006/07	21,044	394	20,650	0	1,127	163	464	58	19,232

Historical Values (1988 - 1997):

Cols. (2) - (4) are actual values for historical winter peaks. As such, they incorporate the effects of conservation (Cols. (7&9)), and MAY incorporate the effects of load control IF load control was operated on these peak days. Therefore, Col. (2) represents the actual Net Firm Demand.

Cols. (5) - (9) represent actual DSM capabilities starting from January 1988.

Note that the values for FPL's former Interruptible Rate are incorporated into Col. (8), which also includes CILC and GS - LC.

Col. (10) represents a HYPOTHETICAL "Net Firm Demand" if the load control values had definitely been exercised on the peak. Col. (10) is derived by the formula: (10) = (2) -(6) -(8).

Projected Values (1998-2007):

Cols. (2) - (4) represent FPL's forecasted peak w/o incremental conservation or cumulative load control. The effects of conservation implemented prior to 1997

Cols. (5) - (9) represent all incremental conservation and cumulative load control. These values in are projected August values and are based on projections with a 1/97 starting point.

Col. (10) represents a 'Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by using the formula: (10) = (2) - (5) - (6) - (7) - (8) - (9).

Schedule 3.3
History and Forecast of Annual Net Energy for Load - GWH
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	Total	Residential Conservation	Comm./Ind Conservation	Retail	Wholesale	Utility Use & Losses	Net Energy For Load	Load Factor(%)
1988	64,894	122	56	64,165	729	4,824	64,716	59.7%
1989	70,268	217	95	69,414	854	5,801	69,956	59.5%
1990	71,510	319	162	70,628	882	4,926	71,029	59.0%
1991	73,743	397	186	73,027	716	5,746	73,160	59.1%
1992	73,778	460	221	73,076	702	6,002	73,097	56.9%
1993	76,632	553	303	75,675	957	4,988	75,776	56.7%
1994	81,493	661	456	80,093	1,400	5,367	80,378	60.4%
1995	85,415	777	677	83,978	1,437	6,276	83,961	59.3%
1996	86,708	971	1,039	85,355	1,353	5,984	84,698	60.2%
1997	89,240	1,213	1,174	88,015	1,226	5,770	86,853	59.7%
1998	88,875	154	139	87,516	1,359	6,229	88,582	63.8%
1999	91,129	234	222	90,092	1,037	6,387	90,673	65.6%
2000	93,294	309	297	92,735	1,059	6,539	92,688	66.2%
2001	95,331	380	427	94,250	1,081	6,681	94,524	66.7%
2002	97,235	444	586	96,129	1,106	6,815	96,203	67.3%
2003	99,197	510	750	98,064	1,133	6,952	97,937	67.7%
2004	101,247	534	801	100,082	1,165	7,096	99,912	67.8%
2005	103,346	534	801	102,147	1,199	7,243	102,011	67.8%
2006	105,553	534	801	104,316	1,237	7,395	104,218	67.8%
2007	107,787	534	801	106,507	1,280	7,554	106,452	67.9%

Historical Values (1988 - 1997):
Col. (2) represents derived "Total Net Energy For Load w/o DSM". The values are calculated using the formula: (2) = (8) + (3) + (4).
Cols. (3) & (4) are DSM values starting in January, 1988 through 1997 which contributed to the values in Cols. (5) - (9).
Cols. (5) & (6) are a breakdown of Net Energy For Load in Col (2) into Retail and Wholesale .
Col. (9) is calculated using Col. (8) from this page and Col. (2), "Total", from Schedule 3.1.

Projected Values (1998 - 2007):
Col. (2) represents Net Energy for Load w/o DSM values.
Cols. (3) - (4) are forecasted values of the reduction on sales from incremental conservation.
Cols. (5) & (6) are a breakdown of Net Energy For Load in Col (2) , into Wholesale and Retail .
Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented the values for Col. (8) above and the values for Col. (10) on Schedule 3.1

Schedule 4

Previous Year Actual and Two-Year Forecast of Retail Peak Demand and Net Energy for Load by Month

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	1997 ACTUAL		1998 * FORECAST		1999* FORECAST	
Month	Total Peak Demand MW	NEL GWH	Total Peak Demand MW	NEL GWH	Total Peak Demand MW	NEL GWH
JAN	16,490	6,423	17,755	6,667	17,845	6,837
FEB	11,715	5,781	15,990	6,533	16,071	6,699
MAR	12,773	6,832	13,545	6,550	13,614	6,716
APR	13,230	6,627	13,226	6,806	13,292	6,979
MAY	15,372	7,375	14,501	7,524	14,574	7,715
JUN	15,804	8,180	16,077	8,196	16,158	8,404
JUL	16,336	8,429	16,695	8,541	16,779	8,757
AUG	16,613	8,842	17,086	8,646	17,172	8,865
SEP	15,574	8,334	16,615	8,343	16,699	8,555
OCT	14,268	7,282	15,421	7,532	15,498	7,723
NOV	12,565	6,379	14,214	6,793	14,286	6,965
DEC	13,047	6,369	14,594	6,743	14,667	6,914
TOTALS		86,853		88,874		91,129

* Forecasted Peaks & NEL do not include the impacts of cumulative load management and incremental conservation.

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III. Projection of Incremental Resource Additions:

Supplemental Information

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Schedule 5

Fuel Requirements 1/

	Fuel Requirements	Units	Actual 2/ 1996	1997	Forecasted 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
(1)	Nuclear	Trillion BTU	243	242	255	255	250	248	255	249	248	255	253	254
(2)	Coal	1,000 TON	748	767	779	787	790	748	788	788	750	788	789	749
(3)		Trillion BTU 4/	40	48	51	54	50	47	47	45	40	43	39	34
(4)	Residual(FO6)- TOTAL	1,000 BBL	24,121	24,876	17,710	20,116	13,592	14,483	9,757	11,523	4,844	5,445	9,719	9,534
(5)	Steam	1,000 BBL	24,121	24,876	17,710	20,116	13,592	14,483	9,757	11,523	4,844	5,445	9,719	9,534
(6)	Distillate(FO2)- TOTAL	1,000 BBL	75	59	144	207	110	115	34	69	21	26	63	70
(7)	CC	1,000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(8)	CT	1,000 BBL	63	44	144	207	110	115	34	69	21	26	63	70
(9)	Steam	1,000 BBL	12	15	0	0	0	0	0	0	0	0	0	0
(10)	Natural Gas -TOTAL	1,000 MCF	218,216	216,130	243,425	246,132	232,690	223,188	250,122	249,571	307,089	310,931	312,970	315,424
(11)	Steam	1,000 MCF	91,564	95,061	115,476	109,216	106,155	100,342	67,009	62,194	59,954	61,799	43,120	34,482
(12)	CC	1,000 MCF	125,525	118,874	125,572	133,761	123,491	119,577	181,871	185,302	246,173	247,998	267,921	279,381
(13)	CT	1,000 MCF	1,127	2,195	2,377	3,155	3,044	3,269	1,242	2,075	962	1,134	1,929	1,561
(14)	Orimulsion 3/	1,000 BBL	0	0	0	0	18,811	25,625	22,103	25,178	23,363	24,301	21,292	25,152

1/ Reflects fuel requirements for FPL only.

2/ Source: A Schedules.

3/ Represents a forecast of fuel consumption expected to be produced upon conversion of the Manatee Power Plant to burn Orimulsion.

4/ Scherer coal is reported in terms of BTU's only, not in tons.

Schedule 6.1
Energy Sources

	Energy Sources	Units	Actual 1/ 1996	1997	Forecasted 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
(1)	Annual Energy Interchange 2/	GWH	10,470	10,181	11,366	11,456	11,939	12,145	12,111	12,245	11,808	11,857	12,196	12,483
(2)	Nuclear	GWH	22,024	22,000	23,314	23,303	22,840	22,656	23,295	22,785	22,714	23,286	23,104	22,980
(3)	Coal	GWH	6,020	6,903	6,926	7,244	6,844	6,436	6,589	6,404	5,811	6,143	5,803	5,173
(4)	Residual(FO6) -Total	GWH	15,133	15,495	11,423	13,003	8,905	9,490	6,385	7,545	3,157	3,545	6,347	6,231
(5)	Steam	GWH	15,133	15,495	11,423	13,003	8,905	9,490	6,385	7,545	3,157	3,545	6,347	6,231
(6)	Distillate(FO2) -Total	GWH	28	16	55	80	44	46	14	28	9	11	26	28
(7)	CC	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(8)	CT	GWH	21	16	55	80	44	46	14	28	9	11	26	28
(9)	Steam	GWH	7	0	0	0	0	0	0	0	0	0	0	0
(10)	Natural Gas -Total	GWH	24,636	25,492	27,899	28,483	26,861	25,804	31,811	31,846	40,770	41,204	42,660	43,898
(11)	Steam	GWH	8,508	9,382	11,119	10,531	10,457	9,814	6,577	6,110	5,878	6,072	4,260	3,316
(12)	CC	GWH	16,066	15,982	16,626	17,754	16,231	15,806	25,178	25,643	34,843	35,077	38,326	40,544
(13)	CT	GWH	62	128	155	198	173	184	56	93	49	56	74	38
(14)	Other 3/	GWH	6,360	6,765	7,892	7,560	7,630	7,724	7,510	7,506	6,922	6,844	6,241	6,124
(15)	Orimulsion 4/	GWH	0	0	0	0	8,231	11,030	9,520	10,838	10,056	10,456	9,176	10,870
	Net Energy For Load	GWH	84,671	86,852	88,875	91,129	93,294	95,331	97,235	99,197	101,247	103,346	105,553	107,787

1/ Source: A Schedules

2/ The projected figures are based on estimated energy purchases from SJRPP and the Southern Companies.

3/ Represents a forecast of energy expected to be purchased from Qualifying Facilities, Independent Power Producers, etc.

4/ Represents a forecast of energy expected to be produced upon conversion of the Manatee Power Plant to burn Orimulsion.

Schedule 6.2
Energy % by Fuel Type

Energy Source	Units	Actual 1/		Forecasted									
		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Annual Energy Interchange 2/	%	12.4	11.7	12.8	12.6	12.8	12.7	12.5	12.3	11.7	11.5	11.6	11.6
Nuclear	%	26.0	25.3	26.2	25.6	24.5	23.8	24.0	23.0	22.4	22.5	21.9	21.3
Coal	%	7.1	7.9	7.8	7.9	7.3	6.8	6.8	6.5	5.7	5.9	5.5	4.8
Residual(FO6) -Total	%	17.9	17.9	12.9	14.4	9.6	10.0	6.6	7.6	3.1	3.4	6.0	5.8
Steam	%	17.9	17.8	12.9	14.3	9.5	10.0	6.6	7.6	3.1	3.4	6.0	5.8
Distillate(FO2) -Total	%	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CT	%	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Natural Gas -Total	%	29.1	29.4	31.4	31.3	28.8	27.1	32.7	32.1	40.3	39.9	40.4	40.7
Steam	%	10.0	10.8	12.5	11.6	11.2	10.3	6.8	6.2	5.8	5.9	4.0	3.1
CC	%	19.0	18.4	18.7	19.5	17.4	16.6	25.9	25.9	34.4	33.9	36.3	37.6
CT	%	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0
Other 3/	%	7.5	7.8	8.9	8.3	8.2	8.1	7.7	7.6	6.8	6.6	5.9	5.7
Orimulsion 4/	%	0.0	0.0	0.0	0.0	8.8	11.6	9.8	10.9	9.9	10.1	8.7	10.1
		100	100	100	100	100	100	100	100	100	100	100	100

1/ Source: A Schedules.

2/ The projected figures are based on estimated energy purchases from SJRPP and the Southern Companies.

3/ Represents a forecast of energy expected to be purchased from Qualifying Facilities, Independent Power Producers, etc.

4/ Represents a forecast of energy expected to be produced upon conversion of the Manatee Power Plant to burn Orimulsion.

Schedule 7.1 *

Forecast of Capacity, Demand, and Scheduled

Maintenance At Time Of Summer Peak

(1)	(2)	(3)	(4)	(5)	(6)			(7)	(8)	(9)	(10)	(11)	(12)
Year	Total Installed 1/ Capacity MW	Firm Capacity Import MW	Firm Capacity Export MW	Firm QF MW	Total Capacity Available 2/ MW	Total Peak 3/ Demand MW	DSM 4/ MW	Firm Summer Peak Demand MW	Reserve Margin Before Maintenance 5/ MW	% of Peak	Scheduled Maintenance MW	Reserve Margin After Maintenance 6/ MW	% of Peak
1998	16,625	1,297	0	1,010	18,932	17,086	1,240	15,846	3,086	19	0	3,086	19
1999	16,730	1,297	0	1,010	19,037	17,172	1,385	15,787	3,250	21	0	3,250	21
2000	16,603	1,297	0	1,010	18,910	17,504	1,519	15,985	2,925	18	0	2,925	18
2001	16,603	1,297	0	1,010	18,910	17,822	1,654	16,168	2,742	17	0	2,742	17
2002	17,440	1,297	0	1,001	19,738	18,129	1,800	16,329	3,409	21	0	3,409	21
2003	17,440	1,297	0	1,001	19,738	18,469	1,946	16,523	3,215	19	0	3,215	19
2004	18,354	1,297	0	1,001	20,652	18,818	1,995	16,823	3,829	23	0	3,829	23
2005	18,354	1,297	0	991	20,642	19,170	1,995	17,175	3,467	20	0	3,467	20
2006	18,773	1,297	0	858	20,928	19,532	1,995	17,537	3,391	19	0	3,391	19
2007	19,192	1,297	0	858	21,347	19,901	1,995	17,906	3,441	19	0	3,441	19

1/ Capacity additions and changes projected to be in-service by June 1st are considered to be available to meet Summer peak loads which are forecasted to occur during August of the year indicated. All values are Summer net MW.

2/ Total Capacity Available=Col.(2)+Col.(3)-Col.(4)+Col.(5).

3/ These forecasted values reflect the Most Likely forecast without DSM.

4/ The MW shown represent cumulative load management capability plus incremental conservation from 1/97 - on. They are not included in total additional resources but reduce the peak load upon which Reserve Margin calculations are based.

5/ ' largin (%) Before Maintenance = Col.(8)/Col.(7)

6/ Margin (%) After Maintenance =Col.(11) /Col.(7)

* Schedule 7.1 is similar to Table III.B.2 in the Site Plan document.

Schedule 7.2 *

Forecast of Capacity , Demand, and Scheduled

Maintenance At Time of Winter Peak

(1)	(2)	(3)	(4)	(5)	(6)			(7)	(8)	(9)	(10)	(11)	(12)
Year	Total Installed 1/ Capability MW	Firm Capacity Import MW	Firm Capacity Export MW	Firm QF MW	Total Capacity Available 2/ MW	Total Peak 3/ Demand MW	DSM 4/ MW	Firm Winter Peak MW	Reserve Margin Before Maintenance 5/ MW	% of Peak	Scheduled Maintenance MW	Reserve Margin After Maintenance 6/ MW	% of Peak
1997/98	17,257	1,297	0	1,010	19,564	17,755	1,278	16,477	3,087	19	0	3,087	19
1998/99	17,370	1,297	0	1,010	19,677	17,845	1,392	16,453	3,224	20	0	3,224	20
1999/00	17,309	1,297	0	1,010	19,616	18,230	1,494	16,736	2,880	17	0	2,880	17
2000/01	17,319	1,297	0	1,010	19,626	18,622	1,568	17,054	2,572	15	0	2,572	15
2001/02	18,381	1,297	0	1,010	20,688	19,027	1,652	17,375	3,313	19	0	3,313	19
2002/03	18,381	1,297	0	1,001	20,679	19,426	1,734	17,692	2,987	17	0	2,987	17
2003/04	19,457	1,297	0	1,001	21,755	19,823	1,812	18,011	3,744	21	0	3,744	21
2004/05	19,457	1,297	0	991	21,745	20,223	1,812	18,411	3,334	18	0	3,334	18
2005/06	19,905	1,297	0	858	22,060	20,630	1,812	18,818	3,242	17	0	3,242	17
2006/07	20,353	1,297	0	858	22,508	21,044	1,812	19,232	3,276	17	0	3,276	17

1/ Capacity additions and changes projected to be in-service by January 1st are considered to be available to meet Winter peak loads which are forecast to occur during January of the second year indicated. All values are Winter net MW.

2/ Total Capacity Available = Col.(2)+ Col.(3) - Col.(4)+Col.(5).

3/ These forecasted values reflect the Most Likely forecast without DSM.

4/ The MW shown represent cumulative load management capability plus incremental conservation. They are not included in total additional

5/ Margin (%) Before Maintenance = Col.(8)/Col.(7)

6/ Margin (%) After Maintenance = Col.(11) /Col.(7)

* Schedule 7.2 is similar to Table III.B.3 in the Site Plan document.

Schedule 8
Planned And Prospective Generating Facility Additions And Changes

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
				Fuel		Fuel Transport		Const.	Commercial	Expected	Gen. Max.	Net Capability		
Plant Name	Unit No.	Location	Unit Type	Pri.	Alt.	Pri.	Alt.	Start Mo./Yr.	In-Service Mo./Yr.	Retirement Mo./Yr.	Nameplate KW	Summer MW	Winter MW	Status
ADDITIONS														
Martin Combined Cycle Unit	5	Martin County 29/29S/38E	CC	NG	FO2	PL	PL	Jun-04	Jan-06	Unknown	500,000	419	448	P
Martin Combined Cycle Unit	6	Martin County 29/29S/38E	CC	NG	FO2	PL	PL	Jun-05	Jan-07	Unknown	500,000	419	448	P

Schedule 8
Planned And Prospective Generating Facility Additions And Changes (Cont.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
				Fuel		Fuel Transport		Const	Commercial	Expected	Gen. Max	Net Capability		
Plant Name	Unit No.	Location	Unit Type	Pri	Alt	Pri	Alt	Start Mo./Yr.	In-Service Mo./Yr.	Retirement Mo./Yr.	Nameplate KW	Summer MW	Winter MW	Status
CHANGES/UPGRADES 1/								2/						
Port Everglades		City of Hollywood 23/50S/42E												
	3		ST	FO6	NG	WA	PL	Feb-98	Apr-98	Unknown	402,000	+14	+15	A
	4		ST	FO6	NG	WA	PL	Feb-98	Jun-98	Unknown	402,000	+13	+14	A
Martin		Martin County 29/29S/38E												
	2		ST	NG	FO6	PL	PL	Feb-98	Apr-98	Unknown	863,000	+31	+11	A
	3		CC	NG	FO2	PL	PL	Apr-98	Jun-98	Unknown	615,000	+48	+12	A
	4		CC	NG	FO2	PL	PL	Apr-98	Jun-98	Unknown	615,000	+48	+12	A
	3		CC	NG	FO2	PL	PL	Apr-99	Jun-99	Unknown		+13	+13	A
	4		CC	NG	FO2	PL	PL	Apr-99	Jun-99	Unknown		+13	+13	A
	3		CC	NG	FO2	PL	PL	Jun-00	Jun-00	Unknown		+10	+30	A
	4		CC	NG	FO2	PL	PL	Jun-00	Jun-00	Unknown		+10	+30	A
Cape Canaveral		Brevard County 19/24S/36F												
	2		ST	FO6	NG	WA	PL	Dec-98	Jan-99	Unknown	402,050	+3	+3	A
Lauderdale		Broward County 30/50S/42E												
	4		CC	NG	FO2	PL	PL	Jun-00	Jun-00	Unknown	521,250	+10	+10	A
	5		CC	NG	FO2	PL	PL	Jun-00	Jun-00	Unknown	521,250	+10	+10	A

1/ The ratings shown for all units represent the incremental changes in capacity. Some capacity enhancements/re-ratings require the installation of additional equipment (e.g., foggers). Other enhancements are the result of changes to operating practices only.

2/ The dates provided in this column are estimates.

Schedule 8
Planned And Prospective Generating Facility Additions And Changes (Cont.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
				Fuel		Fuel Transport		Const. Start	Comm. ercial In-Service	Expected Retirement	Gen. Max Nameplate	Net Capability Summer	Net Capability Winter	
Plant Name	Unit No	Location	Unit Type	Pri.	Alt.	Pri.	Alt.	Mo./Yr.	Mo./Yr.	Mo./Yr.	KW	MW	MW	Status
CHANGES/UPGRADES 1/								4/						
Ft. Myers		Lee County												
	1	35/43S/25E	ST	FO6	No	WA	No	Feb-98	Jun-98	Unknown	402,000	+4	+4	A
	2		ST	FO6	No	WA	No	Feb-98	Jun-98	Unknown	402,000	+15	+15	A
Expansion & Repowering 2/				NG	No	PL	No	Dec-99	Jan-02	Unknown	960,000	837	1062	P
Ft. Myers GT	1-12		GT	FO2	No	WA	No	Dec-99	Jan-00	Unknown	744,000	0	-2	A
Enhancements			GT	FO2	No	WA	No	Apr-99	Jun-99	Unknown	744,000	+41	0	A
			GT	FO2	No	WA	No	Dec-00	Jan-01	Unknown	744,000	+31	+30	A
Manatee 3/		Manatee County 18/33S/20E												
	1		ST	ORI	FO6	WA	WA	Feb-00	Jun-00	Unknown	863,000	-99	-100	P
	2		ST	ORI	FO6	WA	WA	Sep-99	Jan-00	Unknown	863,000	-99	-100	P
Putnam		Putnam County 16/10S/27E												
	1		CC	NG	FO2	PL	WA	Apr-98	Jun-98	Unknown	290,000	+14	0	A
	2		CC	NG	FO2	PL	WA	Apr-98	Jun-98	Unknown	290,000	+15	0	A
Sanford		Volusia County 16/19S/30E												
	4		ST	FO6	NG	WA	PL	Feb-98	Apr-98	Unknown	426000	+7	+7	A
Expansion & Repowering 2/				NG	No	PL	No	Jun-01	Jan-04	Unknown	960,000	914	1078	P
Scherer		Monroe, GA												
	4		Bit	Bit	No	RR	No	Dec-98	Jan-99	Unknown	891,000	+35	+35	A

1/ The ratings shown for all units represent the incremental changes in capacity. Some capacity enhancements/re-ratings require the installation of additional equipment (e.g., foggers). Other enhancements are the result of changes to operating practices only.

2/ Represents incremental capacity resulting from the conversion to combined cycle through expansion & repowering.

3/ Represents the rating of the units upon conversion to burn Orimulsion.

4/ The dates provided in this column are estimates.

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Ft. Myers Expansion & Repowering

(2) **Capacity**

a. Summer	837	MW Incremental (1400 MW Total After Expansion)
b. Winter	1,062	MW Incremental (1625 MW Total After Expansion)

(3) **Technology Type:** Combined Cycle

(4) **Anticipated Construction Timing**

a. Field construction start-date:	1998
b. Commercial In-service date:	2002

(5) **Fuel**

a. Primary Fuel	Natural Gas
b. Alternate Fuel	None

(6) **Air Pollution and Control Strategy:** LNB (Low Nox Burners)

(7) **Cooling Method:** OTS (Once Through - Saline)

(8) **Total Site Area:** 466 Acres

(9) **Construction Status:** P (Planned)

(10) **Certification Status:** P (Planned)

(11) **Status with Federal Agencies:** P (Planned)

(12) **Projected Unit Performnace Data:**

Planned Outage Factor (POF):	3%	
Forced Outage Factor (FOF):	1%	
Equivalent Availability Factor (EAF):	96%	
Resulting Capacity Factor (%):	96%	(First Year)
Average Net Operating Heat Rate (ANHOR):	6,815	Btu/kWh

(13) **Projected Unit Financial Data, *, ****

Book Life (Years):	30	years
Total Installed Cost (In-Service Year $/kW):	593	
Direct Construction Cost ($/kW):	495	
AFUDC Amount ($/kW):	58	
Escalation ($/kW):	40	
Fixed O&M ($/kW-Yr.):	17	(1997$)
Variable O&M ($/MWH):	***	
K Factor:	1.648	

* $/kW values are based on incremental capacity values only.

** Note that cost values shown do not reflect the FPL system benefits which result from efficiency improvements to the existing steam capacity at the site.

*** Variable O&M is included as part of the Fixed O&M

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Sanford Expansion & Repowering

(2) **Capacity**

a. Summer	914	MW Incremental (1457 MW Total After Expansion)
b. Winter	1,076	MW Incremental (1625 MW Total After Expansion)

(3) **Technology Type:** Combined Cycle

(4) **Anticipated Construction Timing**

a. Field construction start-date:	2000
b. Commercial In-service date:	2004

(5) **Fuel**

a. Primary Fuel	Natural Gas
b. Alternate Fuel	None

(6) **Air Pollution and Control Strategy:** LNB (Low Nox Burners)

(7) **Cooling Method:** CP (Cooling Pond)

(8) **Total Site Area:** 1,889 Acres

(9) **Construction Status:** P (Planned)

(10) **Certification Status:** P (Planned)

(11) **Status with Federal Agencies:** P (Planned)

(12) **Projected Unit Performnace Data:**

Planned Outage Factor (POF):	3%	
Forced Outage Factor (FOF):	1%	
Equivalent Availability Factor (EAF):	96%	
Resulting Capacity Factor (%):	96%	(First Year)
Average Net Operating Heat Rate (ANHOR):	6,777	Btu/kWh

(13) **Projected Unit Financial Data *, ****

Book Life (Years):	30	years
Total Installed Cost (In-Service Year $/kW):	612	
Direct Construction Cost ($/kW):	494	
AFUDC Amount ($/kW):	60	
Escalation ($/kW):	59	
Fixed O&M ($/kW-Yr.):	15	(1997$)
Variable O&M ($/MWH):	***	
K Factor:	1.648	

* $/kW values are based on incremental capacity values only.

** Note that cost values shown do not reflect the FPL system benefits which result from efficiency improvements to the existing steam capacity at the site

*** Variable O&M is included as part of the Fixed O&M

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Martin 5

(2) **Capacity**

a. Summer	419	MW
b. Winter	448	MW

(3) **Technology Type:** Combined Cycle

(4) **Anticipated Construction Timing**

a. Field construction start-date:	2002
b. Commercial In-service date:	2006

(5) **Fuel**

a. Primary Fuel	Natural Gas
b. Alternate Fuel	Distillate

(6) **Air Pollution and Control Strategy:** LNB (Low Nox Burners)

(7) **Cooling Method:** CP (Cooling Pond)

(8) **Total Site Area:** 11,179 Acres

(9) **Construction Status:** P (Planned)

(10) **Certification Status:** P (Planned)

(11) **Status with Federal Agencies:** P (Planned)

(12) **Projected Unit Performnace Data:**

Planned Outage Factor (POF):	3%	
Forced Outage Factor (FOF):	1%	
Equivalent Availability Factor (EAF):	96%	
Resulting Capacity Factor (%):	96%	(First Year)
Average Net Operating Heat Rate (ANHOR):	6,081	Btu/kWh

(13) **Projected Unit Financial Data**

Book Life (Years):	30	years
Total Installed Cost (In-Service Year $/kW):	647	
Direct Construction Cost ($/kW):	492	
AFUDC Amount ($/kW):	60	
Escalation ($/kW):	94	
Fixed O&M ($/kW-Yr.):	11	(1997$)
Variable O&M ($/MWH):	0.38	(1997$)
K Factor:	1.647	

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1) **Plant Name and Unit Number:** Martin 6

(2) **Capacity**

a. Summer	419	MW
b. Winter	448	MW

(3) **Technology Type:** Combined Cycle

(4) **Anticipated Construction Timing**

a. Field construction start-date:	2003
b. Commercial In-service date:	2007

(5) **Fuel**

a. Primary Fuel	Natural Gas
b. Alternate Fuel	Distillate

(6) **Air Pollution and Control Strategy:** LNB (Low Nox Burners)

(7) **Cooling Method:** CP (Cooling Pond)

(8) **Total Site Area:** 11,179 Acres

(9) **Construction Status:** P (Planned)

(10) **Certification Status:** P (Planned)

(11) **Status with Federal Agencies:** P (Planned)

(12) **Projected Unit Performnace Data:**

Planned Outage Factor (POF):	3%	
Forced Outage Factor (FOF):	1%	
Equivalent Availability Factor (EAF):	96%	
Resulting Capacity Factor (%):	96%	(First Year)
Average Net Operating Heat Rate (ANHOR):	6,081	Btu/kWh

(13) **Projected Unit Financial Data**

Book Life (Years):	30	years
Total Installed Cost (In-Service Year $/kW):	599	
Direct Construction Cost ($/kW):	444	
AFUDC Amount ($/kW):	57	
Escalation ($/kW):	98	
Fixed O&M ($/kW-Yr.):	11	(1997$)
Variable O&M ($/MWH):	0.38	(1997$)
K Factor:	1.647	

Schedule 10

Status Report and Specifications of Proposed Directly Associated Transmission Lines

Ft. Myers Expansion & Repowering

(1)	**Point of Origin and Termination:**	From Ft. Myers - To Calusa
(2)	**Number of Lines:**	1
(3)	**Right-of-way:**	FPL Owned
(4)	**Line Length:**	1.58 miles
(5)	**Voltage:**	230 kV
(6)	**Anticipated Construction Timing:**	Start date: October 15, 2001 End Date: December 1, 2001
(7)	**Anticipated Capital Investment:**	$354,000
(8)	**Substations:**	Ft. Myers and Calusa
(9)	**Participation with Other Utilities:**	None

---

(1)	**Point of Origin and Termination:**	From Ft. Myers - To Orange River
(2)	**Number of Lines:**	1
(3)	**Right-of-way:**	FPL Owned
(4)	**Line Length:**	2.57 miles
(5)	**Voltage:**	230 kV
(6)	**Anticipated Construction Timing:**	Start date: October 1, 2001 End Date: December 1, 2001
(7)	**Anticipated Capital Investment:**	$706,750
(8)	**Substations:**	Ft. Myers and Orange River
(9)	**Participation with Other Utilities:**	None

Note: The Anticipated Capital Investment for this project is included in the Direct Construction Cost value for the Ft. Myers Expansion & Repowering on Schedule 9, page 1 of 4.

Schedule 10

Status Report and Specifications of Proposed Directly Associated Transmission Lines

Sanford Expansion & Repowering

(1)	**Point of Origin and Termination:**	From Sanford - To Poinsett
(2)	**Number of Lines:**	2
(3)	**Right-of-way:**	FPL Owned
(4)	**Line Length:**	60 miles
(5)	**Voltage:**	230 kV
(6)	**Anticipated Construction Timing:**	Start Date: December 1, 2002 End Date: December 1, 2003
(7)	**Anticipated Capital Investment:**	$20,360,000
(8)	**Substations:**	Sanford and Poinsett
(9)	**Participation with Other Utilities:**	None

Note: The Anticipated Capital Investment for this project is included in the Direct Construction Cost value for the Sanford Expansion & Repowering on Schedule 9, page 2 of 4.

Schedule 10

Status Report and Specifications of Proposed Directly Associated Transmission Lines

Martin 5 & 6

(1)	**Point of Origin and Termination:**	a. Pratt & Whitney to Indiantown b. Pratt & Whitney to Ranch
(2)	**Number of Lines:**	2
(3)	**Right-of-way:**	FPL Owned
(4)	**Line Length:**	a. 8.45 b. 20.74
(5)	**Voltage:**	230 kV
(6)	**Anticipated construction Timing:**	Start Date: May 1, 2005 End Date: December 1, 2005
(7)	**Anticipated Capital Investment:**	$775,000
(8)	**Substations:**	Pratt & Whitney, Ranch, and Indiantown
(9)	**Participation with Other Utilities:**	None

Note: There are no new directly associated transmission lines required with these units. The existing lines will be upgraded to a higher current rating.

The Anticipated Capital Investment for this project is included in the Direct Construction Cost value for the Martin 5 and 6 units, on Schedule 9, pages 3 of 4 and 4 of 4, respectively.

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IV. Environmental and Land Use Information:

Supplemental Information

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IV. Environmental and Land Use Information:

Supplemental Information

Preferred Site: Ft. Myers Plant

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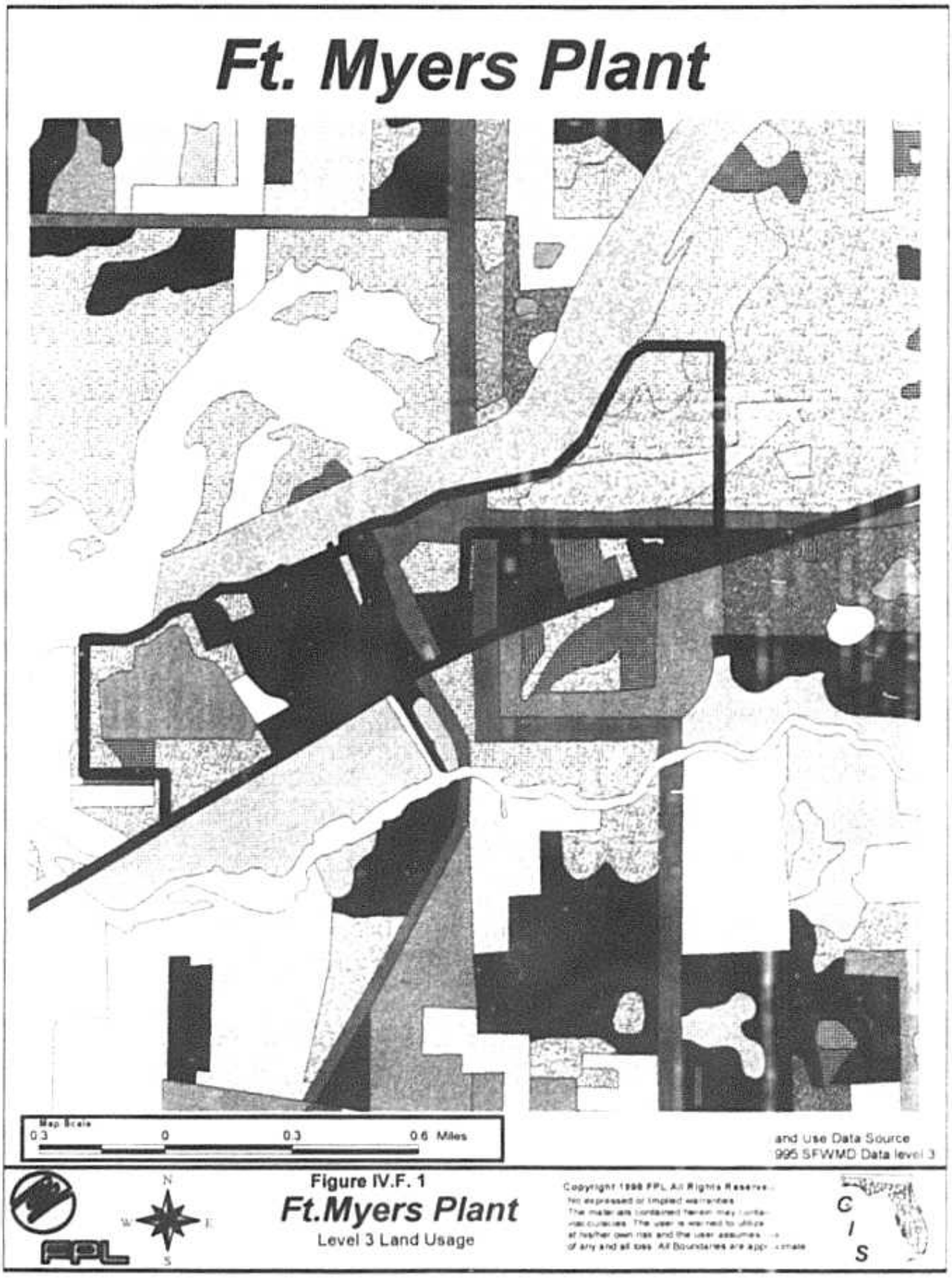

Figure IV.F. 1

Ft.Myers Plant

Level 3 Land Usage

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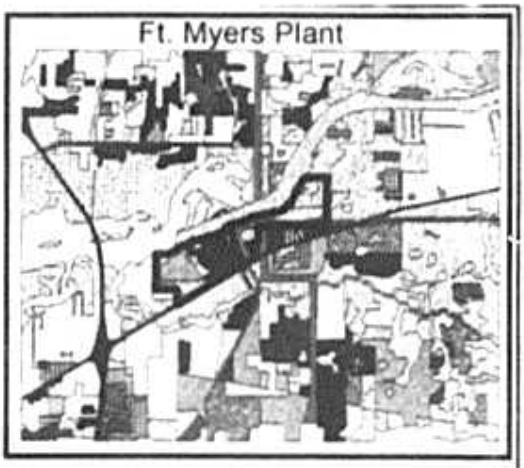

Land Usage Legend Level 3

- Ft Myers Plant Boundary

Surrounding Land Usage

- Mobile Homes
- Fixed Single Family Units
- Fixed Single Family Units 2-5 du/ac
- Fixed & Mobile Units
- Fixed Single Family Units
- Multiple Dwelling Units Low Rise
- Multiple Dwelling Units High Rise
- Retail Sales & Service
- Shopping Centers
- Wholesale Sales & Service
- Junkyards
- Professional Services
- Tourists Services
- Oil & Gas Storage
- Mixed Commercial & Services
- Cemeteries
- Food Processing
- Other Light Industrial
- Other Heavy Industrial
- Strip Mines
- Sand & Gravel Pits
- Rock Quarries
- Educational Facilities
- Religious
- Medical & Health Care
- Governmental
- Correctional
- Other Institutional
- Commercial Child Care
- Swimming Beach
- Golf Courses
- Marinas & Fish Camps
- Parks & Zoos
- Community Recreatioal Facilities
- Historical Sites
- Other Recreational
- Undeveloped Land Within Urban Areas
- Inactive Land W/Street Pattern
- Urban Land In Transaction
- Other Open Land
- Improved Pastures
- Unimproved Pastures
- Woodland Pastures
- Row Crops
- Field Crops
- Sugar Cane Fields
- Citrus Groves
- Tree Nurseries
- Sod Farms
- Ornamentals
- Floriculture
- Horse Farms
- Dairies
- Aquaculture
- Fallow Crop Land
- Herbaceous Rangeland
- Palametto Praries
- Coastal Scrub
- Other Scrubs & Brush
- Mixed Rangeland
- Pine Flatwoods
- Melaleuca Infested
- Longleaf Pine - Xeric Oak
- Sand Pine
- Pine - Mesic Oak

Continued Legend

- Xeric Oak
- Brazilian Pepper
- Melaleuca
- Temperate Hardwood
- Tropical Hardwoodw
- Live Oak
- Cabbage Palm
- Sand Live Oak
- Hardwood Conifer Mixed
- Australian Pine
- Mixed Hardwoods
- Streams & Waterways
- Lakes > or = to 500 Acres
- Lakes > or = to 10 Acres < or = to 500 Acres
- Lakes < or = to 10 Acres
- Reservoirs > or = to 500 Acres
- Reservoirs > or = to 100 Acres < or = to 500 Acres
- Reservoirs > or = to 10 Acres < or = to 100 Acres
- Reservoirs < or = to 10 Acres
- Embayments Opening
- Bay Swamps
- Mangrove Swamps
- Stream & Lake Swamps
- Inland Ponds & Sloughs
- Mixed Wetland Hardwoods
- Willows
- Mixed Shrubs
- Cypress
- Cypress - w/Wet Praries
- Cypress - Pine - Cabbage Pine
- Wetland Forested Mixed
- Freshwater Marshes
- Freshwater Sawgrass Marshes
- Freshwater Cattail Marshes
- Saltwater Marshes
- Wet Praries
- Wet Pranes - with Pine
- Emergent Aquatic Vegetation
- Submergent Aquatic Vegetation
- Sand Other Than Beaches
- Rural Land In Transition
- Borrow Areas
- Spoil Areas
- Fill Areas Highways & Railways
- Airports
- Roads & Highways
- Canals & Locks
- Auto Parking Facilities
- Transmission Towers
- Communication facilities
- Electrical Power Facilities
- Electrical Power Transmission
- Water Supply Plants
- Sewage Treatment

Land Use Data Source
1995 SFWMD Data Level 3

Figure IV.F. 1

Ft. Myers Plant

Land Usage Legend

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Figure IV.F. 2

Ft. Myers Plant Site Plan
Showing Location Of New Facility

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Ft Myers Plant Site

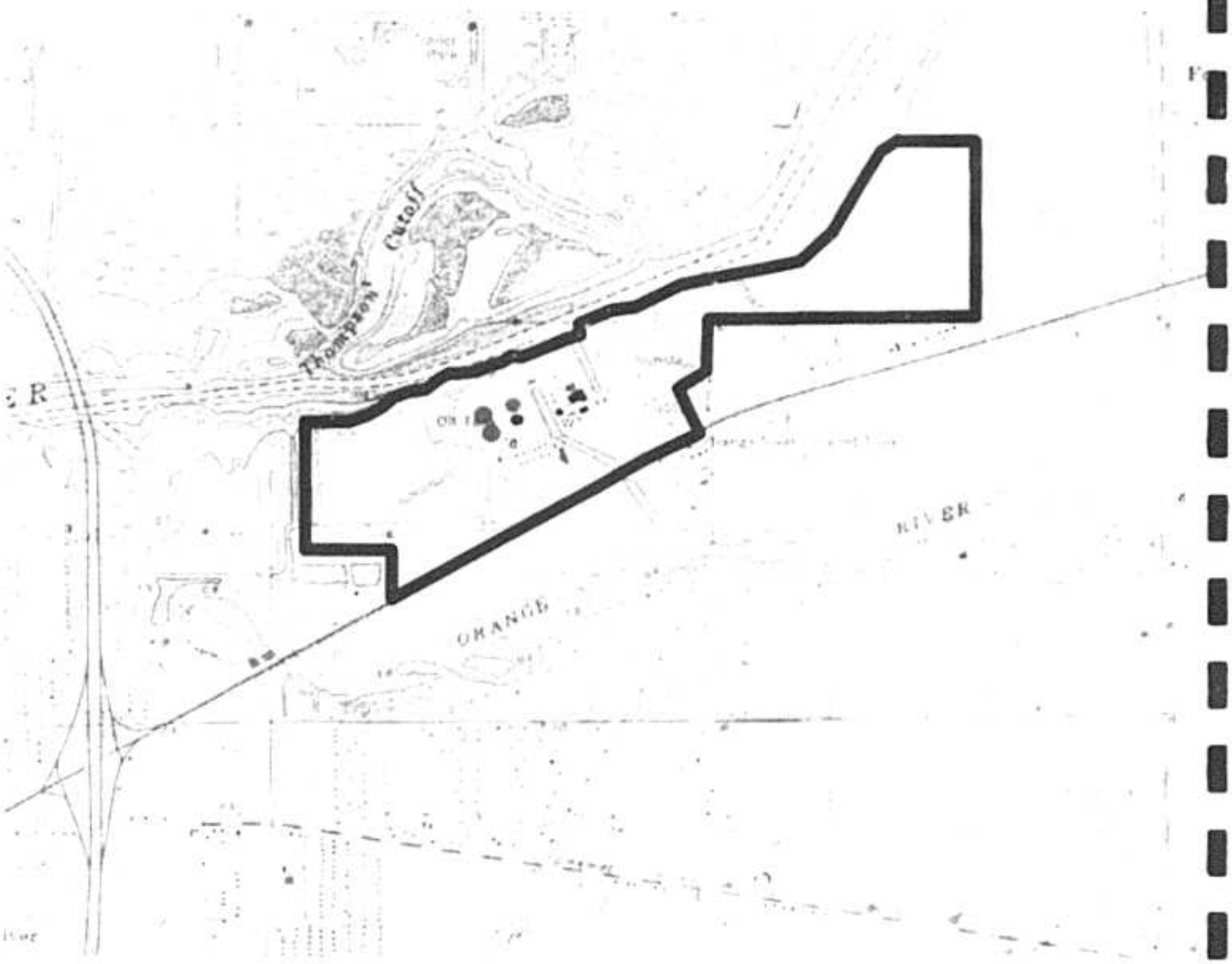

Figure IV.F. 3

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IV. Environmental and Land Use Information:

Supplemental Information

Preferred Site: Sanford Plant

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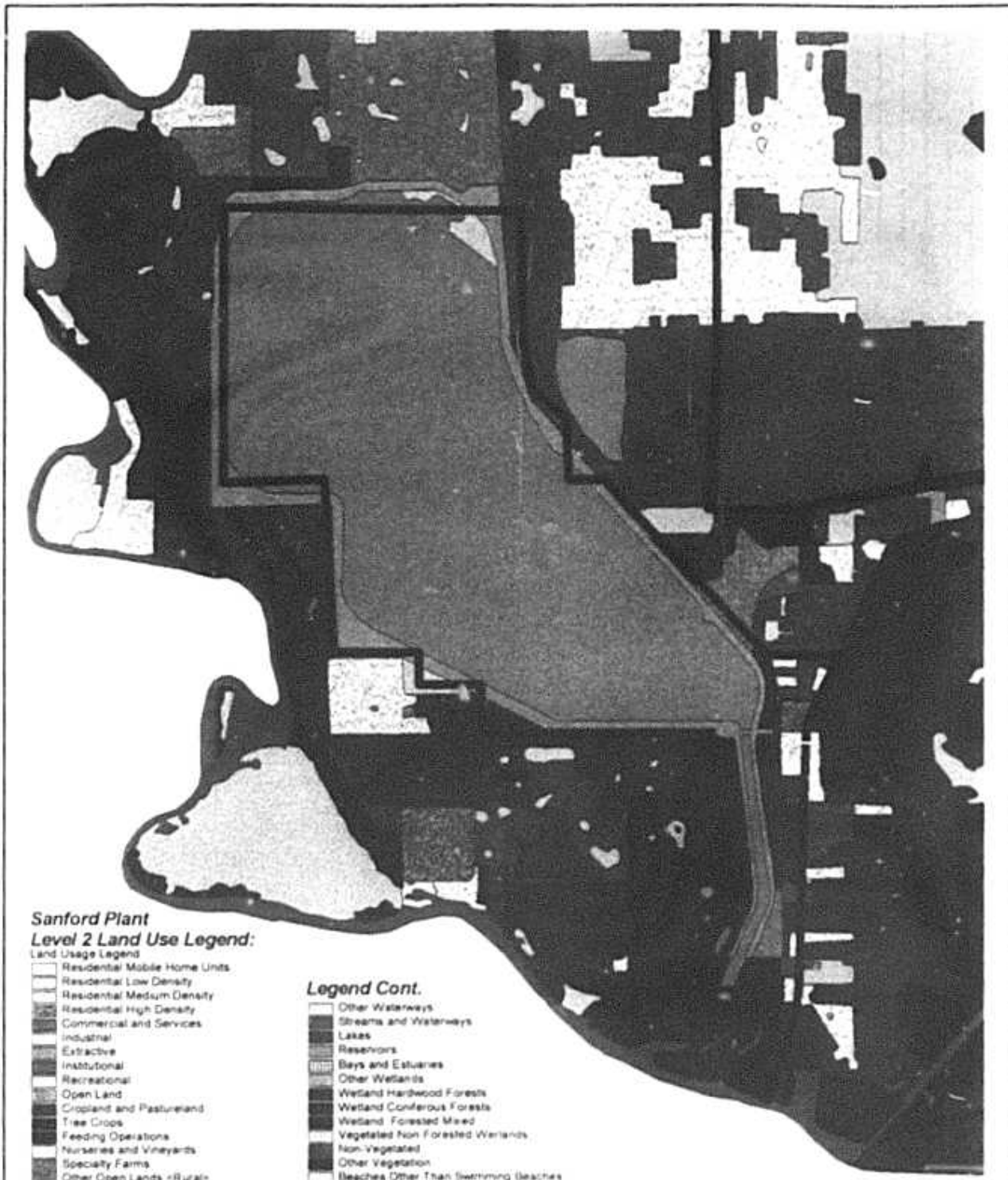

Figure IV.F. 4

Sanford Plant Land Use

Level 2 Land Use

Last Revised 2/4/98

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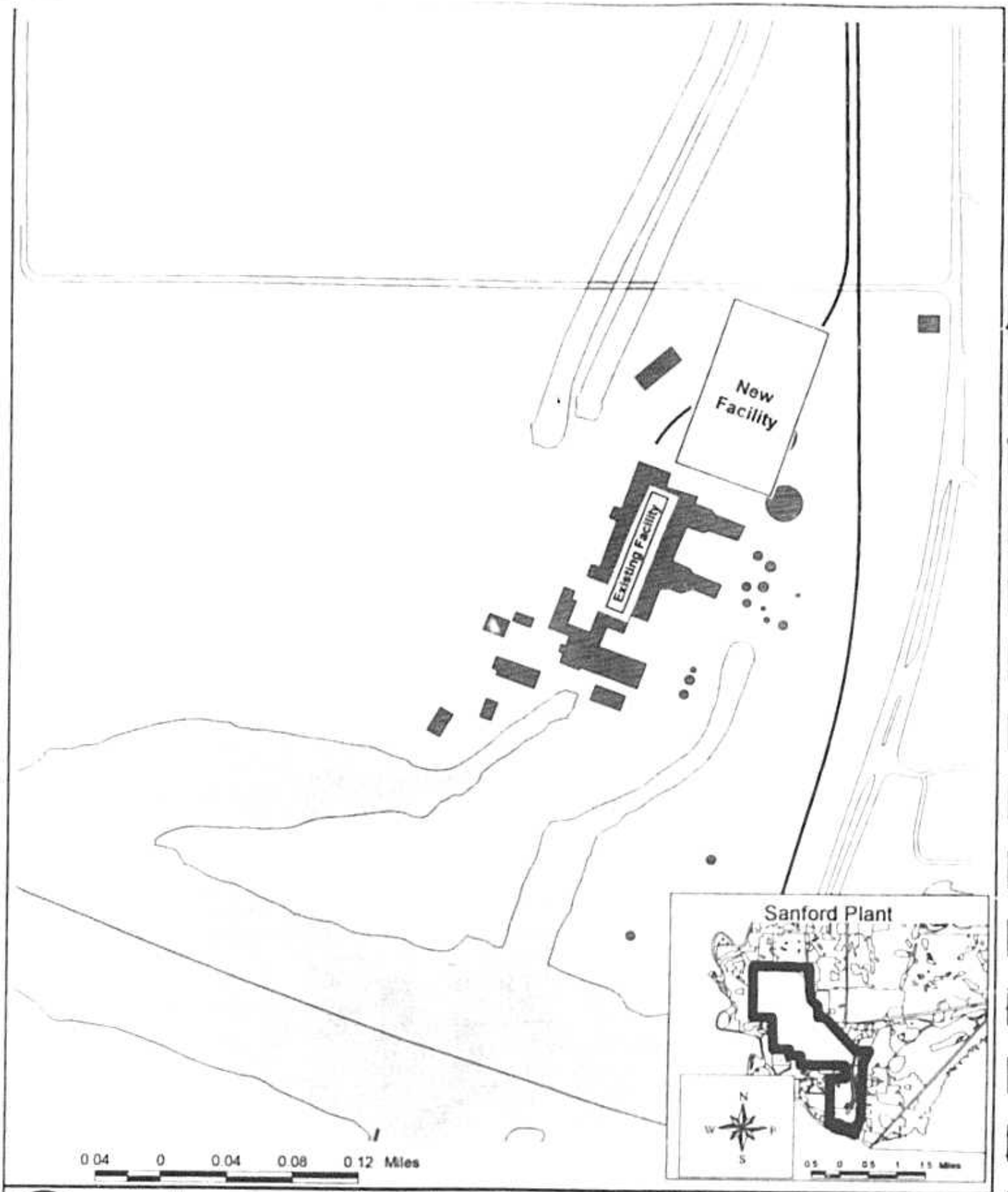

Figure IV.F. 5

Sanford Site Plan Showing Location Of New facility

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FPL Sanford Plant Site

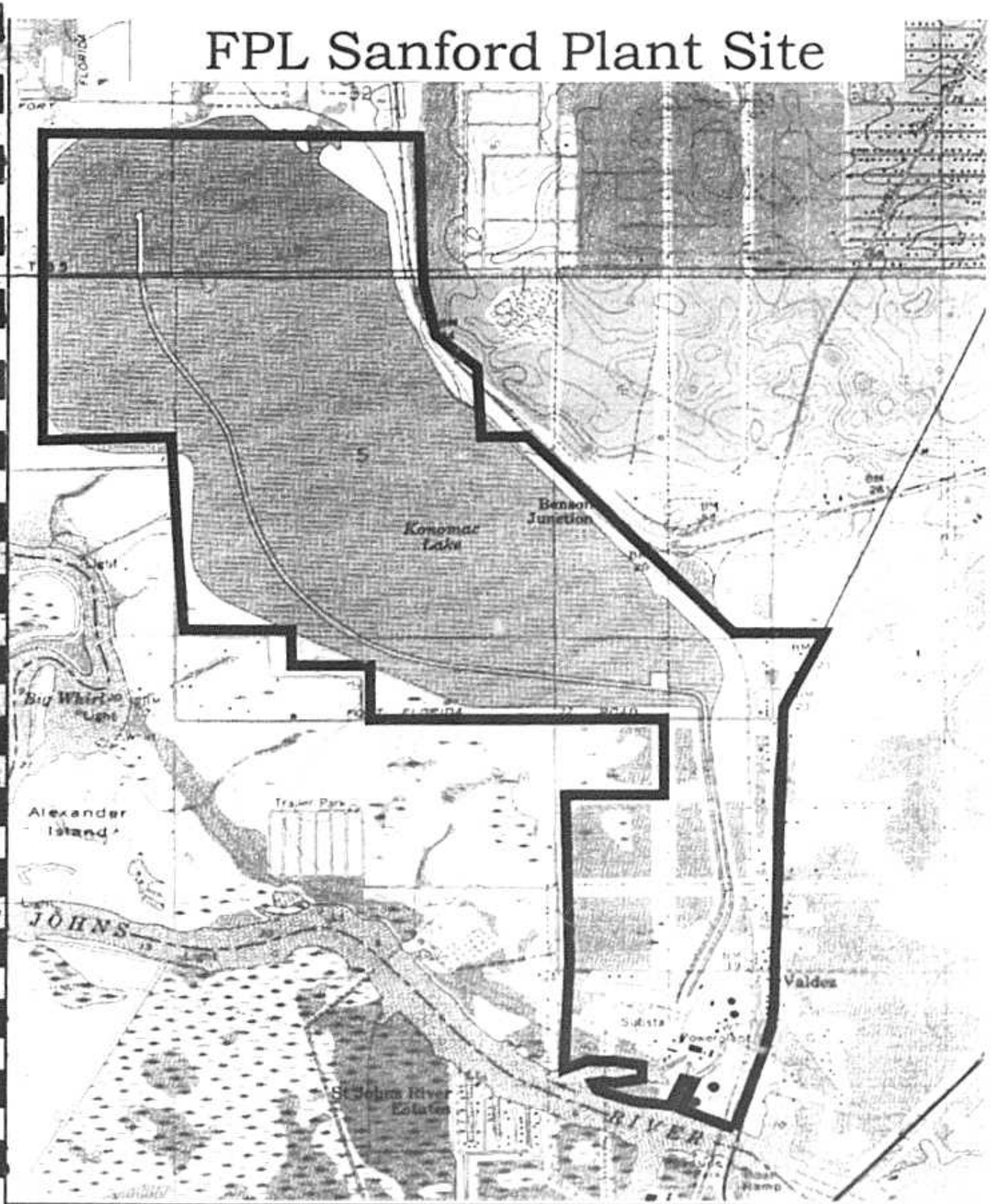

Figure IV.F: 6

N W E S

900 0 900 1800 Feet

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FPL GIS

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IV. Environmental and Land Use Information:

Supplemental Information

Preferred Site: Martin Plant

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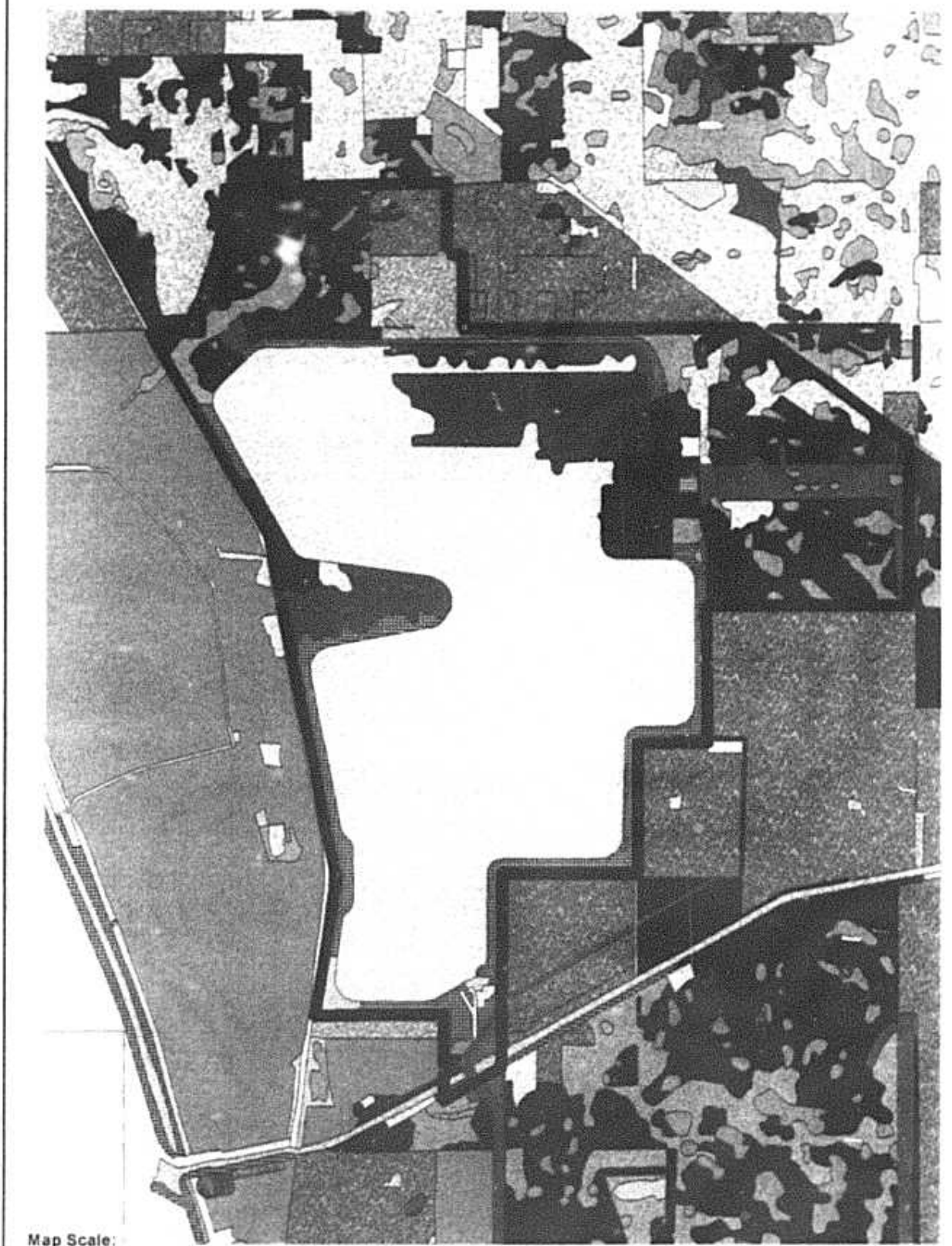

Figure IV.F. 7

Martin Plant Land Use

Level 3 Land Use

Last Revised 2/4/98

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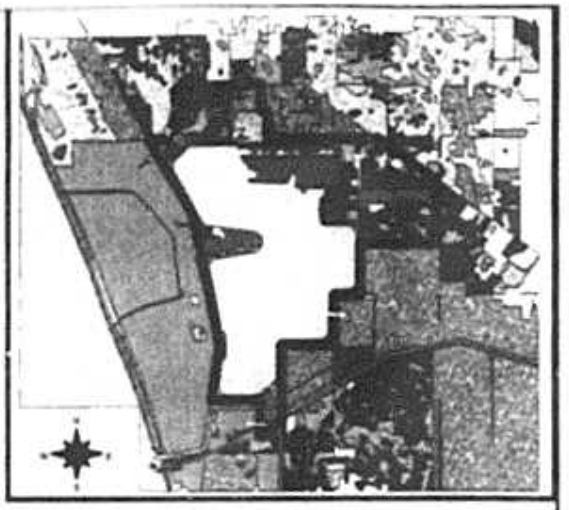
Martin Plant
Level 3 Land Use Legend:



Land Usage Legend
- Mobile Homes
- Fixed Single Family Units
- Fixed Single Family Units 2-5 du/ac
- Fixed & Mobile Units
- Fixed Single Family Units
- Multiple Dwelling Units Low Rise
- Multiple Dwelling Units High Rise
- Retail Sales & Service
- Shopping Centers
- Wholesale Sales & Service
- Junkyards
- Professional Services
- Tourists Services
- Oil & Gas Storage
- Mixed Commercial & Services
- Cemeteries
- Food Processing
- Other Light Industrial
- Other Heavy Industrial
- Strip Mines
- Sand & Gravel Pits
- Rock Quarries
- Educational Facilities
- Religious
- Medical & Health Care
- Governmental
- Correctional
- Other Institutional
- Commercial Child Care
- Swimming Beach
- Golf Courses
- Marinas & Fish Camps
- Parks & Zoos
- Community Recreational Facilities
- Historical Sites
- Other Recreational
- Undeveloped Land Within Urban Areas
- Inactive Land with Street Pattern
- Urban Land In Transaction
- Other Open Land
- Improved Pastures
- Unimproved Pastures
- Woodland Pastures
- Row Crops
- Field Crops
- Sugar Cane Fields
- Citrus Groves
- Tree Nurseries
- Sod Farms
- Ornamentals
- Floriculture
- Horse Farms
- Dairies
- Aquaculture
- Fallow Crop Land
- Herbaceous Rangeland
- Palmetto Prairies
- Coastal Scrub
- Other Scrubs & Brush
- Mixed Rangeland
- Pine Flatwoods
- Melaleuca Infested
- Longleaf Pine - Xeric Oak
- Sand Pine
- Pine - Mesic Oak
- Xeric Oak
- Brazilian Pepper
- Melaleuca
- Temperate Hardwood

Legend Cont.

- Tropical Hardwood
- Live Oak
- Cabbage Palm
- Sand Live Oak
- Hardwood Conifer Mixed
- Australian Pine
- Mixed Hardwoods
- Streams & Waterways
- Lakes > or = to 500 Acres
- Lakes > or = to 10 Acres - < or = to 500 Acres
- Lakes < or = to 10 Acres
- Reservoirs > or = to 500 Acres
- Reservoirs > or = to 100 Acres - < or = to 500 Acres
- Reservoirs > or = to 10 Acres - < or = to 100 Acres
- Reservoirs < or = to 10 Acres
- Embayments Opening
- Bay Swamps
- Mangrove Swamps
- Stream & Lake Swamps
- Inland Ponds & Sloughs
- Mixed Wetland Hardwoods
- Willows
- Mixed Shrubs
- Cypress
- Cypress - with Wet Prairies
- Cypress - Pine - Cabbage - Pine
- Wetland Forested Mixed
- Freshwater Marshes
- Freshwater Sawgrass Marshes
- Freshwater Cattail Marshes
- Saltwater Marshes
- Wet Prairies
- Wet Prairies - with Pine
- Emergent Aquatic Vegetation
- Submergent Aquatic Vegetation
- Sand Other Than Beaches
- Rural Land in Transition
- Borrow Areas
- Spoil Areas
- Fill Areas Highways & Railways
- Airports
- Roads & Highways
- Canals & Locks
- Auto Parking Facilities
- Transmission Towers
- Communication Facilities
- Electrical Power Facilities
- Electrical Power Transmission
- Water Supply Plants
- Sewage Treatment

Land Use Data Source
1995 SFWMD Data Level 3

Figure IV.F. 7

Martin Plant Land Use

Level 3 Land Use Legend

Last Revised: 04/98

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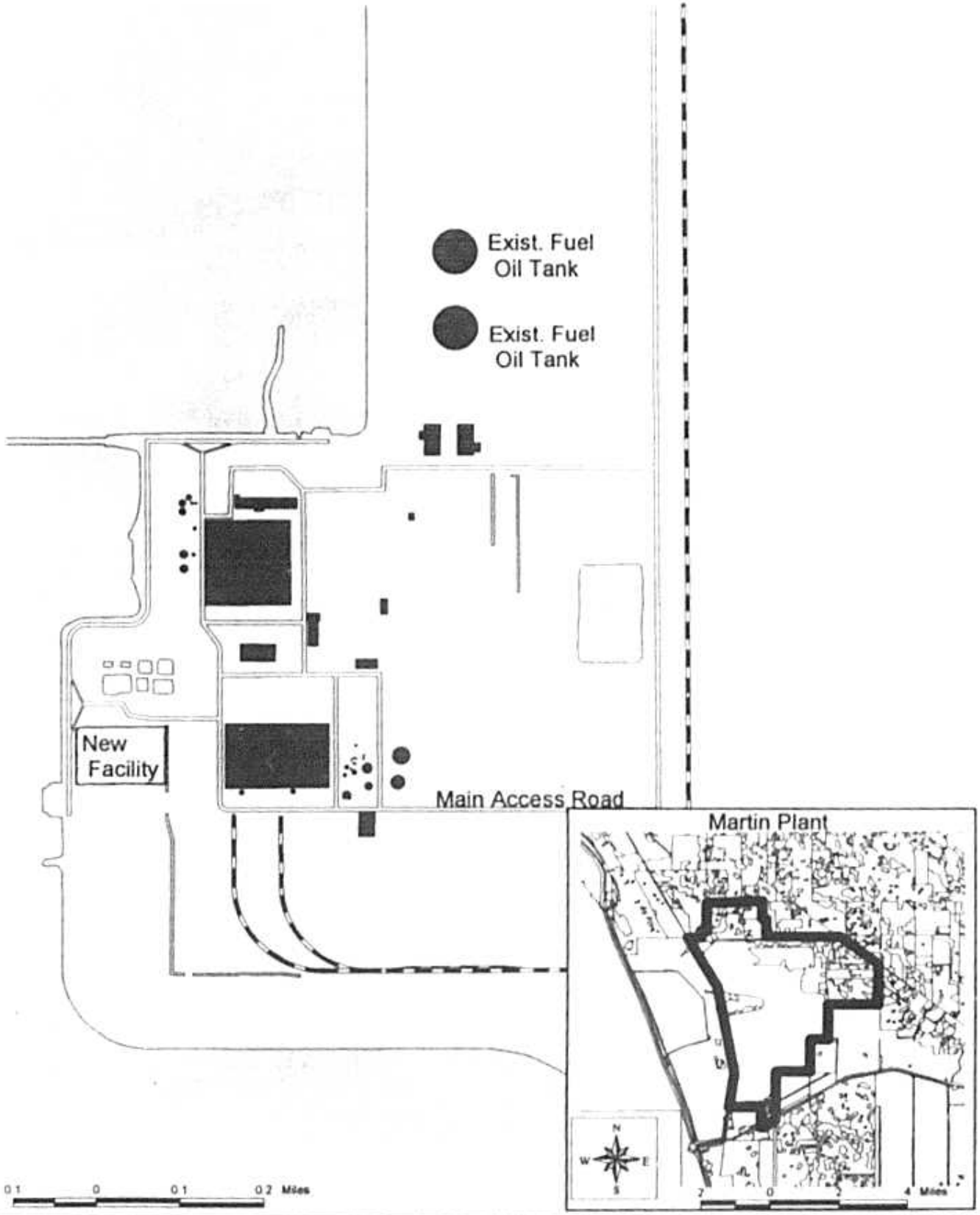

Figure IV.F. 8

Martin Plant Site Plan Showing Location Of New facility

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FPL Martin Plant Site

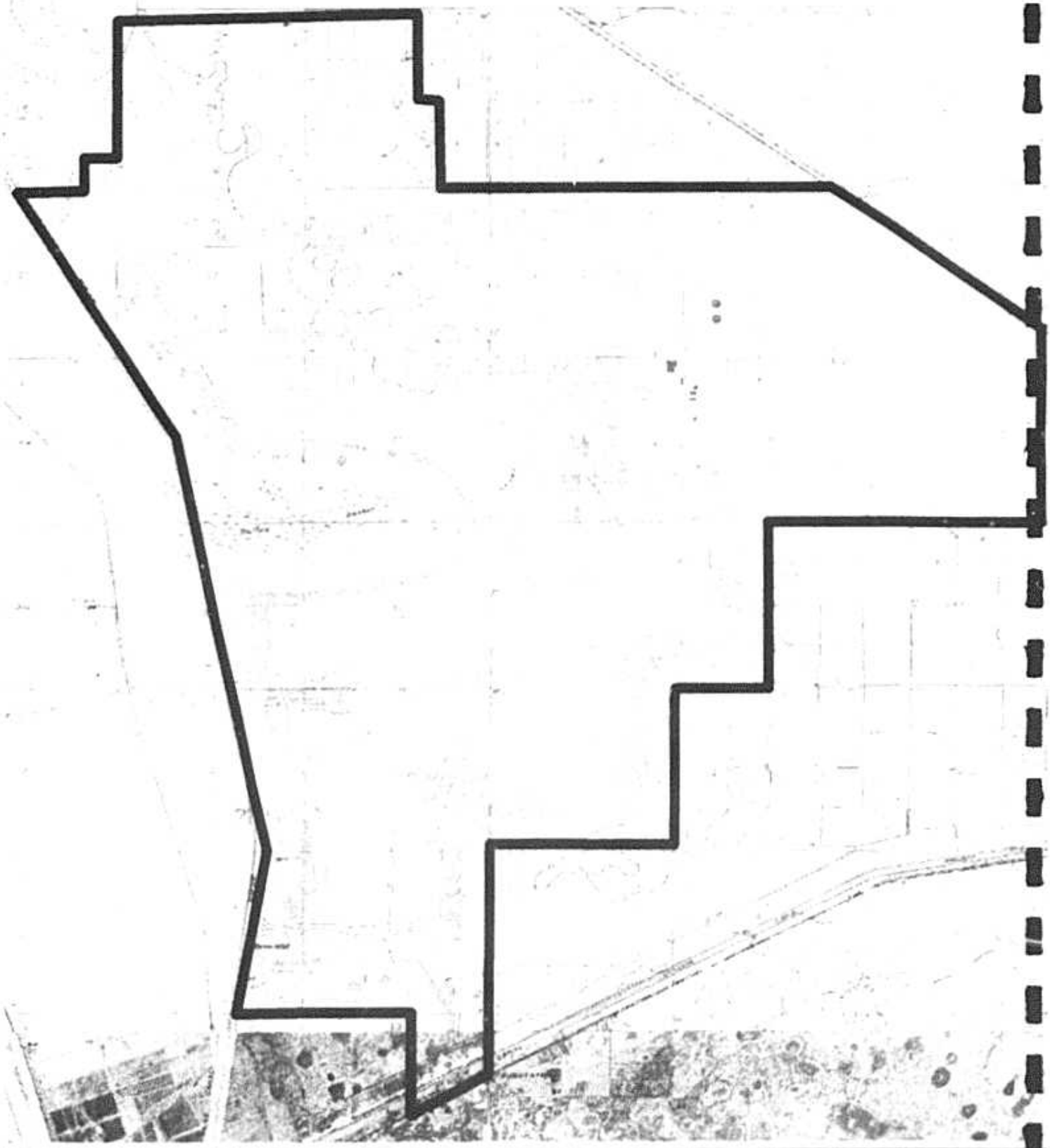

Figure IV.F. 9
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IV. Environmental and Land Use Information:

Supplemental Information

Potential Sites

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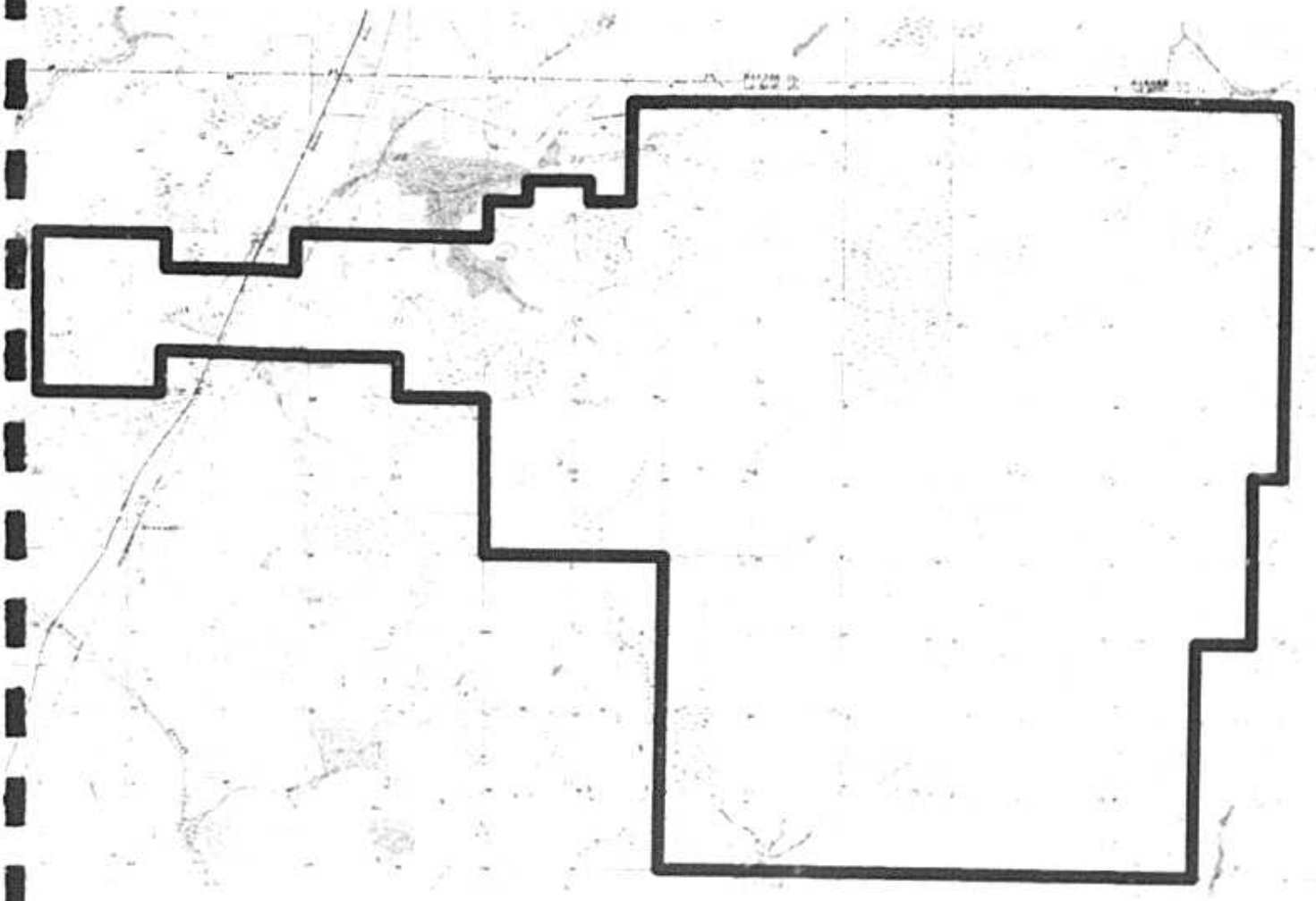
FPL DeSoto Plant Site



N
W E
S

Figure IV.F.10

3000 0 3000 6000 Feet

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GIS

FPL Canaveral Plant Site

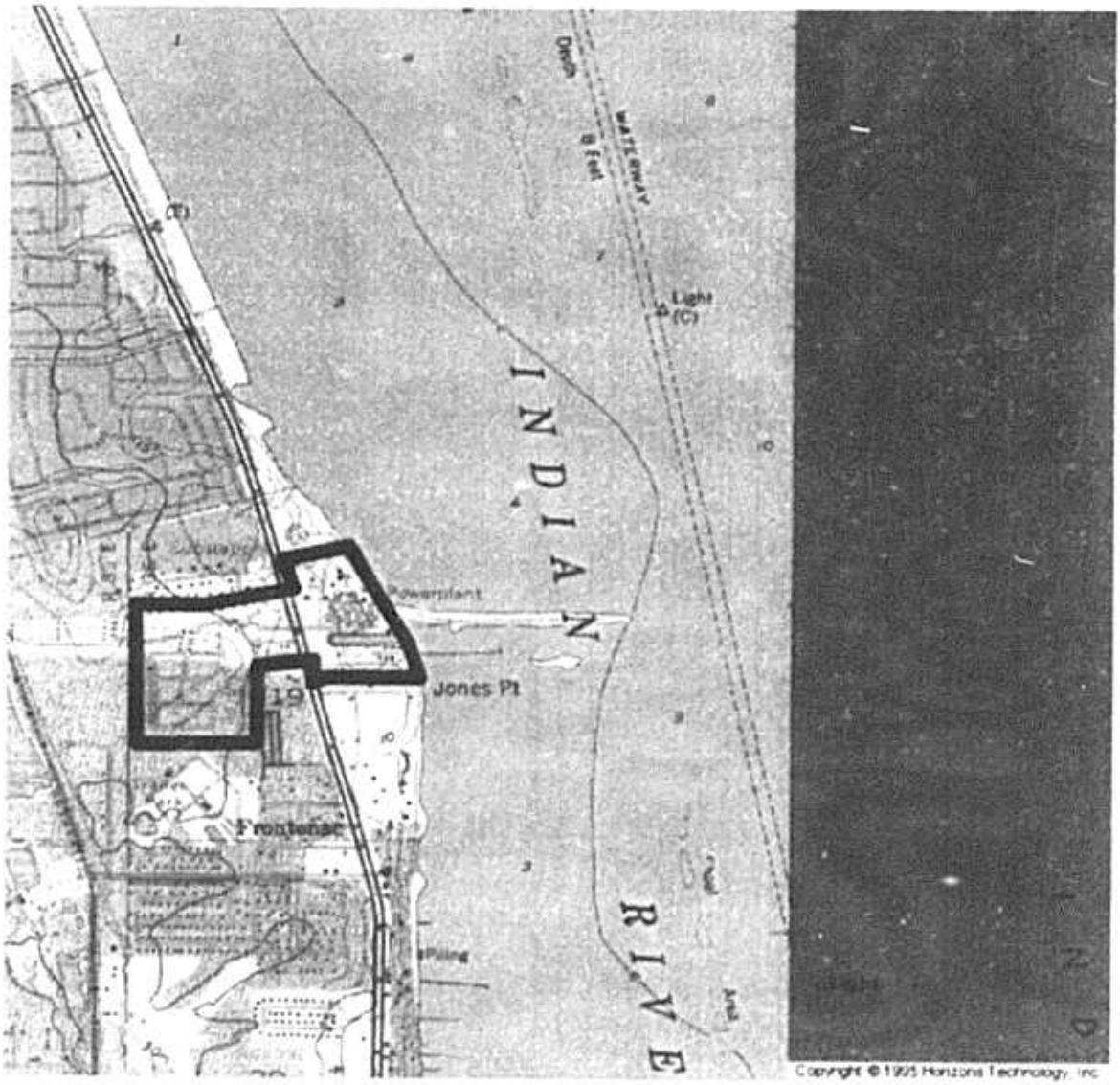

Figure IV.F.11

60

2000 0 2000 Feet

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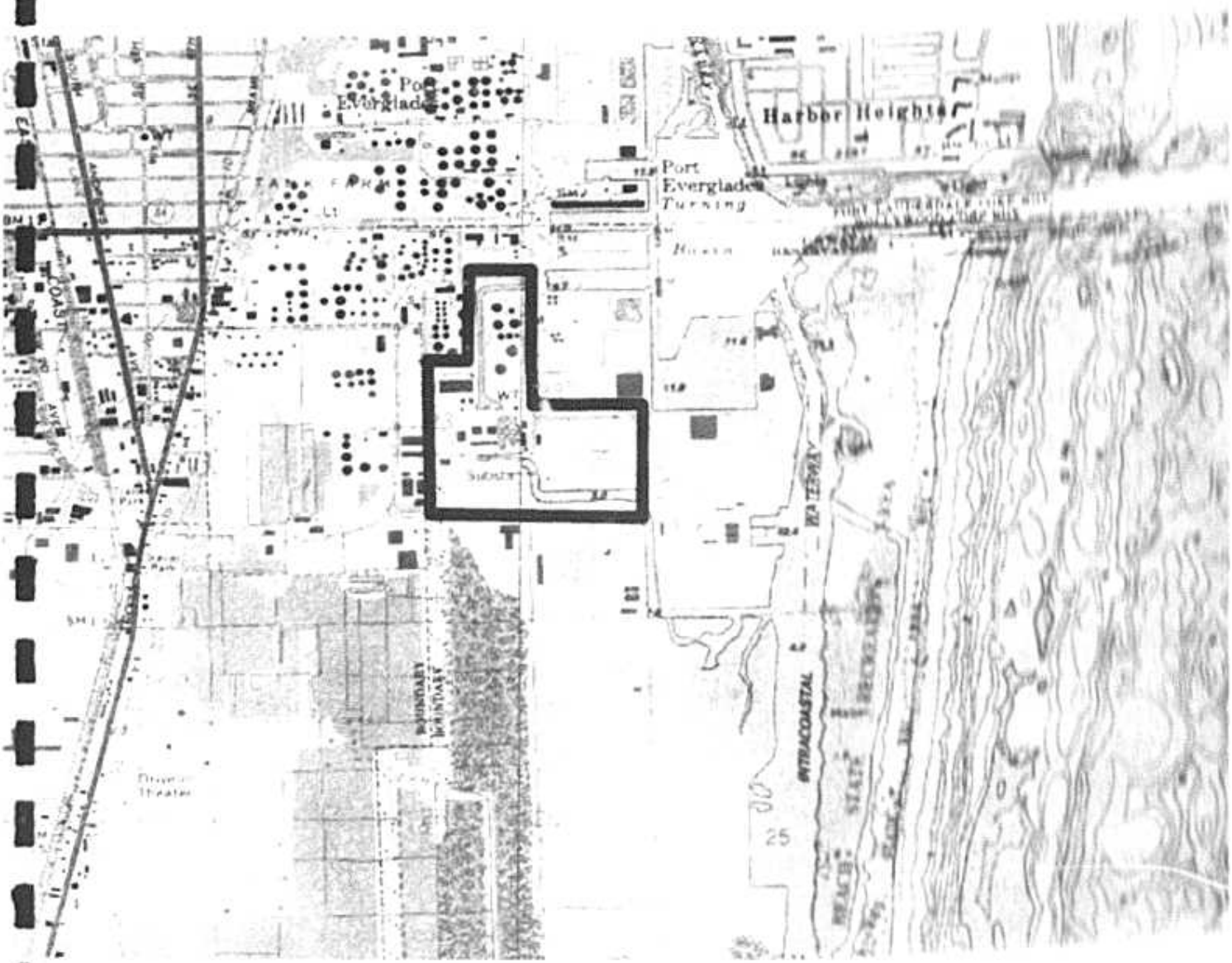
FPL Port Everglades Plant Site



N
W E
S

2000 0 2000 Feet

Figure IV.F.12

61

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FPL Riviera Plant Site

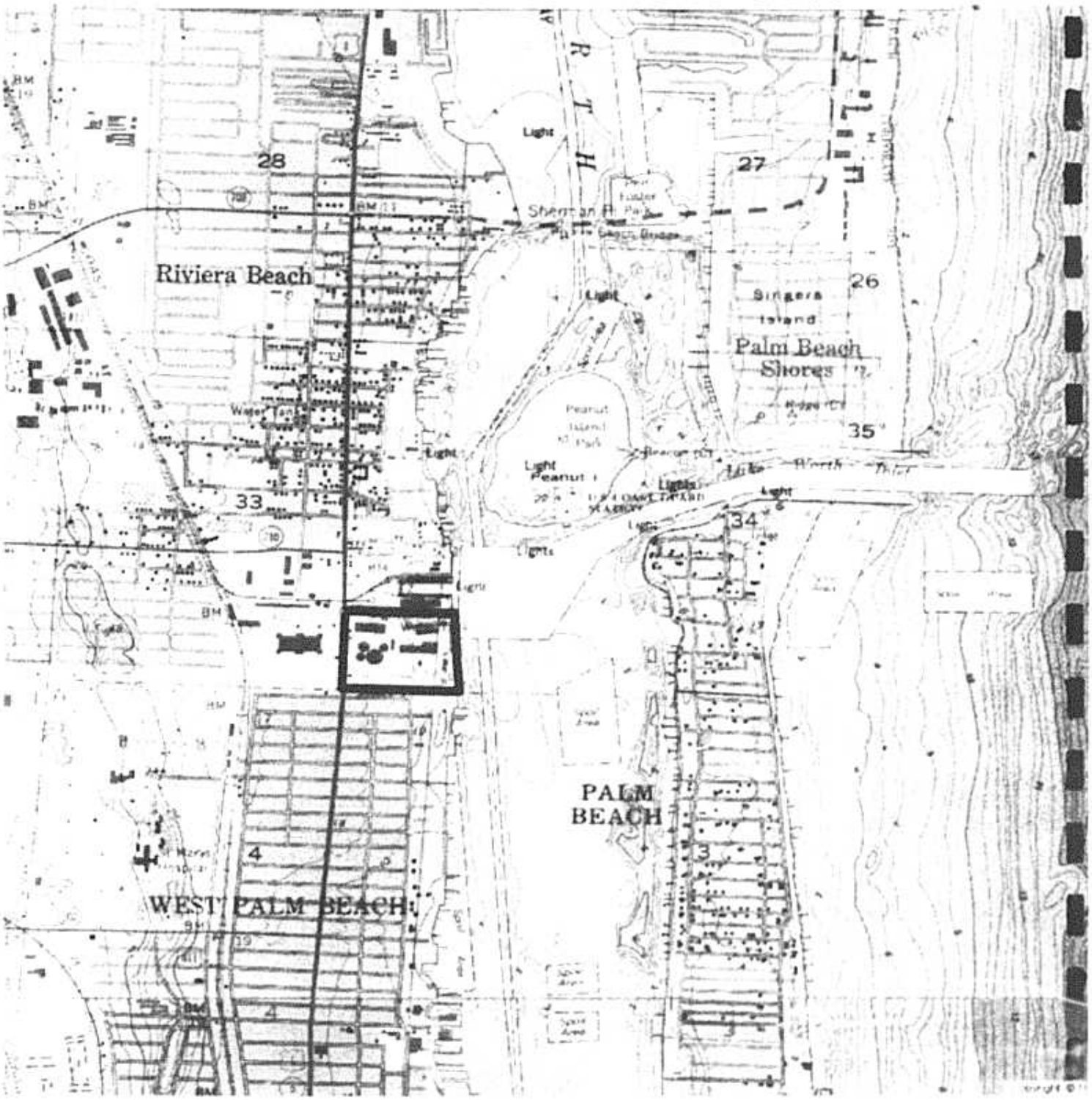

Figure IV.F.13

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V. Other Planning Assumptions and 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 considers two types of transmission constraints. External constraints deal with FPL's ties to its neighboring systems. Internal constraints deal with the flow of electricity within the FPL system.

The external constraints are important since they affect the development of assumptions for the amount of external assistance which is available and the amount and price of economy energy purchases. Therefore, these external constraints 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 transfer capability as well as historical levels of available assistance. FPL models this amount of external assistance as an additional generator 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 constraints are of interest during the production costing component of the economic analysis of the various resource plans. These constraints reflect the location of generators within the FPL system and impact the total system production cost.

FPL currently has no plans for augmenting its transmission interface with other systems.

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.

As discussed on page 37 of FPL's Site Plan document, FPL performs economic analyses of competing resource plans using the EGEAS (Electric Generation Expansion Analysis System) computer model from Stone and Webster Management Consultants, Inc. The resource plan reflected in FPL's Site Plan document emerged as the resource plan with the lowest cumulative present value of revenue requirements and the least impact on FPL's levelized system average electric rates (i.e., a Rate Impact Measure or RIM approach). Please refer to page 37of the Site Plan document for further information.

FPL performed three sensitivity analyses in its 1997 resource planning work. Two of these analyses used load forecasts which differed from FPL's base case or "Most Likely" load forecast. (The third sensitivity analysis is discussed in Discussion Item #4.)The first of these sensitivity analyses looked at a case in which a "Low" load forecast was combined with a "High Price" fuel forecast. In this case, FPL's need for incremental resources moved out past the end of the 1998 – 2007 reporting period. Consequently, no power plant construction options, either new plants or expansion of existing power plants, would be needed for this sensitivity case.

The second sensitivity analysis examined a case in which a "High" load forecast was combined with a "Low Price" fuel forecast. In this case, FPL's need for incremental resources moved forward in time to 1999. This accelerated need, if assumed to be met solely through the construction of new units (as is the primary focus of the Site Plan filing), could only be addressed by combustion turbines in the early years. Subsequent years would be addressed by a combination of new combined cycle units and repowering/expansion of existing units.

The construction options selected in the resource plans for FPL's "Most Likely" case, and for the two sensitvity cases discussed above, are presented on the following page in Table V.1.

Table V.1

Selected Power Plant Construction Options For Base and Sensitivity Cases

Year	"Low" Load and "High" Fuel Price Case	"Most Likely" Load and "Most Likely" Fuel Price Case	"High" Load and "Low" Fuel Price Case
1998	-----	-----	-----
1999	-----	----	2 CT
2000	-----	-----	3 CT
2001	-----	-----	5 CT
2002	-----	Ft. Myers Expansion	Ft. Myers Expansion
2003	-----	-----	Martin 5 CC
2004	-----	Sanford Expansion	Sanford Expansion
2005	----	-----	Martin 6 CC
2006	-----	Martin 5 CC	2 CC
2007	-----	Martin 6 CC	1 CC

Key: CT = combustion turbine
CC = combined cycle unit (at undetermined site unless otherwise noted)

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 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 base case or "Most Likely" fuel price forecast are discussed on page 58 of FPL's Site Plan document.

The "High Price" and "Low Price" fuel forecasts are developed based on a review of major supply and demand assumptions for oil and natural gas. The "High Price" forecast assumes that the worldwide demand for petroleum products will grow somewhat rapidly throughout the planning horizon. Non-OPEC crude oil supply will remain unchanged as improved drilling technology permits only the replacement of depleting fields. As a result, OPEC's market share will grow more rapidly than in the base case which would result in higher oil prices. In addition, this forecast assumes that domestic natural gas demand will grow somewhat rapidly, primarily due to significant increases in the construction of combined cycle generation. Domestic natural gas production will increase slowly as improved drilling technology permits only the replacement of depleting fields. This will result in higher natural gas imports, including Liquified Natural Gas (LNG), than in the base case which, in turn, results in higher natural gas prices.

The "Low Price" fuel forecast assumes that worldwide demand for petroleum products will grow slowly over the forecast horizon. It also assumes that non-OPEC crude oil supply will grow rapidly due to significant improvement in drilling technology and that OPEC's market share will only make small gains relative to the base case. In regard to natural gas, the "Low Price" forecast assumes that domestic demand for natural gas will grow slowly over the forecast horizon and that domestic production will increase faster than in the base case. These assumptions result in lower oil and gas price forecasts.

FPL did test the sensitivity of its resource plan to "High Price" and "Low Price" fuel forecasts, as well as to "High" and "Low" load forecasts, in two sensitivity analyses. The results of these analyses are presented above in FPL's response to Discussion Item # 2.

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.

In addition to the sensitivity analyses discussed above which examined the impact of "High" and "Low" load and fuel price forecasts, FPL also performed a sensitivity analysis in which the differentials between oil prices, gas prices, and coal prices were kept constant over the planning horizon. FPL performed this analysis solely due to the fact that it was included in the FPSC's list of specified information for the Site Plan filing. FPL believes that the likelihood of a constant differential between fuel prices occurring over the planning horizon is very small. In order to perform this "acid test" analysis, FPL used the initial year price forecast for each fuel and kept those prices constant throughout the planning horizon.

The results of this analysis showed that the Ft. Myers expansion in 2002, the Sanford expansion in 2004, and two new combined cycle units which would come in-service in 2006 and 2007 respectively, would be the most economical options with this "acid test" fuel forecast assumption. Thus the same types of construction options, repowering and expansion of existing units, followed by new combined cycle plants, are the best choices under both the "Most Likely" and "acid test" fuel price 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. Schedules 1 and 8 present the capacity output ratings of FPL's existing units. The values used for outages and heat rates are 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 which were considered in the resource planning work. A summary of this information for the new capacity options FPL projects to add over the planning horizon is presented on Schedule 9. Please refer to that schedule.

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.

The key financial assumptions used in FPL's 1997 resource planning work were: a 45% debt and 55% equity FPL capital structure; projected debt cost of 8.5%; and an equity return of 12.5%. These assumptions resulted in a weighted average cost of capital of 10.70% and an after-tax discount rate of 9.2%. These assumptions were used in FPL's base case or "Most Likely" forecast case analysis, and in its sensitivity analyses of alternate load and/or fuel price forecasts.

In order to test the sensitivity of the resource plan to a different set of financial assumptions, FPL performed an analysis in which the capital financing structure was changed to one which might be more typical of a case involving third-party financing of a new power plant. This alternate financing structure was assumed to be one made of 80% debt and 20% equity. The returns on debt and equity were assumed to be the same as for FPL's "Most Likely" case, 8.5% and 12.5% respectively. These assumptions result in a weighted average cost of capital of 9.3% and an after-tax discount rate of 6.68%.

The results of this "alternate financial case" sensitivity analysis were the same as for FPL's "Most Likely" case analysis. The Ft. Myers expansion project was selected for 2002, the Sanford expansion project was selected for 2004, and the Martin 5 and 6 combined cycle units were selected for 2006 and 2007, respectively.

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 intergrated resource planning (IRP) process is described on pages 33 through 38 of FPL's Site Plan 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 intent of minimizing FPL's levelized system average rate (i.e., a Rate Impact Measure or RIM approach). However, since in 1997 the DSM goals through the year 2003 were taken as "a given", the total economic analyses of competing resource plans were simply comparisons of competing capacity options. Since a utility's total kwh sales do not vary when comparing new capacity options, the capacity options which yield the lowest cost also yield the lowest electricity rates. Therefore, for the 1997 resource planning work, the resource plans were compared on the basis of lowest cost (i.e., cumulative present value of revenue requirements).

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

FPL traditionally uses two generation reliability criteria in its resource planning work. These are a minimum 15% Summer reserve margin and a maximum of 0.1 days per year loss-of-load-probability (LOLP). However, in its 1997 planning work, FPL also used a third criterion: a minimum 15% Winter reserve margin due to concern regarding reserves available during Winter peak loads. (FPL will continue to monitor this particular concern and make appropriate adjustments as needed to provide reliable service.) These reliability criteria are discussed on pages 35 and 36 of FPL's Site Plan document.

In its 1997 planning work, FPL utilized transmission planning criteria which are consistent with the Principles and Guides for Planning Reliable Bulk Electric Systems published by the Florida Reliability Coordinating Council in September, 1996. A copy of that document follows this page.

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Principles and Guides for Planning Reliable Bulk Electric Systems

FLORIDA RELIABILITY COORDINATING COUNCIL

September - 1996

Criteria For Reliability In System Planning

Introduction

The purpose of is to augment the reliability of bulk power supply in the areas served by the member systems. This can be best accomplished by promoting maximum coordination of planning, construction and utilization of generation and transmission facilities involved in interconnected operations.

To assist in achieving these objectives, the member organizations of FRCC recognize the need for regional criteria to be used in the planning of their systems for adequate and reliable bulk power supply.

It is recognized that the reliability of power supply in local areas is the responsibility of the individual FRCC members and that each system has internal criteria relating to load forecasting, resource planning, and transmission planning. The criteria outlined in this document are a resource to be used in conjunction with local area criteria.

Forecasts

♦ Principle

Electricity demand and energy forecasts must project far enough into the future to allow timely development, design, and implementation of electric system plans needed to reliably supply customer requirements.

♦ Guides

1. Forecasts should generally include such factors as economic, demographic, and customer trends; conservation, improvements in the efficiency of electrical energy use, and other changes in the end uses of electricity; and weather effects.

2. Assumptions, methodologies, and forecast uncertainties should be documented.

3. Forecasts should clearly document how the effects of utility-sponsored demand-side management programs (e.g., conservation, interruptible demand, direct control load management) are treated.

4. Load forecasts based upon the hourly integrated net peak demand for normal weather conditions shall be used for FRCC reports. However, other forecasts may be used for purposes other than FRCC reporting.

5. Forecasts should state how the electricity demand and energy projections of interconnected entities that are within the boundaries of the FRCC region but not members of FRCC are addressed.

Resources

♦ Principle

Adequate resources must be planned, designed, and implemented to reliably meet projected customer electricity demand and energy requirements.

♦ Guides

A. General

1. Assessments of future resource adequacy should generally include the following:
   - Electricity demand and energy forecasts, including uncertainties
   - Existing and planned demand- and supply-side resources
   - Availability and performance of all resources
   - Limited-energy resources
   - Delays in resource in-service dates
   - Resource life cycle
   - Environmental or regulatory limitations
   - Availability of emergency assistance
2. Measurable levels of resource adequacy should be defined, and may be based on any one of several evaluation methodologies or criteria, as appropriate.
3. Adequate margins should be provided in both active (real) and reactive power resources.
4. Resources not under a system's control should be addressed in the planning process as to availability, capacity value, emergency assistance, scheduling, and deliverability.
5. A balanced relationship should be maintained among the type, size, capacity, and location of all electric system resources.

B. Demand-Side Resources

1. The characteristics of utility-sponsored demand-side resources used in assessing future resource adequacy should generally include the f following:

   - Consistent demand-side management (DSM) program ratings, including seasonal variations
   - Effect on annual system load shape
   - Availability, effectiveness, and diversity of DSM programs
   - Contractual arrangements
   - Expected program duration
   - Aggregate effects of multiple DSM programs

2. The effects of utility-sponsored DSM programs (e.g., conservation, interruptible demand, direct control load management) should be documented and should be verified.

C. Supply-Side Resources

1. Supply-side resource characteristics used in assessing future resource adequacy should generally include the following:

   - Consistent Generator Unit Ratings, Including Seasonal Variations
   - Each FRCC member shall establish Seasonal Net Capability ratings for each generating unit. The Seasonal Net Capability ratings are intended to reflect such seasonal variations as ambient temperature, condensing water temperature and availability, fuels, steam heating loads, reservoir levels and scheduled reservoir discharge.
   - Availability of utility and non-utility generator units
   - Dependability of and contractual obligations for capacity and energy purchases and sales, including assignment of system losses
   - Fuel availability, deliverability, and diversity
   - Retirement of resources

- Changes in unit capability and or availability due to major modifications required for compliance with environmental regulations.

2. Supply-side resource capability shall be tested to demonstrate and verify that the Seasonal Net Capability ratings can be achieved in the respective season. The reported capability is, therefore, a figure which should not be altered until the accumulated evidence of tests and/or analyses of operating experience indicate that a long-term change has taken place. The Seasonal Net Capability ratings shall be confirmed annually.

3. Non-utility generator facilities should be planned and integrated with the bulk electric systems in accordance with all applicable planning principles, criteria, and guides.

4. Purchasers, transmitters, and sellers of electricity should coordinate and agree with each other on the characteristics and level of dependability of their elecricity transactions for reliability assessment purposes, including such factors as:

   - Contractual commitments
   - Duration of the transaction
   - Dependability of the transaction
   - Availability of dedicated generator units
   - Availability of transmission capacity
   - Effect of firm transactions on deliverability of emergency assistance

5. The system should be planned so that operating procedures can be developed for the timely restoration of supply-side resources following a system disturbance, including coordination with neighboring systems, if necessary.

Transmission

♦ Principle

Transmission systems that are part of an interconnected network must be planned, designed, and constructed to operate reliably within thermal, voltage, and stability limits.

♦ Guides

A. Adequacy

1. Transmission systems should be capable of delivering generator unit output to meet projected customer demands during normal and probable contingency conditions.

2. Transmission interconnections between electric systems should have sufficient capability to accommodate projected electricity transfers while not burdening neighboring electric systems.

3. An adequate supply of reactive power should be located throughout the electric systems to accommodate projected customer demands and electricity transfers while maintaining system voltages within acceptable limits during normal and probable contingency conditions.

4. A balanced relationship among transmission system elements should be maintained, if practical, to avoid excessive dependence on any one transmission circuit, structure, right-of-way, or substation.

5. Transmission systems should allow for maintenance of generation and transmission equipment without unacceptable loss of system reliability.

6. Transmission systems should provide flexibility in switching arrangements, voltage control, and other control measures to ensure reliable system operation.

7. The system should be planned so that operating procedures can be developed for the timely restoration of electric system elements following a system disturbance, including coordination with neighboring systems, if necessary.

8. The transmission facilities and electricity transfers of interconnected entities that are not members of FRCC should be addressed in the transmission planning process.

B. Security

1. Electric systems should be planned to withstand probable contingencies at projected customer demand levels and electricity transfers.

2. It is recognized that there are credible, less probable contingencies which may result in islanding and/or loss of firm load. These conditions are considered acceptable as long as the adverse impact is limited and rapid load restoration is possible. Credible, less probable contingencies should be evaluated for risks, consequences, and corrective actions to avoid cascading outages or voltage collapse resulting in uncontrolled interruptions to customer electric supply.

3. Each of the FRCC member systems should be planned to avoid cascading and should generally consider the following contingencies:

   - Sudden loss of entire generating capability in any one plant.
   - Sudden loss of a large load or major load center.
   - The outage of the most critical transmission line caused by a three-phase fault during the outage of any other critical transmission line.
   - Sudden loss of all lines on a common right-of-way.
   - Sudden loss of a substation (limited to a single voltage level within the substation plus transformation from that voltage level), including any generating capacity connected thereto.
   - Delayed clearing of a three-phase fault at any point on the system due to failure of a breaker to open.

C. Coordination

1. The planning and development of electric systems should be coordinated with other interconnected systems to preserve the reliability benefits of interconnected operations.

2. Data that is essential for electric system analysis should be shared on a timely basis. Such data generally includes:

   - System characteristics for modeling, including transmission, resources, and customer demands
   - Resource plans and facility locations
   - Electricity transactions
   - Special controls and procedures that affect transmission capability, resources, or operations

3. Coordinated system studies should be conducted as required.

D. Protection Systems

1. Protection systems for interconnected electric systems should be planned to isolate only the faulted electric system element(s), except in those circumstances where additional elements must be removed from service intentionally to preserve electric system integrity.

2. Protection systems should be planned to include the following general characteristics:

   - Single-contingency redundancy
   - Minimal complexity
   - Reliable communication systems, when used
   - Selectivity of operation
   - Capability of being periodically tested and maintained

3. Special protection systems (or remedial action schemes) should be planned to generally achieve the same level of operational reliability as that provided by traditional protection systems.

4. Automatic load shedding (interruption of electric supply to customers) equipment should be coordinated among electric system elements and with neighboring electric systems to preserve electric system integrity.

5. Protection system designs and their modifications should be coordinated with all applicable planning and operating principles, criteria, guides and with neighboring electric systems as necessary.

6. Protection system applications, settings, and coordination should be reviewed periodically and whenever major changes are anticipated in resources, transmission, substations, operating conditions, or customer demand.

Definitions

FRCC's Planning Principles and Guides are defined as follows:

- **Adequate/Adequacy** - The ability of a bulk electric system to supply the aggregate electrical demand (power) and energy requirements of the consumers at all times, taking into account scheduled and (reasonably expected) unscheduled outages of system components.

- **Cascading** - The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in an uncontrolled, widespread collapse of system power which cannot be restrained from sequentially spreading beyond an area predetermined by appropriate studies.

- **Contingency** - The unexpected loss of a system element.

  - **Probable Contingency** - The loss of any single element (generating unit, transmission line or transformer).

  - **Credible, Less Probable Contingency** - The loss of two or more elements in a single substation, generating plant, or on a transmission right-of-way.

  - **Severe Contingency** - The loss of all elements in a single substation at one voltage level plus transformation or the entire substation, all generation at a plant, or all lines on a common transmission line right-of-way.

- **Emergency Assistance** - Power flow utilizing the interconnected transmission network resulting from a request for assistance by a utility with deficient generation.

- **Forecast Uncertainty** - The probable deviations from the expected values of factors considered in a forecast.

- **Integrated Net Peak Demand** - Peak demand calculated by dividing the energy used over a short period of time by the time period.

- **Limited Energy Resource** - Resources that are dependent on a limited fuel supply, other operating restrictions, or are dispatched to optimize either cost, reliability or other criteria.

- **Normal Weather** - Typical seasonal weather based on historical actual weather data over a reasonable time period, typically twenty years.

- **Seasonal Net Capability** - The gross capacity of a generating unit as measured at the generator terminals less the power required for the auxiliary equipment. This value can vary with ambient temperature.

- **Net Capacity** - The maximum capacity (or effective rating), modified for ambient limitations, that a generating unit, power plant, or electric system can sustain over a specified period of time, less the capacity used to supply the demand of station service or auxiliary needs (such as fan motors, pump motors, and other equipment essential to operation of the generating units).

- **Reliability** - In a bulk power system, this is the degree to which the performance of the elements of that system results in power being delivered to consumers within accepted standards and in the amount desired. The degree of reliability may be measured by the frequency, duration, and magnitude of adverse effects on consumer service.

- **Special Protective System** - A relay system designed to remove electrical elements from the network for conditions other than electrical system faults.

- **System Disturbance** - An unplanned event that causes widespread variations in system parameters on the bulk electric system.

- **Security** - The ability of the bulk (power) electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system components (or switching operations).

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

FPL monitors and evaluates each of its DSM programs on an annual basis. These analyses enable FPL to verify, and update as needed, the projected demand and energy savings of its DSM programs in order to accurately reflect DSM's impact on FPL's future resource needs.

FPL utilizes statistically adjusted engineering models which are calibrated with metered data, billing data, and survey information in order to perform these evaluations. Data is collected from non-participating customers in order to establish what the baseline efficiencies would be in the absence of a particular DSM program. Then data from participants in the program are compared to non-participant data in order to establish usage patterns, demand impacts, and energy impacts associated with the program.

The projected useful life of each measure addressed in FPL's DSM programs is also reviewed periodically. FPL reviews this both through its own analyses as well as through a review of industry publications such as the ASHRAE handbook of HVAC Systems and Applications and manufacturers' product literature. FPL also monitors the published research of others who are studying DSM measure life.

Finally, for those DSM measures which involve the utilization of load management, FPL conducts periodic tests of the load control equipment to ensure that it is functioning correctly.

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

FPL's resource planning process is designed to address various "strategic concerns" or areas of uncertainty. There are 6 areas of uncertainty that FPL seeks to address in its resource planning work: load growth, fuel price, transmission system constraints, environmental regulations, evolving technology, and competitive risk.

In regard to uncertainty about both load growth and fuel price, FPL addresses this by developing resource plans which use "High" and "Low" load forecasts, as well as "High" and "Low" fuel price forecasts, as is discussed in Discussion Item # 3. (In response to the list of information specified

by the FPSC for inclusion in the Site Plan filing, FPL also developed a resource plan which used an "acid test" fuel price forecast. This is discussed in Discussion Item #4.) In addition, uncertainty about fuel prices is addressed in fuel conversion efforts such as the conversion at FPL's Manatee units which will allow the use of Orimulsion, and in the expansion and repowering projects now planned at FPL's Ft. Myers and Sanford sites.

Uncertainty regarding transmission system constraints is addressed by annually updating assumptions about how much assistance may be available to FPL from outside of FPL's service territory as well as assumptions relating to transmission constraints within FPL's system. In regard to uncertainty about environmental regulations, FPL's policy has always been that it will comply with all existing environmental laws and regulations. In that regard, FPL's resource planning analyses include all reasonably known costs of complying with these laws and regulations. Furthermore, in regard to potential new environmental regulations, FPL believes that its efforts to further diversify its fuel sources (through burning of Orimulsion at Manatee), to maintain the ability to burn varying grades of oil or burning either oil or natural gas at numerous plants, and to expand the use of natural gas (through the planned expansion and repowering projects at Ft. Myers and Sanford), should allow FPL to reasonably respond to a variety of potential environmental regulations.

Uncertainty about evolving technology's potential impact on resource plans is best addressed by not committing to resource additions before it is necessary to do so. (In most cases, this approach also benefits the economics of the resource plan.) This minimizes the chance that a newly emerged technology will turn out to be a more economical choice than what the utility has already committed to. Uncertainty about evolving technology is also reduced by maintaining close contact with equipment vendors in order to better understand what the developmental status is of various generating technologies.

Finally, an increasingly important consideration in FPL's planning process is that of competitive risk. FPL's resource planning process is designed to identify the resource plan which best minimizes system average electric rates in order to keep FPL's service competitive in the evolving utility industry. Also, because of the inherent uncertainty associated with an evolving industry, long-term purchase commitments are undesirable. FPL seeks to avoid/minimize such commitments in its planning.

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 has been discussed, the principal elements of FPL's capacity additions during the next 10 years are the expansion and repowering of its Ft. Myers and Sanford plants in 2002 and 2004, respectively. The incremental capacity for these two sites comes from the addition of 6 combustion turbines (CTs) and 6 heat recovery steam generators (HRSGs). FPL plans to acquire these CTs and HRSGs through a bid process which will combine cost and performance considerations.

The later capacity additions projected in FPL's Site Plan document, the new Martin # 5 and # 6 units, will most likely be carried out following the issuance of a capacity solicitation to potential suppliers at an appropriate time, if that approach represents the best vehicle to offer the lowest cost new generating capacity.

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.

FPL's 1997 resource planning work did not identify any new or upgraded transmission lines during the 1998 – 2007 time period which would need to be certified under the Transmission Line Siting Act (403.52 – 403.536, F.S.)