Florida Power & Light Company
Biological Plan of Study Implementation for St. Lucie Plant EPU
Baseline Event 5 Data Report

Report to
Florida Power & Light Company

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Submitted by
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INTRODUCTION

During April 2012, Ecological Associates, Inc. (EAI) conducted the fifth baseline field sampling event in accordance with the St. Lucie Plant EPU Biological Plan of Study. During this fifth event, sampling was conducted on six days between April 2 and April 26, 2012. Data collected included general environmental data; water quality data; numbers and sizes of fish and shellfish collected by gill net, trawl, and beach seine; numbers of fish eggs and larvae and commercially or recreationally important decapod crustacean larvae collected by plankton net; and, numbers and sizes of sea turtles observed. Results of the fifth sampling event are provided in this report. All data should be considered preliminary until quality assurance checks have been completed.

SAMPLING LOCATIONS

Sampling was conducted within three separate sampling sites: SL1 located midway between the St. Lucie Plant and the Ft. Pierce Inlet, SL2 located in the vicinity of the St. Lucie Plant cooling water discharge, and SL3 located midway between the St. Lucie Plant and the St. Lucie Inlet.

For the purposes of gill netting and trawling, three transects were established within each of the three sampling sites: Transect A was located approximately 600 ft from shore on the beach terrace in water depths of 8-32 ft, Transect B was located approximately 4,000 ft. from shore in water depths of 34-44 ft, and Transect C was located approximately 8,000 ft. from shore in water depths of 31-46 ft. Plankton samples were collected concurrently with trawl samples at all three sites but only on Transects A and C.

Three stations were also established within each of the three sampling sites for the purpose of beach seining: Station A was located 0.5 mi. north of the center of the site, Station B was located at the center of the site, and Station C was located 0.5 mi. south of the center of the site. At all stations, seines were pulled to the beach from a water depth of approximately 4 ft.

For the purpose of boat-based sea turtle surveys, one transect was established in each of the three sampling sites. The transects were located along nearshore hardbottom habitat in each site.

RESULTS

Environmental data were recorded at each station during each day of sampling. Data recorded included sea conditions, air temperature, wind speed and direction, and sky conditions. Environmental data are summarized by day in Table 1. Values reflect the range of values recorded throughout each day of sampling.

Water quality data were recorded at three locations and three depths along each of the nine transects established for trawl and gill net sampling. Data recorded included conductivity, water temperature, salinity, pH, and dissolved oxygen (DO). Water quality data are provided in Table 2.

Trawls were towed for 15 minutes along each of the nine transects. The numbers of fish and commercially or recreationally important shellfish collected in each 15-minute tow are presented in Table 3. Because of variations in tow speed, the distances the trawl traveled during a 15-minute tow varied (based on GPS readings). In order to compare abundances among stations in terms of catch per unit effort, the numbers collected per kilometer of bottom sampled were calculated and are presented in Table 4.

The numbers of fish and commercially or recreationally important shellfish collected by gill net on each of the nine transects is given in Table 5. At each transect the gill net began to be retrieved 30 minutes after it was set. However, the total soak time (time from when the net first entered the water until the time it was completely removed from the water) varied among transects because of differences in retrieval times associated with variations in the number of fish present in the net. In order to compare abundances among stations in terms of catch per unit effort, the numbers collected per hour of total soak time were calculated and are given in Table 6.

Beach seines were deployed at each of the nine stations previously described. The numbers of fish and commercially or recreationally important shellfish collected at each station are presented in Table 7.

A maximum of 25 representative specimens of each Representative Important Species (RIS) of fish collected at each transect/station by trawl, gill net, and beach seine were measured (total length) and a batch weight for those specimens was obtained. Average lengths and average weights of each RIS at each station/transect for each gear type are presented in Table 8.

Bongo nets were used to collect fish eggs and larvae as well as commercially or recreationally important decapod crustacean larvae at each of the six transects previously described. Nets were pulled for 15 minutes and the volume of water filtered determined by means of flow meters. Numbers of individuals per cubic meter of water filtered are given in Table 9.

To quantify the number of sea turtles present in each of the three sampling sites, one one-kilometer-long transect in each sampling site was traversed by boat twice. The numbers of sea turtles sighted during each pass along each transect are presented in Table 10.

Table 1. Environmental Data, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. Values reflect the range of values recorded throughout each day of sampling.

Sampling	Date	Sea Conditions	Air Temp	Wind Speed/Direction	Sky Conditions
Trawls/ Ichthyoplankton	4/10/2012	1-2 ft swell	21.3-24.2°C	5-10 mph/SE to SSW	Clear
Trawls/ Ichthyoplankton	4/11/2012	1-2 ft swell, light chop	24.2-25.9°C	3-5 mph/E to SE	Clear
Gill Nets	4/10/2012	1-2 ft swell	23.6-26.9°C	3-5 mph/variable	Clear
Gill Nets	4/11/2012	1-2 ft swell	21.5-26.2°C	3-10 mph/N to NW	Clear
Beach Seines	4/26/2012	calm to light chop	24.2-27.0°C	0-10 mph/SE	Clear
Sea Turtle Transects	4/2/2012	calm	23.3-24.4°C	3-5 mph/NNW	Clear

Table 2. Water Quality Data, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. NR = not recorded

Transect	Station	Depth	Conductivity (mS/cm)	Water Temp (°C)	Salinity (PSU)	pH	DO (mg/l)
Trawl SL1 A	North	Surface	55.70	24.66	36.93	8.08	6.46
		Mid-Depth	55.70	24.68	36.93	8.08	6.36
		Bottom	55.70	24.63	36.92	8.08	6.28
	Middle	Surface	55.70	24.63	36.93	8.06	6.38
		Mid-Depth	55.70	24.62	36.93	8.07	6.34
		Bottom	55.70	24.60	36.92	8.07	6.28
	South	Surface	55.70	24.63	36.92	8.05	6.60
		Mid-Depth	55.60	24.62	36.93	8.06	6.37
		Bottom	55.70	24.61	36.92	8.07	6.36
Trawl SL1 B	North	Surface	55.50	24.55	36.77	8.08	6.40
		Mid-Depth	55.50	24.55	36.77	8.07	6.40
		Bottom	55.50	24.57	36.77	8.08	6.42
	Middle	Surface	55.50	24.60	36.77	8.09	6.40
		Mid-Depth	55.50	24.62	36.78	8.09	6.41
		Bottom	55.50	24.62	36.78	8.09	6.60
	South	Surface	55.50	24.56	36.77	8.10	6.36
		Mid-Depth	55.50	24.56	36.77	8.10	6.39
		Bottom	55.60	24.56	36.85	8.10	6.62
Trawl SL1 C	North	Surface	55.50	24.71	36.78	8.10	6.45
		Mid-Depth	55.50	24.70	36.78	8.10	6.26
		Bottom	55.50	24.70	36.71	8.09	6.29
	Middle	Surface	55.50	24.74	36.78	8.10	6.35
		Mid-Depth	55.50	24.75	36.78	8.10	6.37
		Bottom	55.50	24.74	36.78	8.10	6.32
	South	Surface	55.60	24.74	36.86	8.08	6.54
		Mid-Depth	55.50	24.75	36.78	8.08	6.42
		Bottom	55.50	24.75	36.78	8.08	6.35
Trawl SL2 A	North	Surface	55.60	24.80	36.86	8.06	6.42
		Mid-Depth	55.60	24.86	36.79	8.06	6.36
		Bottom	55.50	24.86	36.87	8.07	6.35
	Middle	Surface	55.60	24.84	36.79	8.09	6.33
		Mid-Depth	55.60	24.84	36.79	8.08	6.38
		Bottom	55.60	24.74	36.86	8.08	6.36
	South	Surface	55.50	24.87	36.87	8.10	6.32
		Mid-Depth	55.60	24.74	36.86	8.14	6.28
		Bottom	55.60	24.73	36.86	8.09	6.31

Table 2 (Continued). Water Quality Data, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

Transect	Station	Depth	Conductivity (mS/cm)	Water Temp (°C)	Salinity (PSU)	pH	DO (mg/l)
Trawl SL2 B	North	Surface	55.60	24.73	36.93	8.11	6.20
		Mid-Depth	55.60	24.73	36.86	8.11	6.24
		Bottom	55.50	24.73	36.78	8.11	6.22
	Middle	Surface	55.50	24.75	36.78	8.12	6.23
		Mid-Depth	55.50	24.74	36.78	8.11	6.21
		Bottom	55.50	24.75	36.78	8.12	6.20
	South	Surface	55.50	24.75	36.78	8.12	6.32
		Mid-Depth	55.50	24.75	36.78	8.12	6.20
		Bottom	55.50	24.76	36.78	8.12	6.23
Trawl SL2 C	North	Surface	55.50	24.56	36.77	8.08	6.35
		Mid-Depth	55.50	24.59	36.77	8.08	6.39
		Bottom	55.50	24.59	36.77	8.09	6.35
	Middle	Surface	55.60	24.53	36.85	8.11	6.64
		Mid-Depth	55.50	24.56	36.85	8.11	6.39
		Bottom	55.50	24.57	36.77	8.10	6.30
	South	Surface	55.50	24.56	36.77	8.11	6.36
		Mid-Depth	55.50	24.59	36.77	8.11	6.36
		Bottom	55.50	24.59	36.77	8.12	6.28
Trawl SL3 A	North	Surface	55.70	25.07	36.95	8.06	6.40
		Mid-Depth	55.60	25.07	36.88	8.07	6.42
		Bottom	55.60	25.08	36.80	8.07	6.29
	Middle	Surface	55.50	24.96	36.80	8.09	6.31
		Mid-Depth	55.60	24.97	36.80	8.08	6.28
		Bottom	55.50	25.00	36.80	8.08	6.19
	South	Surface	55.60	25.06	36.88	8.08	6.18
		Mid-Depth	55.50	25.06	36.88	8.09	6.23
		Bottom	55.50	25.04	36.80	8.09	6.21
Trawl SL3 B	North	Surface	56.70	25.07	37.70	8.11	6.37
		Mid-Depth	55.50	24.83	36.79	8.12	6.50
		Bottom	55.60	23.84	36.80	8.13	6.80
	Middle	Surface	55.40	25.06	36.73	8.11	6.43
		Mid-Depth	55.40	25.04	36.73	8.11	6.55
		Bottom	55.60	24.00	36.82	8.13	6.75
	South	Surface	55.40	25.10	36.73	8.07	6.54
		Mid-Depth	55.40	24.81	36.71	8.09	6.63
		Bottom	55.60	23.83	36.80	8.11	6.89

Table 2 (Continued). Water Quality Data, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

Transect	Station	Depth	Conductivity (mS/cm)	Water Temp (°C)	Salinity (PSU)	pH	DO (mg/l)
Trawl SL3 C	North	Surface	55.30	25.00	36.65	8.11	6.30
		Mid-Depth	55.40	24.95	36.72	8.12	6.44
		Bottom	55.60	23.63	36.79	8.13	6.70
	Middle	Surface	55.50	25.02	36.72	8.10	6.44
		Mid-Depth	55.50	24.90	36.72	8.11	6.39
		Bottom	55.60	23.63	36.79	8.13	6.64
	South	Surface	55.50	25.02	36.80	8.10	6.50
		Mid-Depth	55.50	25.02	36.72	8.11	6.57
		Bottom	55.60	23.67	36.79	8.13	6.78
Gill Net SL1 A	West	Surface	55.90	23.77	37.03	8.05	6.25
		Mid-Depth	56.00	23.74	37.02	8.04	6.31
		Bottom	56.00	23.67	37.09	8.04	6.35
	Middle	Surface	56.00	23.78	37.10	8.03	6.23
		Mid-Depth	55.90	23.77	37.10	8.03	6.24
		Bottom	56.00	23.64	37.09	8.02	6.21
	East	Surface	55.90	23.92	37.03	8.00	6.13
		Mid-Depth	55.90	23.90	37.03	8.01	6.19
		Bottom	56.00	23.83	37.03	8.01	6.19
Gill Net SL1 B	West	Surface	55.70	24.01	36.89	8.08	6.13
		Mid-Depth	55.70	23.94	36.88	8.08	6.16
		Bottom	55.60	23.91	36.88	8.08	6.19
	Middle	Surface	55.70	24.00	36.96	8.07	6.31
		Mid-Depth	55.70	23.91	36.81	8.06	6.23
		Bottom	55.70	23.89	36.88	8.07	6.23
	East	Surface	55.70	23.96	36.89	8.03	6.16
		Mid-Depth	55.70	23.87	36.88	8.05	6.30
		Bottom	55.70	23.86	36.81	8.05	6.25
Gill Net SL1 C	West	Surface	55.60	24.37	36.84	8.09	6.22
		Mid-Depth	55.60	24.19	36.83	8.09	6.30
		Bottom	55.60	24.17	36.82	8.09	6.29
	Middle	Surface	55.60	24.33	36.83	8.08	6.39
		Mid-Depth	55.60	24.18	36.83	8.09	6.23
		Bottom	55.60	24.17	36.75	8.09	6.20
	East	Surface	55.50	24.32	36.76	8.05	6.26
		Mid-Depth	55.60	24.18	36.75	8.07	6.22
		Bottom	55.50	24.17	36.82	8.07	6.24

Table 2 (Continued). Water Quality Data, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

Transect	Station	Depth	Conductivity (mS/cm)	Water Temp (°C)	Salinity (PSU)	pH	DO (mg/l)
Gill Net SL2 A	West	Surface	55.80	24.25	36.98	8.09	6.24
		Mid-Depth	55.70	24.08	36.89	8.09	6.24
		Bottom	55.70	24.02	36.89	8.10	6.27
	Middle	Surface	55.50	24.93	36.86	8.08	6.23
		Mid-Depth	55.60	24.46	36.84	8.09	6.16
		Bottom	55.70	24.01	36.81	8.09	6.26
	East	Surface	55.50	25.09	36.80	8.06	5.99
		Mid-Depth	55.60	24.23	36.81	8.08	6.25
		Bottom	55.60	23.99	36.81	8.08	6.27
Gill Net SL2 B	West	Surface	55.60	24.61	36.85	8.10	6.23
		Mid-Depth	55.60	24.28	36.76	8.11	6.12
		Bottom	55.50	24.27	36.76	8.11	6.23
	Middle	Surface	55.50	24.55	36.84	8.10	6.27
		Mid-Depth	55.60	24.29	36.76	8.11	6.19
		Bottom	55.50	24.29	36.76	8.11	6.24
	East	Surface	55.70	24.71	36.93	8.09	6.08
		Mid-Depth	55.60	24.30	36.83	8.11	6.62
		Bottom	55.60	24.29	36.76	8.10	6.35
Gill Net SL2 C	West	Surface	55.60	25.06	36.88	8.11	5.87
		Mid-Depth	55.50	24.57	36.77	8.12	6.38
		Bottom	55.50	24.56	36.77	8.12	6.36
	Middle	Surface	55.50	24.93	36.80	8.11	6.46
		Mid-Depth	55.50	24.57	36.77	8.12	6.27
		Bottom	55.50	24.56	36.77	8.12	6.24
	East	Surface	55.30	24.95	36.72	8.09	6.24
		Mid-Depth	55.50	24.56	36.70	8.11	6.40
		Bottom	55.40	24.55	36.70	8.11	6.22
Gill Net SL3 A	West	Surface	55.50	24.40	36.76	8.09	6.13
		Mid-Depth	55.50	24.40	36.76	8.09	6.14
		Bottom	55.50	24.39	36.76	8.09	6.14
	Middle	Surface	55.50	24.34	36.76	8.07	6.22
		Mid-Depth	55.50	24.34	36.76	8.07	6.27
		Bottom	55.50	24.36	36.76	8.08	6.24
	East	Surface	55.50	24.38	36.76	8.04	6.27
		Mid-Depth	55.50	24.41	36.76	8.05	6.33
		Bottom	55.50	24.34	36.76	8.06	6.27

Table 2 (Continued). Water Quality Data, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

Transect	Station	Depth	Conductivity (mS/cm)	Water Temp (°C)	Salinity (PSU)	pH	DO (mg/l)
Gill Net SL3 B	West	Surface	55.50	24.70	36.78	8.12	6.17
		Mid-Depth	55.50	24.69	36.78	8.11	6.26
		Bottom	55.50	24.33	36.76	8.12	6.34
	Middle	Surface	55.60	24.69	36.78	8.11	6.25
		Mid-Depth	55.50	24.68	36.78	8.11	6.29
		Bottom	55.50	24.32	36.76	8.11	6.29
	East	Surface	55.50	24.68	36.78	8.06	6.31
		Mid-Depth	55.50	24.67	36.78	8.09	6.30
		Bottom	55.50	24.35	36.76	8.09	6.44
Gill Net SL3 C	West	Surface	55.50	24.82	36.71	8.15	6.29
		Mid-Depth	55.40	24.59	36.70	8.15	6.41
		Bottom	55.60	23.66	36.87	8.15	6.44
	Middle	Surface	55.50	24.76	36.71	8.15	6.52
		Mid-Depth	55.50	24.58	36.77	8.15	6.40
		Bottom	55.60	23.65	36.79	8.15	6.45
	East	Surface	55.70	24.69	36.93	8.14	6.38
		Mid-Depth	55.60	24.56	36.85	8.15	6.35
		Bottom	55.60	23.68	36.79	8.15	6.46

Table 3. Number of Individuals of Each Taxon of Fish and Commercially or Recreationally Important Shellfish Captured by Trawl during One 15-minute Tow at Each Station, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

TAXON	SL1			SL2			SL3			TOTAL
	A	B	C	A	B	C	A	B	C	
Callinectes sp.	1									1
Penaeidae (penaeid shrimp)									3	3
Rimapenaeus sp.				5		1			7	13
Sicyonia brevirostris (brown rock shrimp)									2	2
Bothus robinsi (twospot flounder)									1	1
Citharichthys macrops (spotted whiff)				1						1
Ophidion sp. (cusk-eel)									1	1
Prionotus scitulus (leopard searobin)								1	2	3
Umbrina coroides (sand drum)	1									1
TOTAL	2	0	0	6	0	1	0	1	16	26

Table 4. Number of Individuals of Each Taxon of Fish and Commercially or Recreationally Important Shellfish Captured per Kilometer by Trawl at Each Station, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. (Note: Totals in the right column represent the number of individuals captured per kilometer for all nine transects.)

TAXON	SL1			SL2			SL3			TOTAL
	A	B	C	A	B	C	A	B	C	
Callinectes sp.	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
Penaeidae (penaeid shrimp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.32	0.31
Rimapenaeus sp.	0.00	0.00	0.00	5.05	0.00	0.81	0.00	0.00	10.09	1.32
Sicyonia brevirostris (brown rock shrimp)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.88	0.20
Bothus robinsi (twospot flounder)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	0.10
Citharichthys macrops (spotted whiff)	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.10
Ophidion sp. (cusk-eel)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	0.10
Prionotus scitulus (leopard searobin)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	2.88	0.31
Umbrina coroides (sand drum)	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
TOTAL	1.92	0.00	0.00	6.06	0.00	0.81	0.00	0.76	23.05	2.65

Table 5. Number of Individuals of Each Taxon of Fish and Commercially or Recreationally Important Shellfish Captured by Gill Net at Each Station, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

TAXON	SL1			SL2			SL3			TOTAL
	A	B	C	A	B	C	A	B	C	
Arenaeus cribrarius (speckled swimming crab)							1			1
Ancylopsetta ommata (ocellated flounder)								1		1
Caranx crysos (blue runner)	5			1			1	5		12
Carcharhinus acronotus (blacknose shark)				1	1					2
Carcharhinus brevipinna (spinner shark)		1								1
Centropristis striata (black sea bass)	1									1
Chloroscombrus chrysurus (Atlantic bumper)	12									12
Diplectrum formosum (sand perch)		1								1
Lutjanus synagris (lane snapper)							33			33
Menticirrhus americanus (southern kingfish)	1				3					4
Micropogonias undulatus (Atlantic croaker)	1									1
Pomatomus saltatrix (bluefish)	2									2
Rhinobatos lentiginosus (Atlantic guitarfish)								1		1
Rhizoprionodon terraenovae (Atlantic sharpnose shark)		68	2		31		57	3	3	164
Scomberomorus maculatus (Spanish mackerel)	6									6
Sphyrna tiburo (bonnethead)	4						1			5
TOTAL	32	70	2	2	35	0	93	10	3	247

Table 6. Catch Per Unit Effort (Number of Individuals Per Hour of Soak Time) for Each Taxon of Fish and Commercially or Recreationally Important Shellfish Captured by Gill Net at Each Station, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. (Note: Totals in the right column represent the number of individuals captured per hour for all nine transects.)

TAXON	SL1			SL2			SL3			TOTAL
	A	B	C	A	B	C	A	B	C	
Arenaeus cribrarius (speckled swimming crab)	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.1
Ancylopsetta ommata (ocellated flounder)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.1
Caranx crysos (blue runner)	6.0	0.0	0.0	1.5	0.0	0.0	0.8	6.3	0.0	1.5
Carcharhinus acronotus (blacknose shark)	0.0	0.0	0.0	1.5	1.1	0.0	0.0	0.0	0.0	0.3
Carcharhinus brevipinna (spinner shark)	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Centropristis striata (black sea bass)	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Chloroscombrus chrysurus (Atlantic bumper)	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Diplectrum formosum (sand perch)	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Lutjanus synagris (lane snapper)	0.0	0.0	0.0	0.0	0.0	0.0	27.5	0.0	0.0	4.2
Menticirrhus americanus (southern kingfish)	1.2	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.5
Micropogonias undulatus (Atlantic croaker)	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Pomatomus saltatrix (bluefish)	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Rhinobatos lentiginosus (Atlantic guitarfish)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.1
Rhizoprionodon terraenovae (Atlantic sharpnose shark)	0.0	60.9	2.6	0.0	32.6	0.0	47.5	3.8	3.9	21.0
Scomberomorus maculatus (Spanish mackerel)	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Sphyrna tiburo (bonnethead)	4.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.6
TOTAL	38.4	62.7	2.6	3.0	36.8	0.0	77.5	12.5	3.9	31.6

Table 7. Number of Individuals of Each Taxon of Fish and Commercially or Recreationally Important Shellfish Captured by Beach Seine at Each Station, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

TAXON	SL1			SL2			SL3			TOTAL
	A	B	C	A	B	C	A	B	C	
Anchoa hepsetus (striped anchovy)		14		43	16					73
Caranx latus (horse-eye jack)					1					1
Elops saurus (ladyfish)	1									1
Harengula jaguana (scaled sardine)	6									6
Menticirrhus littoralis (Gulf kingfish)					3					3
Pomatomus saltatrix (bluefish)								11		11
Scomberomorus maculatus (Spanish mackerel)				1						1
Selene vomer (lookdown)	2					4				6
Trachinotus carolinus (Florida pompano)			1	2		1			1	5
Trachinotus falcatus (permit)						4				4
Umbrina coroides (sand drum)			1	1					2	4
TOTAL	9	14	2	47	20	9	0	11	3	115

Table 8. Average total length (TL) and average weight (W) of each Representative Important Species Captured by Gill Net, Trawl, and Beach Seine, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. For each species the number weighed/measured (n) and the total number collected (N) are given.

TAXON	Gill Net				Trawl				Beach Seine			
	TL (mm)	W (g)	n	N	TL (mm)	W (g)	n	N	TL (mm)	W (g)	n	N
Anchoa hepsetus (striped anchovy)									31.7	0.1	70	73
Harengula jaguana (scaled sardine)									167.7	54.5	6	6
Menticirrhus americanus (southern kingfish)	390.0	646.7	3	4								
Menticirrhus littoralis (Gulf kingfish)									85.7	6.7	3	3
Micropogonias undulatus (Atlantic croaker)	311.0	400.0	1	1								
Pomatomus saltatrix (bluefish)	436.0	755.0	2	2					43.9	0.8	10	11
Prionotus scitulus (leopard searobin)					146.7	36.2	3	3				
Scomberomorus maculatus (Spanish mackerel)	468.7	493.3	6	6					28.0	0.1	1	1
Trachinotus carolinus (Florida pompano)									122.2	143.8	5	5
Umbrina coroides (sand drum)					44.0	0.9	1	1	139.3	51.8	4	4

Table 9. Number of Individuals of Each Taxon of Fish Eggs and Larvae and Commercially or Recreationally Important Decapod Crustacean Larvae Captured Per Cubic Meter of Water Filtered During One 15-minute Bongo-Net Tow at Each Transect, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. (Note: Totals in the right column represent numbers captured per cubic meter of water filtered at all six transects.)

TAXON	SL 1		SL 2		SL 3		TOTAL
	A	C	A	C	A	C	
Apogonidae, post yolk-sac larvae		0.032		0.074			0.022
Blenniidae, post yolk-sac larvae		0.065		0.074	0.059	0.050	0.037
Bregmacerotidae, post yolk-sac larvae		0.032					0.007
Brevoortia sp., post yolk-sac larvae					0.176		0.011
Carangidae, post yolk-sac larvae						0.050	0.004
Chaetodipterus faber, post yolk-sac larvae						0.050	0.004
Citharichthys arctifrons, post yolk-sac larvae					0.059		0.004
Clupeidae, yolk-sac larvae	0.118						0.030
Clupeiformes, post yolk-sac larvae				0.074			0.015
Cynoscion sp., post yolk-sac larvae			0.085				0.015
Dactyloscopidae, post yolk-sac larvae			0.085		0.176		0.026
Gerreidae, post yolk-sac larvae	0.118						0.030
Gobiidae, post yolk-sac larvae		0.871		1.407		0.150	0.496
Gobiosoma robustum, post yolk-sac larvae				0.593			0.119
Gobiosoma sp., post yolk-sac larvae					0.059		0.004
Gonostomatidae, post yolk-sac larvae		0.065					0.015
Haemulidae, post yolk-sac larvae					0.059		0.004
Hygophum reinhardtii, post yolk-sac larvae		0.032					0.007
Labridae, post yolk-sac larvae		0.032					0.007
Microgobius gulosus, post yolk-sac larvae		0.032					0.007
Monacanthidae, post yolk-sac larvae		0.032		0.074			0.022
Opistognathidae, post yolk-sac larvae		0.032					0.007
Ostraciidae, post yolk-sac larvae	0.059						0.015
Parablennius marmoreus, post yolk-sac larvae	0.059						0.015
Paralichthyidae, post yolk-sac larvae			0.085				0.015
Pareques acuminatus, post yolk-sac larvae			0.085				0.015

Table 9 (continued). Number of Individuals of Each Taxon of Fish Eggs and Larvae and Commercially or Recreationally Important Decapod Crustacean Larvae Captured Per Cubic Meter of Water Filtered During One 15-minute Bongo-Net Tow at Each Transect, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. (Note: Totals in the right column represent numbers captured per cubic meter of water filtered at all six transects.)

TAXON	SL 1		SL 2		SL 3		TOTAL
	A	C	A	C	A	C	
Perciformes, post yolk-sac larvae					0.059		0.004
Pomaentridae, post yolk-sac larvae		0.032					0.007
Sciaenidae, post yolk-sac larvae		0.032		0.222			0.052
Selar crumenophthalmus, post yolk-sac larvae				0.074			0.015
Serranidae, post yolk-sac larvae		0.032					0.007
Sparidae, post yolk-sac larvae		0.065					0.015
Sparisoma sp., post yolk-sac larvae		0.032			0.118		0.015
Sphoeroides sp., post yolk-sac larvae		0.032					0.007
Stomiiformes, post yolk-sac larvae		0.065					0.015
Symphurus sp., post yolk-sac larvae		0.032					0.007
Syngnathus louisianae, juvenile	0.059						0.015
Unidentified fish fragment, post yolk-sac larvae	0.235	0.097	0.170	0.148	0.235	0.200	0.172
Clupeidae, eggs	0.353						0.090
Sciaenidae, eggs			0.255			0.050	0.049
Synodontidae, eggs						0.750	0.056
Unidentified fish eggs	10.588	3.774	2.213	2.444	4.176	4.450	5.037
Albunea sp., zoea		0.032	3.745	0.444		0.500	0.791
Callinectes sp., megalops	5.529	0.903	1.362	2.296	6.941	0.500	2.791
Callinectes sp., juvenile					0.059		0.004
Callinectes sp., zoea		0.484	0.085	0.370		0.150	0.213
Emerita talpoida, zoea		0.065	0.511	0.296	0.059	0.050	0.172
Farfantepenaeus aztecus, postlarvae	0.412		0.085				0.119
Farfantepenaeus duorarum, postlarvae	0.176	0.032					0.052
Farfantepenaeus sp., postlarvae					0.059		0.004
Lepidopa sp., zoea			0.170				0.030
Menippe mercenaria, zoea	0.118	0.065	5.532				1.015

Table 9 (continued). Number of Individuals of Each Taxon of Fish Eggs and Larvae and Commercially or Recreationally Important Decapod Crustacean Larvae Captured Per Cubic Meter of Water Filtered During One 15-minute Bongo-Net Tow at Each Transect, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study. (Note: Totals in the right column represent numbers captured per cubic meter of water filtered at all six transects.)

TAXON	SL 1		SL 2		SL 3		TOTAL
	A	C	A	C	A	C	
Penaeidae, mysis				0.148			0.030
Penaeidae, protozoea			0.170				0.030
Scyllarus americanus, pyllosoma		0.032				0.050	0.011
TOTAL	17.824	7.032	14.638	8.741	12.294	7.000	11.780

Table 10. Number of Individuals of Each Species of Sea Turtle Sighted During Each of Two Passes Along Three One-Kilometer-Long Transects, Baseline Sampling Event 5 (April 2012), St. Lucie Plant EPU Biological Study.

SPECIES	SL 1		SL 2		SL 3	
	Pass 1	Pass 2	Pass 1	Pass 2	Pass 1	Pass 2
Chelonia mydas (green turtle)	0	2	3	8	0	0