



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data**

75 Southern Coastal Plain Ecoregion				
Sea Island Flatwoods (75f subecoregion) - reference streams				
Waterbody Name	Catchment Area (m2)	Basin Name	Major Basin Name	Collection Date
<i>Reference Site 1</i>	50805539.57	Coastal	Ogeechee Coastal	1/12/2003
<i>Reference Site 2</i>	45386714.33	Altamaha	Altamaha	12/8/2002
<i>Reference Site 3</i>	6253801.67	Coastal	Ogeechee Coastal	1/19/2003
<i>Reference Site 4</i>	23856650.43	Satilla	St. Marys - Satilla	1/28/2001



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data**

Sea Island Flatwoods (75f subecoregion) - reference streams				
Waterbody Name	Index Score	Numeric Ranking	Narrative Description	Stream Rating
<i>Reference Site 1</i>	100	1	very good	A
<i>Reference Site 2</i>	98	1	very good	A
<i>Reference Site 3</i>	89	2	good	A
<i>Reference Site 4</i>	83	3	fair	B

* Due to drought conditions during the collection time frame, potential reference sites may have ranked lower than their normal range, which might be why one reference location ranked fair in the Coastal Plain Ecoregion. Do not compare your individual test sites to these sites, compare your sites to the multi-metric index. Use the spreadsheets in this excel workbook (excel file) to calculate the metric index score and give a stream rating for your sample location.

GADNR/EPD plans to try to update the metric indices the for entire Southern Coastal Plain Ecoregion (during non-drought condition).



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data**

		% Land use per Catchment Area for Reference Sites: 75f			
		Sample Identification Number			
Land use	Year	<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
% Forested	1998	66.9913	71.5492	62.1411	55.8075
% Urban	1998	6.5432	6.0479	7.8055	9.2761
% Agricultural Total	1998	0.0408	0.0754	0.1876	0.049
% Barren	1998	4.8192	12.4527	6.8821	12.2336
% Wetland	1998	21.6056	9.8749	22.9837	22.5395
% Forested	1994	66.9913	71.5492	62.1411	78.3419
% Urban	1994	6.5432	6.0479	7.8055	1.0495
% Agricultural Total	1994	0.0408	0.0754	0.1876	2.6965
% Barren	1994	4.8192	12.4527	6.8821	5.4861
% Wetland	1994	21.6056	9.8749	22.9837	17.3959



GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data

		Water Chemistry Values for Reference Sites: 75f - Sea Island Flatwoods			
		Sample Identification Number			
		<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
Parameter	Chemical Units				
Air Temperature	°C	7.6	4.6	7.1	20
Water Temperature	°C	8.04	6.34	5.6	10.15
Specific Conductivity	mS/cm	0.0509	0.179	0.0622	0.12
Dissolved Oxygen	%	59.8	53	28.3	29.7
Dissolved Oxygen	mg/l	7.08	6.59	3.6	3.52
pH	SU	4.18	3.67	5.45	6
Turbidity	NTU	17.4	0.00	57	3.4
Depth	m	0.1	0.2	0.8	0.3
Ammonia	mg/l as N	0.137	Below Detection	12.72	Below Detection
Nitrate-Nitrite	mg/l as N	0.315	0.039	Below Detection	Below Detection
Total Phosphorus	mg/l as P	Below Detection	Below Detection	0.113	Below Detection
Alkalinity	mg/l as CaCO ₃	0.0	0.0	0.00	20.89
Hardness	mg/l as CaCO ₃	57.70	45.33	30.67	40.13
Copper	mg/l	Below Detection	0.003		Below Detection
Iron	mg/l	1.015	0.907	1.187	Below Detection
Manganese	mg/l	0.036	Below Detection	Below Detection	Below Detection
Zinc	mg/l	Below Detection	0.017		Below Detection



GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data

	Pebble Count % for Reference Sites: 75f - Sea Island Flatwoods			
	Sample Identification Number			
Particle	<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
Silt/Clay	9	N/A	100	98
Sand	91	100	N/A	2



GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data

	Habitat Values for Reference Sites: 75f - Sea Island Flatwoods			
	Sample Identification Number			
Habitat Parameters	<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
Epifaunal Substrate/Available Cover	18	11	17	18
Pool Substrate Characterization	16	10	15	15
Pool Variability	15	11	9	9
Sediment Deposition	13	20	10	18
Channel Flow Status	20	19	13	20
Channel Alteration	15	20	17	18
Channel Sinuosity	10	19	11	9
Bank Stability (Left Bank)	8	8	9	10
Bank Stability (Right Bank)	8	8	9	10
Vegetative Protection (Left Bank)	8	6	9	9
Vegetative Protection (Right Bank)	8	6	9	10
Riparian Vegetative Zone Width (Left Bank)	6	9	9	9
Riparian Vegetative Zone Width (Right Bank)	7	3	9	9
Total Habitat Score	152	150	146	164



GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data

Reference Site: 75f - Sea Island Flatwoods
 Reference Site 1

Order	Family	Final ID	Individuals	TCR	Stage
Amphipoda	Gammaridae	<i>Gammarus sp.</i>	2	X	
Basommatophora	Ancylidae	<i>Ferrissiasp.</i>	5	X	
Coleoptera	Dytiscidae	Dytiscidae	1	X	
Diptera	Chironomidae	Chironominae	1	X	
		<i>Cryptochironomus sp.</i>	1	X	
		<i>Kiefferulus sp.</i>	4	X	
		<i>Polypedilum sp.</i>	3	X	2 @ TCR-2
		<i>Polypedilum tritum</i>	5	X	
Isopoda	Asellidae	Caecidotea	48	X	
		<i>Lirceus sp.</i>	114	X	
Total Individuals			184		



GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data

Reference Site: 75f - Sea Island Flatwoods
 Reference Site 2

Order	Family	Final ID	Individuals	Stage	TCR
Diptera	Chironomidae	<i>Chironomus sp.</i>	9	X	3 TCR-2, 1 TCR-3
		<i>Cryptochironomus</i>	1	X	
		<i>Phaenopsectra punctipes group</i>	4	X	2 TCR-2
		<i>Polypedilum scalaenum group</i>	17	X	
		<i>Polypedilum tritum</i>	153	X	
		<i>Stenochironomus sp.</i>	1	X	
		<i>Polypedilum sp.</i>	13	X	
		<i>Corynoneura</i>	7	X	
		Chironominae	1	X	
		<i>Zavrelimyia thryptica complex</i>	1	X	
		<i>Kiefferulus sp.</i>	4	X	2 TCR-3
Isopoda	Asellidae	<i>Heterotrissocladius cladwell/boltoni complex</i>	1	X	
		<i>Caecidotea sp.</i>	1	X	
Total Individuals			213		



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data**

Reference Site: 75f - Sea Island Flatwoods
Reference Site 3

Order	Family	Final ID	Individuals	Stage	TCR
		Oligochaeta	8	X	
Amphipoda	Talitridae	<i>Hyaella azteca</i>	1	X	
Coleoptera	Dytiscidae	<i>Celina sp.</i>	1	L	
Diptera	Ceratopogonidae	<i>Bezzia complex</i>	2	X	
	Chironomidae	<i>Chironomus sp.</i>	9	X	
		<i>Chironomus ochreatus</i>	20	X	
		<i>Chironomus staegeri</i>	1	X	
		<i>Kiefferulus sp.</i>	20	X	
		<i>Phaenopsectra obediens group</i>	3	X	1 @ TCR-2
		<i>Polypedilum illinoense group</i>	3	X	
		<i>Polypedilum scalaenum group</i>	1	X	
		<i>Polypedilum trigonum</i>	10	X	
		<i>Polypedilum tritum</i>	56	X	
		<i>Tanytarsus sp.</i>	2	X	
		<i>Tribelos fuscicorne</i>	2	X	
	Isopoda	Asellidae	Caecidotea	73	X
Total Individuals			212		



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHERN COASTAL PLAIN ECOREGION (75)
(75f) Sea Island Flatwoods Data**

Reference Site: 75f - Sea Island Flatwoods
Reference Site 4

Order	Family	Final ID	Individuals	TCR	Stage
		Oligochaeta	18	A	
Amphipoda	Crangonyctidae	<i>Crangonyx sp.</i>	18	A	5- TCR-2
	Dytiscidae	Dytiscidae	1	L	TCR-2
Coleoptera	Hydrophilidae	<i>Helochaeres maculicollis</i>	2	A	
		<i>Helochaeres maculicollis</i>	1	L	
Decapoda	Cambaridae	Cambarinae	1	A	
		<i>Procambarus sp.</i>	1	A	
Diptera	Ceratopogonidae	<i>Atrichopogon websteri</i>	1	X	
		Ceratopogonidae	1	L	
	Chaoboridae	<i>Chaoborus sp.</i>	4	L	
	Chironomidae	<i>Kiefferulus sp.</i>	62	X	
		<i>Polypedilum illinoense group</i>	100	X	
		<i>Polypedilum tritum</i>	1	X	TCR-2
	Ephydriidae	Ephydriidae	2	L	
Tabanidae	<i>Tabanus sp.</i>	1	X		
Isopoda	Asellidae	Caecidotea	8	A	
Veneroida	Pisidiidae	Musculium	1	A	
Total Individuals			223		