



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA  
SOUTHERN COASTAL PLAIN ECOREGION (75)  
Sea Island/Coastal Marsh - Non-Tidal (75j) Data**

75 Southern Coastal Plain Ecoregion					
75j subecoregion - Sea Island/Coastal Marsh - non-tidal reference streams					
Station ID	Waterbody Name	Catchment Area (m2)	Basin Name	Major Basin Name	Collection Date
75j-10	<i>Reference Site 1</i>	3586464.044	Ogeechee Coastal	Ogeechee	1/20/2003
75j-15	<i>Reference Site 2</i>	1122184.875	Ogeechee Coastal	Ogeechee	2/22/2003
75j-25	<i>Reference Site 3</i>	14138382.21	Satilla	St. Marys - Satilla	2/21/2003
75j-26	<i>Reference Site 4</i>	4326320.042	Cumberland-St. Simons	St. Marys - Satilla	2/21/2003

\* Due to drought conditions during the sampling years and the possible need for separate metric indices for black water and clear water ecosystems some of the potential reference sites ranked as fair. 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.

The current goal of GADNR/EPD is to update the metric indices within the next 5 years for the entire Southern Coastal Plain Ecoregion (during non-drought condition). The second goal is to determine if the Sea Islands/Coastal Marsh Subecoregion for both tidal and non-tidal should have separate indices for black water and clear water streams.



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75j subecoregion - Sea Island/Coastal Marsh - non-tidal reference streams metric scores									
Station ID	Waterbody Name	AmphPct	stdamphpct	OligoPct	stdoligopct	%Tpod/TC	stdtpod/tc	HBI	stdHBI
75j-10	Reference Site 1	4.93	18.19	0.99	98.71	0.59	99.55	6.95	78.01
75j-15	Reference Site 2	0.42	1.54	1.67	96.82	1.34	98.78	7.27	66.63
75j-25	Reference Site 3	30.42	100.00	5.83	85.27	1.64	98.48	7.61	54.30
75j-26	Reference Site 4	17.08	63.08	0.83	99.13	0.68	99.45	7.35	63.61

DE

0.80

0.80

0.80

0.80

75j - non-tidal reference streams metric scores			
Station ID	ShredPct	stdshredpct	Index Score
75j-10	0.99	28.72	65
75j-15	4.17	100.00	73
75j-25	1.25	36.44	75
75j-26	1.25	36.44	72

DE

0.6

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		% Land use per Catchment Area for Reference Sites: 75j - Sea Island/Coastal Marsh			
		Stream Name and Sample Identification Number			
		<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
<b>Land use</b>	<b>Year</b>	<b>75j-10</b>	<b>75j-15</b>	<b>75j-25</b>	<b>75j-26</b>
% Natural	1998	94.6707	95.9036	88.4968	77.8286
% Urban	1998	5.3293	4.0964	10.9963	20.1747
% Agricultural Total	1998	0	0	0.5068	1.9967
% Barren	1998	20.6637	0.241	16.4817	11.4393
% Natural	1994	94.6707	95.9036	88.4968	77.8286
% Urban	1994	5.3293	4.0964	10.9963	20.1747
% Agricultural Total	1994	0	0	0.5068	1.9967
% Barren	1994	20.6637	0.241	16.4817	11.4393



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		Water Chemistry Values for Reference Sites: 75j - Sea Island/Coastal Marsh			
		Stream Name and Sample Identification Number			
		<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
<b>Parameter</b>	<b>Chemical Units</b>	<b>75j-10</b>	<b>75j-15</b>	<b>75j-25</b>	<b>75j-26</b>
Air Temperature	°C	10.5	19.32	16.65	18.9
Water Temperature	°C	4.95	14.37	4.25	14.9
Specific Conductivity	mS/cm	0.1262	0.1019	0.1061	0.152
Dissolved Oxygen	%	47.3	77.1	48.6	6.63
Dissolved Oxygen	mg/l	6.12	7.87	5.02	6.63
pH	SU	3.55	4.57	5.59	6.07
Turbidity	NTU	19.2	13.8	10	33
Depth	m	0.2	0.1	0.2	0.2
Ammonia	mg/l as N	0.324	<0.03	0.057	0.031
Nitrate-Nitrite	mg/l as N	>1.0	0.034	<0.01	0.034
Total Phosphorus	mg/l as P	0.133	<0.01	<0.01	<0.01
Alkalinity	mg/l as CaCO <sub>3</sub>	0.0	0.0	0.0	19.79
Hardness	mg/l as CaCO <sub>3</sub>	16.50	35.67	116.33	74.33
Copper	mg/l	<0.002	<0.002	<0.002	0.015
Iron	mg/l	0.419	1.876	0.907	1.710
Manganese	mg/l	<0.004	<0.004	<0.004	0.006
Zinc	mg/l	<0.006	<0.006	0.023	0.014



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	Pebble Count % for Reference Sites: 75j - Sea Island/Coastal Marsh			
	Stream Name and Sample Identification Number			
	<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
<b>Particle</b>	<i>75j-10</i>	<i>75j-15</i>	<i>75j-25</i>	<i>75j-26</i>
Silt/Clay	4	37	44	49
Sand	96	63	56	51



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**Sea Island/Coastal Marsh - Non-Tidal (75j) Data**

	Habitat Values for Reference Sites: 75j - Sea Island/Coastal Marsh			
	Stream Name and Sample Identification Number			
	<i>Reference Site 1</i>	<i>Reference Site 2</i>	<i>Reference Site 3</i>	<i>Reference Site 4</i>
<b>Habitat Parameters</b>	<b>75j-10</b>	<b>75j-15</b>	<b>75j-25</b>	<b>75j-26</b>
Epifaunal Substrate/Available Cover	16	10	11	12
Pool Substrate Characterization	13	8	8	8
Pool Variability	15	8	14	13
Sediment Deposition	12	13	19	14
Channel Flow Status	18	11	19	18
Channel Alteration	18	18	19	17
Channel Sinuosity	17	12	8	13
Bank Stability (Left Bank)	9	5	10	7
Bank Stability (Right Bank)	9	5	10	7
Vegetative Protection (Left Bank)	8	8	6	9
Vegetative Protection (Right Bank)	8	8	6	9
Riparian Vegetative Zone Width (Left Bank)	9	9	7	10
Riparian Vegetative Zone Width (Right Bank)	9	7	7	10
<b>Total Habitat Score</b>	<b>161</b>	<b>122</b>	<b>144</b>	<b>147</b>



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Reference Site: 75j - Sea Island/Coastal Marsh  
Reference Site 1 (75j-10)

Order	Family	Final ID	Individuals	TCR	Stage
Amphipoda	Gammaridae	<i>Gammarus sp.</i>	10	TCR-2	X
Coleoptera	Dytiscidae	Dytiscidae	1		L
Coleoptera	Dytiscidae	<i>Hygrotus sp.</i>	5		L
Coleoptera	Noteridae	<i>Notomicrus sp.</i>	2	TCR-2	A
Diptera	Chironomidae	Chironominae	1		X
Diptera	Chironomidae	<i>Chironomus sp.</i>	16	3 @ TCR-2	X
Diptera	Chironomidae	<i>Chironomus longipes</i>	2		X
Diptera	Chironomidae	<i>Corynoneura sp.</i>	1		X
Diptera	Chironomidae	<i>Labrundinia sp.</i>	1		X
Diptera	Chironomidae	<i>Polypedilum tritum</i>	148	8 @ TCR-2	X
Diptera	Chironomidae	<i>Stenochironomus sp.</i>	1		X
Diptera	Simuliidae	<i>Prosimulium sp.</i>	1		X
Diptera	Tipulidae	Tipulidae	1		X
Isopoda	Asellidae	Asellidae	1		X
Isopoda	Asellidae	Caecidotea	9		X
Isopoda	Asellidae	<i>Lirceus sp.</i>	1		X
		Oligochaeta	2		X
<b>Total Individuals</b>			203		



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**Reference Site: 75j - Sea Island/Coastal Marsh**  
**Reference Site 2 (75j-15)**

Order	Family	Final ID	Individuals	TCR	Stage
Amphipoda	Talitridae	<i>Hyalella azteca</i>	1		X
Basommatophora	Physidae	<i>Physella</i> sp.	2	TCR-2	X
Coleoptera	Dytiscidae	<i>Hydroporus (Neoporus) sp.</i>	2		A
		<i>Hygrotus</i> sp.	1	TCR-2	L
Diptera	Ceratopogonidae	<i>Bezzia complex</i>	1		X
	Chironomidae	Chironomidae	1		X
		Chironominae	1		X
		<i>Chironomus</i> sp.	27		X
		<i>Chironomus (Lobochironomus) sp.</i>	1		X
		<i>Chironomus ochreatus</i>	14	TCR-2	X
		<i>Corynoneura</i> sp.	1	TCR-2	X
		<i>Labrundinia</i> sp.	2	1 @ TCR-2	X
		<i>Polypedilum</i> sp.	8		X
		<i>Polypedilum scalaenum</i> group	4		X
		<i>Polypedilum tritum</i>	88		X
		<i>Stenochironomus</i> sp.	2	1 @ TCR-2	X
	Corethrellidae	<i>Corethrella</i> sp.	1	TCR-2	X
	Tabanidae	<i>Tabanus</i> sp.	1		X
	Tipulidae	<i>Pilaria</i> sp.	2	TCR-2	X
Isopoda	Asellidae	Asellidae	15		X
		<i>Caecidotea</i>	60		X
Odonata	Aeshnidae	<i>Boyeria grafiana</i>	1		X
		Oligochaeta	4		X
<b>Total Individuals</b>			240		





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Reference Site: 75j - Sea Island/Coastal Marsh  
Reference Site 3 (75j-25)

Order	Family	Final ID	Individuals	TCR	Stage
Amphipoda	Crangonyctidae	<i>Crangonyx sp.</i>	73		X
Basommatophora	Planorbidae	<i>Gyraulus sp.</i>	4		X
Coleoptera	Curculionidae	<i>Anchytarsus bicolor</i>	2		X
	Dytiscidae	Dytiscidae	1		L
	Helodidae	<i>Cyphon sp.</i>	2	1 @ TCR-2	L
Cyclopoida	Cyclopidae	Cyclopidae	1		X
Decapoda	Cambaridae	<i>Procambarus spiculifer</i>	3		X
Diptera	Ceratopogonidae	<i>Bezzia complex</i>	3		X
	Chironomidae	<i>Chironomus sp.</i>	6		X
		<i>Dicrotendipes sp.</i>	1		X
		<i>Kiefferulus sp.</i>	14		X
		<i>Nanocladius sp.</i>	2		X
		Orthoclaadiinae	1		X
		<i>Polypedilum illinoense group</i>	18		X
		<i>Polypedilum tritum</i>	36		X
		<i>Pseudorthoclaadius sp.</i>	1		X
		Tanypodinae	1		X
		<i>Tanypus sp.</i>	1		X
		<i>Tanytarsus sp.</i>	40		X
		<i>Tanytarsus V</i>	1		X
	Tipulidae	Tipulidae	1		X
Isopoda	Asellidae	<i>Caecidotea sp.</i>	9		X
Odonata	Libellulidae	<i>Pachydiplax longipennis</i>	1		X
Pseudoscorpionida	Chernetidae	<i>Lamprochernes sp.</i>	1		X
Veneroida	Pisidiidae	<i>Pisidium sp.</i>	3		X
		Oligochaeta	14		X
<b>Total Individuals</b>			240		



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Reference Site 4 (75j-26)

Order	Family	Final ID	Individuals	TCR	Stage
Amphipoda	Crangonyctidae	<i>Crangonyx sp.</i>	41		X
Basommatophora	Ancylidae	<i>Ferrissia sp.</i>	1		X
	Planorbidae	<i>Gyraulus sp.</i>	1		X
Coleoptera	Dytiscidae	Dytiscidae	1		A
		<i>Hydroporus (Neoporus) sp.</i>	7		L
	Helodidae	<i>Cyphon sp.</i>	3		L
	Helodidae (=Scirtidae)	<i>Helodidae (=Scirtidae) sp.</i>	1	TCR-2	L
Cyclopoida	Cyclopidae	Cyclopidae	18		X
Decapoda	Sesarmidae	<i>Sesarma sp.</i>	1	TCR-3	X
Diptera	Chironomidae	Ceratopogonidae	<i>Bezzia complex</i>	12	X
		Chironomidae		1	X
		<i>Chironomus ochreatus</i>	1		X
		<i>Corynoneura sp.</i>	7		X
		<i>Dicrotendipes sp.</i>	6		X
		<i>Dicrotendipes simpsoni</i>	1		X
		<i>Natarsia A</i>	1		X
		<i>Parametriocnemus sp.</i>	1		X
		<i>Paratendipes subaequalis</i>	4		X
		<i>Polypedilum illinoense group</i>	3		X
		<i>Polypedilum scalaenum group</i>	34		X
		<i>Polypedilum tritum</i>	5		X
		<i>Tanytarsus sp.</i>	48		X
		<i>Tanytarsus T</i>	34		X
		Tipulidae	<i>Molophilus sp.</i>	3	X
Ephemeroptera	Ephemerellidae	Ephemerellidae	1		X
Isopoda	Sphaeromatidae	<i>Cassidinidea lunifrons</i>	1	TCR-2	X
Odonata	Libellulidae	<i>Libellula sp.</i>	1		X
		Oligochaeta	2		X
<b>Total Individuals</b>			240		