



GADNR/EPD MACROINVERTEBRATE REFERENCE DATA
SOUTHEASTERN PLAINS ECOREGION (65)
Dougherty Plains - 65g Data

(65) SOUTHEASTERN PLAINS ECOREGION				
65g Dougherty Plains - reference streams				
Waterbody Name	Catchment Area (m2)	Basin Name	Major Basin Name	Collection Date
<i>Reference Site 1</i>	8865464	Lower Chattahoochee	Apalachicola	11/11/2000
<i>Reference Site 2</i>	55464540	Ichawaynochaway	Apalachicola	02/24/2001
<i>Reference Site 3*</i>	59123150	Ichawaynochaway	Apalachicola	02/24/2001
<i>Reference Site 4</i>	51395940	Lower Chattahoochee	Apalachicola	11/10/2002
<i>Reference Site 5**</i>	14165630	Ichawaynochaway	Apalachicola	11/11/2000

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% Land use per Catchment Area for Reference Sites: 65g - Dougherty Plains						
Sample Identification Number						
Land use	Year	Reference Site 1	Reference Site 2	Reference Site 3*	Reference Site 4	Reference Site 5**
% Natural	1998	62.5553	57.0109	63.6231	79.385	53.2854
% Forested	1998	41.14	37.5252	30.8957	59.4321	32.9247
% Urban	1998	6.7027	5.3891	5.2189	6.1947	5.4924
% Agriculture Total	1998	30.742	37.6	31.0223	14.4203	41.2221
% Barren	1998	8.3342	2.5392	4.0964	6.7677	4.6142
% Wetland	1998	13.0811	16.9465	28.6309	13.1852	15.7466
% Natural	1994	66.1592	64.3128	63.7373	79.385	53.2854
% Forested	1994	58.1388	52.0767	37.3545	59.4321	32.9247
% Urban	1994	0.0334	0.003	0.3681	6.1947	5.4924
% Agriculture Total	1994	29.8544	31.5326	32.8057	14.4203	41.2221
% Barren	1994	3.953	4.1577	3.0889	6.7677	4.6142
% Wetland	1994	4.6086	12.5273	29.3142	13.1852	15.7466

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Water Chemistry Values for Reference Sites: 65g - Dougherty Plains						
		Sample Identification Number				
		Reference Site 1	Reference Site 2	Reference Site 3*	Reference Site 4	Reference Site 5**
Air Temperature	°C	20	20	20	17.22	24
Conductivity	mS/cm	0.0524	0.4	0.343	0.0555	0.086
Dissolved Oxygen	%	94	74	24.1	85.1	87.8
Dissolved Oxygen	mg/l	9.74	7.56	2.46	8.69	7.64
pH	SU	6.75	7.35	6.83	6.55	6.82
Turbidity	NTU	13.8	3.4	5	15.6	1.1
Water Temperature	°C	13.48	14.51	15.2	14.36	22.03
Depth	m	0.2	0.3	0.3	0.2	0.1
Ammonia	mg/l as N	0.052	0.036	0.038	0.069	0.056
Copper	mg/l	Below Detection	Below Detection	Below Detection	Below Detection	Below Detection
Manganese	mg/l	Below Detection	Below Detection	Below Detection	Below Detection	0.114
Nitrate-Nitrite	mg/l as N	0.253	0.051	0.013	0.236	0.200
Total Phosphorus	mg/l as P	Below Detection	Below Detection	Below Detection	Below Detection	Below Detection
Zinc	mg/l	Below Detection	Below Detection	Below Detection	Below Detection	0.024
Iron	mg/l	Below Detection	Below Detection	Below Detection	0.567	0.818
Nitrite	mg/l as N	Below Detection	0.016	0.022	Below Detection	0.061
Alkalinity	mg/L as CaCO ₃	17.36	175.99	127.01	13.36	28.50
Hardness	mg/L as CaCO ₃	23.03	196.91	150.93	22.22	29.33

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Pebble Count % for Reference Sites: 65g - Dougherty Plains					
	Sample Identification Number				
	Reference Site 1	Reference Site 2	Reference Site 3*	Reference Site 4	Reference Site 5*
Particle					
Silt/Clay	20	30.69306931	100	45.45454545	---
Sand	49.52380952	69.30693069	---	30.3030303	66.99029126
Gravel	30.47619048	---	---	8.080808081	27.18446602
Cobble	---	----	---	16.16161616	3.883495146
Boulder	---	---	---	---	1.941747573
Bedrock	---	---	---	---	---

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Habitat Values for Reference Sites: 65g Dougherty Plains					
Habitat Parameters	Sample Identification Number				
	Reference Site 1	Reference Site 2	Reference Site 3*	Reference Site 4	Reference Site 5**
Epifaunal Substrate/Available Cover	16.00	15.00	18.00	18.00	14.00
Embeddedness	N/A	N/A	N/A	N/A	N/A
Velocity/Depth Regime	N/A	N/A	N/A	N/A	N/A
Pool Substrate Characterization	15.00	14.00	16.00	17.00	11.00
Pool Variability	10.00	10.00	16.00	16.00	10.00
Sediment Deposition	14.00	15.00	17.00	17.00	10.00
Channel Flow Status	15.00	14.00	17.00	18.00	6.00
Channel Alteration	15.00	16.00	16.00	16.00	6.00
Frequency of Riffles (or bends)	N/A	N/A	N/A	N/A	N/A
Channel Sinuosity	12.00	15.00	13.00	15.00	8.00
Bank Stability (Left Bank)	7.00	8.00	9.00	9.00	4.00
Bank Stability (Right Bank)	7.00	8.00	9.00	9.00	4.00
Vegetative Protection (Left Bank)	7.00	4.00	9.00	9.00	4.00
Vegetative Protection (Right Bank)	8.00	4.00	9.00	9.00	4.00
Riparian Vegetative Zone Width (Left Bank)	8.00	9.00	9.00	9.00	5.00
Riparian Vegetative Zone Width (Right Bank)	9.00	9.00	7.00	9.00	4.00
Total Habitat Score	143.00	141.00	165.00	171.00	90.00

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65g - Dougherty Plains - reference streams
Reference Site 1

Order	Family	Final ID	Individuals	TCR	Stage
		Oligochaeta	6		A
Arhynchobdellida	Erpobdellidae	Erpobdellidae	1		A
Coleoptera	Curculionidae	<i>Anchytarsus bicolor</i>	1		L
Decapoda	Cambaridae	<i>Cambarinae sp.</i>	5		I
		<i>Procambarus sp.</i>	1		A
Diptera	Chironomidae	<i>Ablabesmyia mallochi</i>	20		X
		<i>Corynoneura sp.</i>	9		X
		<i>Labrundinia pilosella</i>	2		X
		<i>Meropelopia sp.</i>	1		X
		<i>Paratanytarsus sp.</i>	2		X
		<i>Paratendipes albimanus</i>	3		X
		<i>Phaenopsectra punctipes group</i>	1		X
		<i>Polypedilum aviceps</i>	53		X
		<i>Polypedilum fallax group</i>	1		X
		<i>Polypedilum flavum</i>	4		X
		<i>Polypedilum illinoense group</i>	22		X
		<i>Polypedilum scalaenum group</i>	1		X
		<i>Pseudorthocladius sp.</i>	1		X
		<i>Rheocricotopus robacki</i>	8		X
		<i>Rheotanytarsus exiguus group</i>	13		X
		<i>Rheotanytarsus pellucidus</i>	5		X
		<i>Stempellinella A</i>	1		X

* continued on next page

65g - Dougherty Plains - reference streams
Reference Site 1 Continued

Order	Family	Final ID	Individuals	TCR	Stage
Diptera	Chironomidae	<i>Stempellinella cf. leptocelloides</i>	2		X
		<i>Tanytarsus A</i>	1		X
		<i>Tanytarsus C</i>	3		X
		<i>Tanytarsus L</i>	6		X
		<i>Tanytarsus U</i>	1		X
		<i>Thienemanniella xena</i>	1		X
		<i>Tribelos sp.</i>	2		X
		<i>Tribelos jucundus</i>	4		X
		<i>Xestochironomus sp.</i>	2		X
	Simuliidae	<i>Simulium sp.</i>	19		X
	Tipulidae	<i>Hexatoma sp.</i>	1		X
		<i>Tipula sp.</i>	1		X
Ephemeroptera	Heptageniidae	Heptageniidae	6		X
		<i>Stenonema femoratum</i>	6		X
Isopoda	Asellidae	<i>Caecidotea sp.</i>	1		A
Odonata	Calopterygidae	<i>Calopteryx sp.</i>	7		X
	Coenagrionidae	<i>Argia sp.</i>	1		X
	Gomphidae	Gomphidae sp.	1		X
		<i>Progomphus obscurus</i>	1		X
Trichoptera	Hydropsychidae	<i>Cheumatopsyche sp.</i>	3		X
		<i>Hydropsyche depravata</i>	1		X
	Leptoceridae	<i>Oecetis georgia</i>	1		X
		<i>Triaenodes ignitus</i>	1	TCR-2	X
	Philopotamidae	<i>Chimarra sp.</i>	1		X
Veneroida	Corbiculidae	<i>Corbicula fluminea</i>	4		A
Total Individuals			238		



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65g - Dougherty Plains - reference streams
Reference Site 2

Order	Family	Final ID	Individuals	TCR	Stage
		Oligochaeta	7		A
Amphipoda	Crangonyctidae	Crangonyctidae	3		A
		<i>Crangonyx sp.</i>	16		A
		<i>Synurella chamberlaini</i>	5		A
Architaenioglossa	Viviparidae	<i>Viviparus georgianus</i>	21		A
Basommatophora	Planorbidae	<i>Menetus brogniartianus</i>	2		A
Coleoptera	Dryopidae	<i>Helichus sp.</i>	1	TCR-2	L
	Dytiscidae	<i>Hydroporus (Neoporus)</i>	7		L
		<i>Hydroporus aulicus</i>	2	TCR-2	A
Decapoda	Cambaridae	Cambarinae	25		A
		<i>Faxonella sp.</i>	2	TCR-2	A
Diptera	Ceratopogonidae	Ceratopogonidae	1		X
	Chironomidae	<i>Hydrobaenus sp.</i>	2		X
		<i>Microtendipes pedellus group</i>	2		X
		<i>Natarsia A</i>	2		X
		<i>Orthocladius sp.</i>	1		X
		<i>Polypedilum illinoense group</i>	1		X
		<i>Stenochironomus sp.</i>	1		X
		<i>Tanytarsus M</i>	1		X
	Stratomyidae	<i>Oxycera sp.</i>	1	TCR-2	X
	Tipulidae	<i>Pilaria sp.</i>	1		X
Ephemeroptera	Baetidae	<i>Acentrella turbida</i>	1	TCR-2	X
		<i>Pseudocloeon frondale</i>	3		X
	Leptophlebiidae	Leptophlebiidae	106		X
Isopoda	Asellidae	<i>Caecidotea sp.</i>	5		A
		<i>Lirceus sp.</i>	8		A
Odonata	Cordulegastridae	<i>Cordulegaster sp.</i>	2		X
Plecoptera	Perlidae	<i>Perlesta sp.</i>	4		X
		<i>Perlidae sp.</i>	2		X
	Perlodidae	<i>Clioperla clio</i>	3		X
Trichoptera	Polycentropodidae	<i>Polycentropus sp.</i>	1		X
Veneroida	Pisidiidae	<i>Pisidium sp.</i>	1		A
Total Individuals			239		



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**65g - Dougherty Plains - reference streams
Reference Site 3***

Order	Family	Final ID	Individuals	TCR	Stage
		Oligochaeta	10		A
Decapoda	Cambaridae	Cambarinae	34		I
Amphipoda	Crangonyctidae	Crangonyx	28		A
Isopoda	Asellidae	Caecidotea	161		A
Decapoda	Cambaridae	Faxonella creaseri	2	TCR-3	A
Basommatophora	Planorbidae	Promenetus exacuus	4		A
Architaenioglossa	Viviparidae	Viviparus georgianus	1	TCR-3	X
Total Individuals			240		



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**65g - Dougherty Plains - reference streams
Reference Site 4**

Order	Family	Final ID	Individuals	TCR	Stage
		Oligochaeta	3		A
Amphipoda	Crangonyctidae	<i>Crangonyx sp.</i>	4		A
Basommatophora	Ancylidae	<i>Ferrissia fragilis</i>	1	TCR-2	A
	Physidae	<i>Physella sp.</i>	3		A
Coleoptera	Dryopidae	<i>Helichus fastigiatus</i>	1		A
	Dytiscidae	<i>Hydroporus (Neoporus) sp.</i>	7		L
	Elmidae	<i>Macronychus glabratus</i>	4		L
		<i>Stenelmis sp.</i>	13		L
Decapoda	Cambaridae	Cambarinae	12		I
		<i>Procambarus sp.</i>	2		I
	Palaemonidae	<i>Palaemonetes kadiakensis</i>	6		A
Diptera	Chironomidae	<i>Ablabesmyia janta variation II</i>	1	TCR-3	X
		<i>Ablabesmyia mallochi</i>	2		X
		<i>Chironomus sp.</i>	1		X
		<i>Clinotanypus sp.</i>	3		X
		<i>Corynoneura sp.</i>	7		X
		<i>Djalmabatista pulcher variant (5 toothed)</i>	7		X
		<i>Labrundinia pilosella</i>	2		X
		<i>Micropsectra D</i>	1		X
		<i>Microtendipes pedellus group</i>	1		X
		<i>Parametriocnemus sp.</i>	1		X
		<i>Phaenopsectra punctipes group</i>	4		X
		<i>Phaenopsectra/Tribelos complex</i>	1		X
		<i>Polypedilum aviceps</i>	6		X
		<i>Polypedilum fallax group</i>	1		X
		<i>Polypedilum flavum</i>	3		X
		<i>Polypedilum illinoense group</i>	1		X
		<i>Rheocricotopus robacki</i>	2		X
		<i>Rheotanytarsus exiguus group</i>	1		X
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65g - Dougherty Plains - reference streams
Reference Site 4 Continued

Order	Family	Final ID	Individuals	TCR	Stage
Diptera	Chironomidae	<i>Stempellinella A</i>	10		X
		<i>Stempellinella cf. leptocelloides</i>	1		X
		<i>Stenochironomus sp.</i>	9		X
		<i>Stictochironomus sp.</i>	5		X
		<i>Tanytarsus sp.</i>	1		X
		<i>Tanytarsus C</i>	2		X
		<i>Tanytarsus L</i>	2		X
		<i>Tanytarsus M</i>	2		X
		<i>Tanytarsus O</i>	1		X
		<i>Tanytarsus S</i>	1		X
		<i>Tanytarsus T</i>	1	TCR-2	X
		<i>Tribelos sp.</i>	1		X
		<i>Tribelos jucundus</i>	3		X
		<i>Xestochironomus</i>	3		X
Ephemeroptera	Caenidae	<i>Caenis sp.</i>	2		X
		<i>Caenis mcafferti</i>	1		X
	Ephemerellidae	<i>Eurylophella sp.</i>	1		X
	Ephemeridae	<i>Hexagenia sp.</i>	1		X
	Heptageniidae	<i>Stenacron sp.</i>	2		X
		<i>Stenonema femoratum</i>	9		X
	Isonychiidae	<i>Isonychia sp.</i>	1		X
	Leptophlebiidae	<i>Leptophlebiidae</i>	2		X
Neotaenioglossa	Pleuroceridae	<i>Elimia catenaria</i>	7	TCR-3	A
			13	TCR-3	I
Odonata	Coenagrionidae	<i>Argia sp.</i>	9		X
	Gomphidae	<i>Gomphus sp.</i>	6		X
Plecoptera	Taeniopterygidae	<i>Taeniopteryx sp.</i>	1		X
Trichoptera	Calamoceratidae	<i>Anisocentropus pyraloides</i>	4		X
	Leptoceridae	<i>Nectopsyche pavidia</i>	3		X
		<i>Oecetis georgia</i>	3		X
		<i>Triaenodes helo/perna complex</i>	1		X
		<i>Triaenodes ignitus</i>	1	TCR-2	X
	Limnephilidae	<i>Limnephilidae</i>	4		X
	Molannidae	<i>Molanna blenda</i>	1		X
Veneroida	Pisidiidae	<i>Pisidiidae</i>	1		A



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Reference Site 5**

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		Oligochaeta	3		X
Amphipoda	Crangonyctidae	<i>Crangonyx sp.</i>	1		A
Basommatophora	Physidae	<i>Physella sp.</i>	1		X
Coleoptera	Dytiscidae	<i>Hydroporus (Neoporus) sp.</i>	2		X
			14		X
	Elmidae	Elmidae	1		X
		<i>Stenelmis sp.</i>	33		X
Decapoda	Cambaridae	Cambarinae	11		X
		<i>Procambarus sp.</i>	8		X
Diptera	Ceratopogonidae	<i>Bezzia complex</i>	1		X
	Chironomidae	<i>Ablabesmyia mallochi</i>	1		X
		Chironomidae	2		X
		<i>Chironomus sp.</i>	5		X
		<i>Corynoneura sp.</i>	5	1 TCR-2	X
		<i>Paracladopelma undine</i>	1		A
		<i>Paratendipes subaequalis</i>	3		X
		<i>Phaenopsectra/Tribelos complex</i>	2		X
		<i>Polypedilum sp.</i>	14		X
		<i>Polypedilum flavum</i>	2		X
		<i>Polypedilum illinoense group</i>	3		X
		<i>Polypedilum tritum</i>	11		X
		<i>Stenochironomus sp.</i>	5		X

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65g - Dougherty Plains - reference streams
Reference Site 5** Continued

Order	Family	Final ID	Individuals	TCR	Stage
Diptera	Chironomidae	Tanypodinae	1		X
		<i>Tanytarsus sp.</i>	2		X
		<i>Tanytarsus D</i>	1		X
		<i>Tanytarsus P</i>	1		X
		<i>Tanytarsus Q</i>	1		X
		<i>Tanytarsus U</i>	2		X
		Thienemannimyia group	1		X
		<i>Tribelos sp.</i>	1		X
		<i>Tribelos fuscicorne</i>	1		X
		<i>Tribelos jucundus</i>	3		X
	Simuliidae	Simuliidae	1		L
		<i>Simulium sp.</i>	4		X
	Tabanidae	<i>Tabanus sp.</i>	2	1 TCR-2	X
	Tipulidae	<i>Pseudolimmophila</i>	1		X
Ephemeroptera	Caenidae	<i>Caenis sp.</i>	1		X
	Ephemeridae	<i>Hexagenia limbata</i>	1		X
Isopoda	Asellidae	Asellidae	4		X
		<i>Caecidotea sp.</i>	4	TCR-2	X
		<i>Lirceus sp.</i>	6		X
Odonata	Coenagrionidae	<i>Ischnura sp.</i>	2		X
Trichoptera	Hydropsychidae	<i>Cheumatopsyche</i>	7		X
	Philopotamidae	<i>Chimarra sp.</i>	7		L
	Polycentropodidae	Polycentropodidae	1		X
Veneroida	Pisidiidae	Pisidiidae	3		X
		<i>Pisidium sp.</i>	1	TCR-2	X
		<i>Sphaerium sp.</i>	2		X

Total Individuals

190