



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA**  
**PIEDMONT ECOREGION (45)**  
**Talladega Upland - 45d Data**

(45) PIEDMONT ECOREGION					
45d Talladega Upland - reference streams					
Station ID	Waterbody Name	Catchment Area (m2)	Basin Name	Major Basin Name	Collection Date
45d-15	Reference Site 1	61503957.01	Upper Coosa	Coosa - Tallapoosa	10/29/2000
45d-16	Reference Site 2	15874478.77	Upper Coosa	Coosa - Tallapoosa	10/11/2002
45d-4	Reference Site 3	2947284.314	Etowah	Coosa - Tallapoosa	2/3/2001
45d-9	Reference Site 4	8864754.015	Etowah	Coosa - Tallapoosa	2/23/2001



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45d - Talladega Upland - reference streams metric scores							
Station ID	Waterbody Name	ColeoTax	StdColTax	OdonPct	Std%Odon	%Tpod/TC	Std%Tpod/Tc
45d-15	Reference Site 1	8	90	0.00	100	14.29	36
45d-16	Reference Site 2	9	100	2.92	55	2.20	97
45d-4	Reference Site 3	2	23	1.49	79	1.49	100
45d-9	Reference Site 4	8	90	1.42	80	2.44	96

DE

0.4

0.8

0.8

45d - Talladega Upland - reference streams metric scores								
Station ID	Waterbody Name	TolerPct	Std%Tol	NCBI	StdNCBI	ShredTax	StdShredTax	Final Index
45d-15	Reference Site 1	8.62	87	2.06	100	6	70	81
45d-16	Reference Site 2	7.50	93	4.58	39	9	100	81
45d-4	Reference Site 3	8.42	88	3.90	57	6	70	70
45d-9	Reference Site 4	6.16	100	3.90	57	6	70	82

DE

1

1

0.4



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA**  
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		% Land use per Catchment Area for Reference Sites: 45d - Talladega Upland			
		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>45d-15</b>	<b>45d-16</b>	<b>45d-4</b>	<b>45d-9</b>
% Natural	1998	29.8189	94.9	77.7812	93.8645
% Urban	1998	1.5395	0.1	8.7036	2.7778
% Agriculture Total	1998	0.8756	3.4	13.5152	3.3578
% Barren	1998	3.9065	1.6	11.0021	5.4742
% Natural	1994	92.3893	94.9	85.2712	89.0465
% Urban	1994	0.0687	0.1	0.3869	0.1252
% Agriculture Total	1994	1.2234	3.4	11.6139	9.5765
% Barren	1994	6.3186	1.6	2.728	1.2518



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		Water Chemistry Values for Reference Sites: 45d - Talladega Upland			
		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>Parameters</b>	<b>Chemical Units</b>	<b>45d-15</b>	<b>45d-16</b>	<b>45d-4</b>	<b>45d-9</b>
Air Temperature	°C	20	---	5	14.2
Water Temperature	°C	15.37	20.34	2.41	10.7
Specific Conductivity	mS/cm	0.0592	0.0699	0.0881	0.0336
Dissolved Oxygen	%	---	78.8	---	95.1
Dissolved Oxygen	mg/l	7.48	6.92	13.17	10.56
pH	SU	6.94	6.8	7.39	7.08
Turbidity	NTU	0	0	3.2	4.9
Depth	m	0.2	0.4	0.2	0.1
Ammonia	mg/l as N	0.095	0.060	<0.03	0.036
Nitrate-Nitrite	mg/l as N	0.013	0.030	0.072	<0.01
Total Phosphorus	mg/l as P	<0.01	0.192	<0.01	<0.01
Alkalinity	mg/l as CaCO <sub>3</sub>	18.88	19.20	35.59	9.21
Hardness	mg/l as CaCO <sub>3</sub>	26.16	23.67	41.79	15.31
Copper	mg/l	<0.1	<0.002	<0.1	<0.1
Iron	mg/l	<0.1	1.767	<0.1	<0.1
Manganese	mg/l	<0.1	0.092	<0.1	<0.1
Zinc	mg/l	<0.1	0.017	<0.1	<0.1



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Pebble Count % for Reference Sites: 45d - Talladega Upland				
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>	<b>45d-15</b>	<b>45d-16</b>	<b>45d-4</b>	<b>45d-9</b>
Silt/Clay	---	4	---	---
Sand	6	5	12	6.06
Gravel	35	68	41	31.31
Cobble	47	18	35	26.26
Boulder	12	5	7	33.33
Bedrock	---	---	5	3.03



**GADNR/EPD MACROINVERTEBRATE REFERENCE DATA**  
**PIEDMONT (45)**  
**Talladega Upland - 45d Data**

Habitat Values for Reference Sites: 45d - Talladega Upland				
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>45d-15</b>	<b>45d-16</b>	<b>45d-4</b>	<b>45d-9</b>
Epifaunal Substrate/Available Cover	16	19	16	18
Embeddedness	18	18	14	17
Velocity/Depth Regime	15	18	16	18
Sediment Deposition	18	13	15	19
Channel Flow Status	15	12	15	18
Channel Alteration	17	18	18	18
Frequency of Riffles (or bends)	16	12	19	20
Bank Stability (Left Bank)	9	8	9	9
Bank Stability (Right Bank)	8	8	9	10
Vegetative Protection (Left Bank)	9	8	9	9
Vegetative Protection (Right Bank)	9	8	9	9
Riparian Vegetative Zone Width (Left Bank)	7	9	9	9
Riparian Vegetative Zone Width (Right Bank)	9	9	9	10
<b>Total Habitat Score</b>	166	160	167	184



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**45d - Talladega Upland - reference streams**  
**45d-15 Reference Site 1**

Order	Family	Final Identification	Individuals	TCR	Stage
Coleoptera	Dytiscidae	<i>Liodessus sp.</i>	3		L
	Elmidae	<i>Dubiraphia sp.</i>	3		L
		Elmidae	2		L
		<i>Microcylloepus pusillus</i>	1		A
		<i>Microcylloepus pusillus</i>	3		L
		<i>Optioservus sp.</i>	3		L
		<i>Optioservus ovalis</i>	1		X
		<i>Stenelmis sp.</i>	6		A
		<i>Stenelmis sp.</i>	2		L
	Psephenidae	<i>Psephenus herricki</i>	1		L
Decapoda	Cambaridae	Cambarinae	1		X
Diptera	Atherinidae	<i>Atherix lantha</i>	2		X
	Chironomidae	<i>Microtendipes pedellus group</i>	2		X
		<i>Orthocladus sp.</i>	1	TCR-2	X
		<i>Polypedilum flavum</i>	1		X
		<i>Polypedilum illinoense group</i>	1		X
		<i>Thienemanniella sp.</i>	1		X
		<i>Thienemannimyia group</i>	1		X
	Simuliidae	Simuliidae	1		X
	Tipulidae	<i>Tipula sp.</i>	14		X
		Tipulidae	1		X
Megaloptera	Corydalidae	<i>Nigronia serricornis</i>	1		X
Neotaenioglossa	Pleuroceridae	<i>Elimia sp.</i>	5		X
	Capniidae	Capniidae	87	9 @ TCR-2	X

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**45d - Talladega Upland - reference streams**  
**45d-15 Reference Site 1 Continued**

Order	Family	Final Identification	Individuals	TCR	Stage
Plecoptera	Capniidae	<i>Paracapnia angulata</i>	72		X
	Nemouridae	Nemouridae	2		X
		<i>Ostrocerca sp.</i>	2		X
	Perlodidae	<i>Isoperla marlynia</i>	6		X
	Taeniopterygidae	<i>Taeniopteryx sp.</i>	3		X
Veneroida	Corbiculidae	<i>Corbicula fluminea</i>	1		X
		Oligochaeta	2		X
<b>Total Individuals</b>			232		





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**PIEDMONT (45)**  
**Talladega Upland - 45d Data**

**45d - Talladega Upland - reference streams**  
**45d-16 Reference Site 2**

Order	Family	Final ID	Individuals	TCR	Stage
Coleoptera	Dryopidae	Dryopidae	1	TCR-3	A
		<i>Helichus sp.</i>	1		A
	Elmidae	<i>Ancyronyx variegatus</i>	1		L
		<i>Dubiraphia sp.</i>	2		A
		<i>Dubiraphia sp.</i>	2		L
		Elmidae	5		L
		<i>Macronychus glabratus</i>	15		L
		<i>Optioservus sp.</i>	1		L
		<i>Stenelmis sp.</i>	1		X
	Hydrophilidae	<i>Berosus sp.</i>	1		X
Decapoda	Cambaridae	<i>Procambarus spiculifer</i>	2		X
Diptera	Atherinidae	<i>Atherix lantha</i>	1		X
	Ceratopogonidae	<i>Bezzia complex sp.</i>	1		X
	Chironomidae	<i>Ablabesmyia mallochi</i>	1		X
		<i>Corynoneura sp.</i>	10		X
		<i>Labrundinia sp.</i>	1		X
		<i>Microtendipes pedellus group</i>	2	1 @ TCR-2	X
		Orthoclaadiinae	2		X
		<i>Parametriocnemus sp.</i>	3		X
		<i>Phaenopsectra/Tribelos complex</i>	5		X
		<i>Polypedilum sp.</i>	10		X
		<i>Polypedilum flavum</i>	16		X
		<i>Polypedilum illinoense group</i>	1		X
		<i>Polypedilum tritum</i>	9		X
		<i>Rheocricotopus robacki</i>	3		X
		<i>Rheotanytarsus sp.</i>	1		X
		<i>Rheotanytarsus exiguus group</i>	1		X

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45d - Talladega Upland - reference streams 45d-16 Reference Site 2 Continued					
Order	Family	Final ID	Individuals	TCR	Stage
Diptera	Chironomidae	<i>Stempellinella sp.</i>	1		X
		<i>Stempellinella A</i>	4		X
		<i>Stenochironomus sp.</i>	4		X
		<i>Tanytarsus sp.</i>	1		X
		<i>Thienemanniella sp.</i>	3	1@TCR-2, 2 @ TCR-3	X
		<i>Thienemanniella xena</i>	8		X
		<i>Tribelos sp.</i>	3		X
		<i>Tribelos jucundus</i>	2		X
	Tipulidae	<i>Tipula sp.</i>	4		X
		Tipulidae	2		X
Ephemeroptera	Baetidae	Baetidae	3		X
		<i>Baetis sp.</i>	1		X
	Ephemerellidae	<i>Attenella attenuata</i>	1		X
	Heptageniidae	Heptageniidae	12		X
		<i>Stenacron sp.</i>	3		X
		<i>Stenonema sp.</i>	19		X
	Isonychiidae	<i>Isonychia sp.</i>	1		X
Heteroptera	Veliidae	<i>Rhagovelia obesa</i>	1		X
Hydrobiidae	Somatogyrus	<i>Somatogyrus sp.</i>	2	TCR-3	X
Lepidoptera	Pyralidae	<i>Parapoynx sp.</i>	3		X
Megaloptera	Corydalidae	<i>Nigronia serricornis</i>	1		X
	Sialidae	<i>Sialis sp.</i>	1		X
Neotaenioglossa	Pleuroceridae	<i>Elimia sp.</i>	43		X
Odonata	Aeshnidae	<i>Boyeria vinosa</i>	1	TCR-2	X
	Coenagrionidae	Coenagrionidae	2		X
		<i>Enallagma sp.</i>	2		X
	Corduliidae	<i>Somatochlora sp.</i>	1		X
	Gomphidae	<i>Dromogomphus spinosus</i>	1		X
Plecoptera	Perlidae	<i>Neoperla sp.</i>	1		X
Trichoptera	Calamoceratidae	<i>Anisocentropus pyraloides</i>	1		X
		<i>Heteroplectron americanum</i>	1		X
	Hydropsychidae	<i>Cheumatopsyche sp.</i>	3		X
	Leptoceridae	Leptoceridae	1		X
	Philopotamidae	<i>Chimarra sp.</i>	3		X
Veneroida	Corbiculidae	<i>Corbicula fluminea</i>	1		X
Total Individuals			239		



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## PIEDMONT (45)

### Talladega Upland - 45d Data

#### 45d - Talladega Upland - reference streams

#### 45d-4 Reference Site 3

Order	Family	Final ID	Individuals	TCR	Stage
Coleoptera	Dryopidae	<i>Helichus sp.</i>	1		A
	Psephenidae	<i>Ectopria sp.</i>	1		X
Decapoda	Cambaridae	<i>Cambarus coosae</i>	1	TCR-2	X
Diptera	Chironomidae	<i>Cricotopus sp.</i>	1		X
		<i>Cricotopus fugax</i>	1		X
		<i>Diamesa B</i>	2		X
		<i>Hudsonimyia sp.</i>	1	TCR-3	X
		Orthoclaadiinae	10		X
		<i>Orthocladus sp.</i>	3	2@TCR-1, 1@TCR-2	X
		<i>Orthocladus obumbratus</i>	4	1@TCR-1, 3@TCR-2	X
		<i>Orthocladus robacki</i>	3	1@TCR-2, 2@TCR-1	X
		<i>Parametriocnemus sp.</i>	7	6@ TCR-1, 1@TCR-2	X
		<i>Paratanytarsus sp.</i>	2		X
		<i>Paratrachocladus sp.</i>	3	1@TCR-2;1@TCR-3	X
		<i>Polypedilum sp.</i>	4		X
		<i>Polypedilum aviceps</i>	16		X
		<i>Polypedilum flavum</i>	3		X
		<i>Rheotanytarsus exiguus group</i>	1		X
		<i>Rheotanytarsus pellucidus</i>	2		X
		<i>Thienemanniella sp.</i>	1	TCR-2	X
		<i>Tvetenia sp.</i>	1		X
		<i>Tvetenia vitracies</i>	2		X
	Simuliidae	<i>Prosimulium sp.</i>	90		X
		<i>Simulium sp.</i>	1		X
	Tipulidae	<i>Tipula sp.</i>	3		X

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**45d - Talladega Upland - reference streams**  
**45d-4 Reference Site 3 Continued**

Order	Family	Final ID	Individuals	TCR	Stage
Ephemeroptera	Ephemerellidae	<i>Ephemerella argo</i>	3		X
	Heptageniidae	<i>Stenonema sp.</i>	2	TCR-2	X
	Isonychiidae	<i>Isonychia sp.</i>	1		X
Megaloptera	Corydalidae	<i>Nigronia fasciatus</i>	1		X
Odonata	Gomphidae	<i>Stylogomphus albistylus</i>	3		X
Plecoptera	Capniidae	Capniidae	1		X
Trichoptera	Hydropsychidae	<i>Cheumatopsyche sp.</i>	21		X
		<i>Hydropsyche scalaris</i>	2		X
	Limnephilidae	<i>Pseudostenophylax sparsus uniformis</i>	1		X
	Philopotamidae	<i>Chimarra sp.</i>	2		X
	Polycentropodidae	Polycentropodidae	1		X
<b>Total Individuals</b>			202		



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**45d - Talladega Upland - reference streams**  
**45d-9 Reference Site 4**

Order	Family	Final ID	Individuals	TCR	Stage
Basommatophora	Physidae	<i>Physella sp.</i>	2	TCR-2	X
Coleoptera	Chelonariidae	<i>Chelonarium lecontei</i>	1		L
	Curculionidae	<i>Anchytarsus bicolor</i>	2		L
	Dryopidae	<i>Helichus sp.</i>	1		X
		Elmidae	1	TCR-3	A
		Elmidae	1		L
		<i>Macronychus glabratus</i>	1		L
		<i>Optioservus sp.</i>	1		L
	Elmidae	<i>Stenelmis sp.</i>	1		L
	Psephenidae	<i>Psephenus herricki</i>	1		L
Decapoda	Cambaridae	Cambarinae	1		X
Diptera	Chironomidae	Chironominae	1		X
		<i>Eukiefferiella sp.</i>	2	1@TCR-1, 1@TCR-2	X
		<i>Eukiefferiella brehmi group</i>	5		X
		<i>Eukiefferiella tirolensis</i>	2		X
		<i>Hydrobaenus sp.</i>	1		X
		<i>Meropelopia sp.</i>	1	TCR-2	X
		<i>Micropsectra sp.</i>	1		X
		<i>Micropsectra A</i>	1		X
		<i>Nanocladius sp.</i>	1		X
		<i>Nilothauma sp.</i>	1	TCR-2	X
		<i>Parametriocnemus sp.</i>	19	1 @ TCR-2	X
		<i>Paraphaenocladius sp.</i>	1		X
		<i>Paratanytarsus dissimilis</i>	2		X
		<i>Phaenopsectra obediens group</i>	1		X

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**45d - Talladega Upland - reference streams**  
**45d-9 Reference Site 4 Continued**

Order	Family	Final ID	Individuals	TCR	Stage
Diptera	Chironomidae	<i>Polypedilum sp.</i>	5		X
		<i>Polypedilum aviceps</i>	49		X
		<i>Polypedilum flavum</i>	22		X
		<i>Pseudorthocladius sp.</i>	1		X
		<i>Reomyia sp.</i>	1		X
		<i>Rheotanytarsus sp.</i>	1	TCR-2	X
		<i>Rheotanytarsus exiguus group</i>	2		X
		Tanypodinae	1		X
		<i>Tanytarsus sp.</i>	1		X
		<i>Xylotopus par</i>	1		X
	Simuliidae	<i>Prosimulium sp.</i>	7		X
		Simuliidae	1		X
		<i>Simulium sp.</i>	3		X
	Tipulidae	Tipulidae	1		X
Ephemeroptera	Baetidae	<i>Pseudocloeon sp.</i>	1		X
	Ephemerellidae	<i>Attenella attenuata</i>	1		X
		<i>Ephemerella argo</i>	1		X
		Ephemerellidae	1		X
		<i>Eurylophella lutulenta</i>	1		X
	Heptageniidae	<i>Epeorus dispar</i>	1		X
		Heptageniidae	2		X
Isopoda	Asellidae	Asellidae	1		X
	Asellidae	<i>Lirceus sp.</i>	3		X
Megaloptera	Corydalidae	<i>Nigronia serricornis</i>	1		X
Neotaenioglossa	Pleuroceridae	<i>Elimia sp.</i>	6		X
Odonata	Coenagrionidae	<i>Amphiagrion saucium</i>	1	TCR-2	X
	Gomphidae	Gomphidae	2		X
Plecoptera	Capniidae	Capniidae	1		X
	Perlidae	<i>Acroneuria abnormis</i>	6		X
	Perlodidae	<i>Isoperla sp.</i>	3		X
		Perlodidae	1		X
	Taeniopterygidae	<i>Oemopteryx complex</i>	2		X
	Calamoceratidae	<i>Anisocentropus pyraloides</i>	1		X
Trichoptera	Hydropsychidae	<i>Ceratopsyche sparna</i>	1		X

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**45d - Talladega Upland - reference streams**  
**45d-9 Reference Site 4 Continued**

Order	Family	Final ID	Individuals	TCR	Stage
Trichoptera	Hydropsychidae	Hydropsychidae	1		X
		<i>Potamyia flava</i>	1		X
	Philopotamidae	<i>Chimarra sp.</i>	9		X
		<i>Wormaldia moesta</i>	1	TCR-2	X
	Polycentropodidae	<i>Neureclipsis sp.</i>	10	TCR-2	X
		Polycentropodidae	2		X
			Oligochaeta	2	
		Total Individuals	211		