# Appendix A

# Field Data Sheets and Field Notes



# **Stormwater Retention Basin**



#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

STREAM NAME	ETENTIC	ON P	ons	LOCATION	RP-	/					
STATION #	RIVERN	_		STREAM CLA	SS						
LAT	_ LONG _			RIVER BASIN							
STORET#				AGENCY						_	
INVESTIGATORS						LOT	NUMBER				
FORM COMPLETED  SPT/V	OBY C3 /SA	uL		DATE <u>06/</u> TIME <u>/2:4</u>	13/05 5 AM (PM		ASON FOR SURVEY				
HABITAT TYPES	☐ Cobble	:%			☐ Vegetated	l Banks <u>(</u> r (	10% □ Sand rgent )10%	%			
SAMPLE COLLECTION	How wer	e the sar	-frame mples collection of jabs  □ Sna	cted? W	ading C	☐ from ba					
GENERAL COMMENTS	Lud Alli	levize zatu	a ex	r 3-	30	0/0 1	in Alligat		·	 e.Q	<u> </u>
QUALITATIVE I Indicate estimated Dominant					l, 1 = Rar	e, 2 = 0	Common, 3= Abunc	iant,	4 =		
Periphyton	<del></del>			3 4	Slimes			0	7	2	3 4
Filamentous Algae		Z		3 4	Масго	inverteb	rates	0	1	2	3 4
Macrophytes	•	(	0 1 2	3 4)	<u>Fish</u>					2	3 4
	l abundand	ce: 0 = or	= Absent ganisms)	/Not Observed , 3= Abundan	t (>10 org	ganisms	organisms), 2 = Con ), 4 = Dominant (>5	50 or ——	gani —–	isms	
Porifera	0 1 2					3 4					3 4
Hydrozoa Platyhelminthes	0 1 2 0 1 2				0 1 2	3) 4 $3) 4$	Ephemeroptera Trichoptera	0	1	2	3 4
Turbellaria	0 1 2				0 1 2	<b>2</b> 74	Other	0	1	2	$3 \stackrel{4}{\cancel{4}}$
Hirudinea	$0 \stackrel{1}{\bigcirc} 2$			-	0 1 2	3 4	Clad ocera	U	1	4	3 (2
Oligochaeta	0 1 2		I -	-	0 1 2	3 4					
Isopoda	0 1 2		1		0 1 2	3 4	]				
Amphipoda	0 1 2			•	0 1 2	3 4	1				
Decapoda	0 1 2		1 -		0 1 2	3 4					
Gastropoda	0 1 2		_		0 1 2	3 4	1				
Bivalvia	0 1 2	3 4			0 1 2	3 4					
			Culcid	lae	0.12	3 4					

### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

Page 1 of 1

							. ago . o.	
STREAM NAME R	etention Pond	SITE NAME	ANNISTON	N PCB	SITE - OU-1/OU-2	2 AREA		
STATION# RI	P-STA-1	LOCATION	ANNISTON	N, AL				
RIVER BASIN		UPPER LIMIT	LATITUDE/LC	ONGITU	JDE: 33°37'00.9'	"/85°49';	32.1"	
AGENCY		LOWER LIMI	T LATITUDE/L	ONGIT				_
INVESTIGATORS S	PT, SML, JKS			LOT	NUMBER			_
FORM COMPLETED	RY	DATE 6/13/20	005	REAS	SON FOR SURVEY			_
	SPT	TIME 1245	AM PM		BMI COMMUNI	TY ASSE	ESSMENT	
HABITAT TYPES	Indicate the percentage of		pe present					
	☐ Cobble% ☐ S ☐ Submerged Macrophyte	nags% s 30 %	Vegetated Ba  ✓ Other (€			%		
					<u>/_10</u> /0			_
SAMPLE COLLECTION	Gear used  D-frame	☐ kick-net	Other _j	abs				
COLLEGION	How were the samples co	ollected?	wading 🖵 fi	rom ban	k 🖵 from boa	.t		
	Indicate the number of ja	nhs/kicks taken ir	each habitat ty	me.				
	☐ Cobble ☐ S	nags	☑ Vegetated Ba	anks <u>6(</u>				
	Submerged Macrophyte     Submerged Ma	s_30	Other (		)_10			
GENERAL								
COMMENTS								
	ASTING OF AQUATION abundance: 0 = Absert		ed, 1 = Rare,	2 = C	ommon, 3= Abuno	dant, 4	=	
Periphyton	0 1	2 3 4	Slimes			0 1	2 3	4
Filamentous Algae	0 1	2 3 4	Macroinv	vertebr	ates	0 1	2 3 (	4
Macrophytes	0 1	2 3 4	Fish			0 (1	) 2 3	4
	ATIONS OF MACROB abundance: 0 = Abse organisn	nt/Not Observ			rganisms), 2 = Cor , 4 = Dominant (>:			
Porifera	0 1 2 3 4 Ani	soptera	0 1 2	3 4	Chironomidae	0 1	2 3	4
Hydrozoa	0 1 2 3 4 Zyg	goptera	0 1 2 (	3) 4	Ephemeroptera	0 1	2 3	4
Platyhelminthes	0 1 2 3 4 Her	niptera	>	3)4	Trichoptera	0 1	2 3	4
Turbellaria		eoptera	_	3)4	Other	0 1	2 3 (	4
Hirudinea	_	oidoptera	0 1 2	3 4	Cladocera			_
Oligochaeta		lidae		3 4				
Isopoda		ydalidae		3 4				
Amphipoda	•	ulidae		3 4				
Decapoda		pididae		3 4				
Gastropoda	0 1 2 3 4 Sim	uiliidae	0 1 2	3 4				

0 1 2 3 4 Tabinidae

Bivalvia

### Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001.

Sample Location: Sample Date: Sample Type:	Station RP-01 13-Jun-05 Kick Net		
Taxon:	Common Name	Number	Percent
Rhyncobdellida	i i		
Glossiphoniidae			
Helobdella papillata	leech	2	0.6%
Hydrachnidia			
Limnesiidae		12	2.00/
Limnesia sp. Ephemeroptera	mite	13	3.9%
Baetidae			
Callibaetis sp.	mayfly	120	36.3%
Caenidae			
Caenis sp.	mayfly	3	0.9%
Odonata			
Aschnidae		_	
Aeschna sp.	dragonfly	8	2.4%
Anax sp. Coenagrionidae	dragonfly	1	0.3%
Coenagrionidae <i>Enallagma sp.</i>	damselfly	54	16.3%
Libellulidae (early instar)	dragonfly	1	0.3%
Erythemis simplicollis	dragonfly	3	0.9%
Hemiptera	,		
Belostomatidae	ı		
Belostoma sp.	giant water bug	4	1.2%
Corixidae			0.204
Hesperocorixa sp.	water boatman water boatman	1 2	0.3% 0.6%
<i>Sigara sp.</i> Gerridae	water boatman	2	0.0%
Gerris sp.	water strider	2	0.6%
Mesoveliidae	Water Sureer	_	0.070
Mesovelia mulsanti	water treader	6	1.8%
Naucoridae			
Pelocoris femoratus	creeping water bug	9	2.7%
Notonectidae		24	10.00/
Notonecta indica	back swimmer	36	10.9%
Coleoptera Dytiscidae			
Ilybius sp.	diving beetle	5	1.5%
Haliplidae	drying seede	3	1.5 /0
Haliplus sp.	crawling water beetle	2	0.6%
Peltodytes sp.	crawling water beetle	1	0.3%
Hydrophilidae			
Berosus sp.	scavenger beetle	1	0.3%
Tropisternus sp.	scavenger beetle	22	6.6%
Noteridae <i>Hydrocanthus sp.</i>	burrowing water beetle	1	0.3%
Diptera	bullowing water beene	1	0.370
Ceratopogonidae			
Palpomyia gr.	biting midge	4	1.2%
Chaoboridae			
Chaoborus punctipennis	phantom midge	1	0.3%
Chironomidae			0.511
Cricotopus bicinctus	midge	1	0.3%
Endochironomus nigricans	midge	6 10	1.8%
Larsia sp. Parachironomus chaetoalus	midge	10 5	3.0% 1.5%
Paratanytarsus sp.	midge midge	1	0.3%
Culicidae	mage	1	0.570
Culex sp.	mosquito	5	1.5%
Stratiomyiidae			
Odontomyia sp.	soldier fly	1	0.3%
Total Number of Specimens	-	331	100.0%
Total Number of Taxa		31	

#### FISH SAMPLING FIELD DATA SHEET (FRONT)

of 1page 1 STREAM NAME Retention Pond SITE NAME Anniston PCB Site - OU-1/OU-2 Area Anniston, AL STATION# RP-STA-1 LOCATION STATION-CENTER LATITUDE/LONGITUDE: 33°39'10.5"/85°50'54.6" RIVER BASIN LOWER LIMIT LATITUDE/LONGITUDE: AGENCY N/A GEAR Smith-Root LR24 Electro-shocker SML, SPT, JKS INVESTIGATORS REASON FOR SURVEY fish community study DATE <u>6/13/05</u> FORM COMPLETED BY SPT TIME \_0141\_

SAMPLE COLLECTION	How were the fish captured? ☑ back pack ☐ tote barge ☐ other
	Block nets used? □ YES ☑ NO
	Sampling Duration Start time End time Duration
	Stream width (in meters) Max Mean
HABITAT TYPES	Indicate the percentage of each habitat type present  □ Riffles% ② Pools 50% □ Runs% □ Snags%  ☑ Submerged Macrophytes 50% □ Other ( )%
GENERAL COMMENTS	no fish species observed

SPECIES	TOTAL	OPTION	OPTIONAL: LENGTH (mm)/WEIGHT (g)						Al	NOM	ALIES	s*		
	(COUNT)	(25 S	(25 SPECIMEN MAX SUBSAMPLE)						F	L	M	S	Т	Z
							4							
							4							
							4							
	T													
							-							
							4							
							-							
	Т							Г	Г		Г		Г	
								<u> </u>	<u> </u>		<u> </u>		<u> </u>	
		$\vdash$					1							
		$\vdash$					1							
							1							
							1							

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

### FISH SAMPLING FIELD DATA SHEET (BACK)

SPECIES	TOTAL (COUNT)	OPTIO	PTIONAL: LENGTH (mm)/WEIGHT (g) (25 SPECIMEN MAX SUBSAMPLE)						_ <del></del>									
	(COUNT)	(23)	SF ECIVIT	ZIV IVIAA (	OUDSAMI	(LE)	D	E	F	L	M	S	T	Z				
							_											
							-											
	I																	
							1											
							1											
							1											
	•																	
							4											
							4											
							-											
	ı																	
							1											
							1											
							1											
	_																	
	L																	
	l																	
				<del>                                     </del>														

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

# **Snow Creek Station 1**



# top 33°39′40.7″ 85°50′51.7″ top 33°39′43.2″ 85°50′55.5″

#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

	WOW (REEK	LOCATION 517	MON/REACH 1	14th + Me
STATION#	RIVERMILE	STREAM CLASS		
LAT	LONG	RIVER BASIN		
STORET#		AGENCY	· ·	
INVESTIGATORS			LOT NUMBER	
FORM COMPLETED	ML/SPT/JKS	DATE GIO AM P	REASON FOR SURVEY	
HABITAT TYPES			I Banks 20 % Sand	40%
SAMPLE COLLECTION		ollected? Wading the bas/kicks taken in each habita than the base of the base	from bank from b	
GENERAL COMMENTS	From 1.13 fals See field	sec notational for 1	esult f DMI	/pm treem
	<u> </u>			
	LISTING OF AQUATION abundance: 0 = Absen		e, 2 = Common, 3= Abu	ndant, 4=
Indicate estimated Dominant				0 1 2 3 4
Indicate estimated		2 3 4 Slimes		<u></u>
Indicate estimated Dominant  Periphyton		2 3 4 Slimes		0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA	abundance: 0 = Absertions OF MACROBI abundance: 0 = Absertions	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran		0 1 2 3 4 0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA	abundance: 0 = Absertions OF MACROBI abundance: 0 = Absertions	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran  ENTHOS nt/Not Observed, 1 = Ran ns), 3 = Abundant (>10 org	invertebrates  re (1-3 organisms), 2 = Corganisms), 4 = Dominant (2	0 1 2 3 4 0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA Indicate estimated	ATIONS OF MACROBI abundance: 0 = Abservations	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran  ENTHOS nt/Not Observed, 1 = Ran ns), 3 = Abundant (>10 org	invertebrates  re (1-3 organisms), 2 = Corganisms), 4 = Dominant (2	0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA Indicate estimated  Porifera Hydrozoa Platyhelminthes	1 1 0 1 0 1 2 3 4 Ani 0 1 2 3 4 Henry 1 2 3	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran s), 3 = Abundant (>10 org soptera optera	re (1-3 organisms), 2 = Corganisms), 4 = Dominant (2)  3  4	0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA Indicate estimated  Porifera Hydrozoa Platyhelminthes Turbellaria	1 abundance: 0 = Abservations OF MACROBI abundance: 0 = Abservations OF MACROBI abundance: 0 = Abservations O = Abservations	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran s), 3 = Abundant (>10 org  soptera optera	re (1-3 organisms), 2 = Corganisms), 4 = Dominant (2)  3	0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA Indicate estimated  Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea	1 abundance: 0 = Abservations OF MACROBI abundance: 0 = Abservations or maintain of the control	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran as), 3 = Abundant (>10 org  soptera 0 1 2 niptera 0 1 2	re (1-3 organisms), 2 = Corganisms), 4 = Dominant (2)  3  4	0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA Indicate estimated  Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea Oligochaeta	1 abundance: 0 = Abservations OF MACROBI abundance: 0 = Abservations or a distribution of the control of the co	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran as), 3 = Abundant (>10 org  soptera 0 1 2 niptera 0 1 2	invertebrates  re (1-3 organisms), 2 = Coganisms), 4 = Dominant (2)  3	0 1 2 3 4 0 1 2 3 4
Indicate estimated Dominant  Periphyton Filamentous Algae Macrophytes  FIELD OBSERVA Indicate estimated  Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea	1 abundance: 0 = Abservations OF MACROBI abundance: 0 = Abservations Of MACROBI abundance: 0 = Abservations Of 1 2 3 4 Ani 0 1 2 3 4 Columbia Colum	2 3 4 Slimes 2 3 4 Macro 2 3 4 Fish  ENTHOS nt/Not Observed, 1 = Ran as), 3 = Abundant (>10 org  soptera 0 1 2 niptera 0 1 2	re (1-3 organisms), 2 = Corganisms), 4 = Dominant (2)  3  4	0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4

Empididae

Simuliidae

Tabinidae Culcidae

1 2 🗿 4

Decapoda

Bivalvia

Gastropoda

### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

						Page 1 of 1
STREAM NAME S	NOW CREEK	SITE NAME	ANNISTO	N PCB S	ITE - OU-1/OU	-2 AREA
STATION# S	C-STA-1	LOCATION	ANNISTO	N, AL		
RIVER BASIN		UPPER LIMIT	LATITUDE/LO	ONGITUD	DE: 33°39'43.2	?"/85°50'55.5"
AGENCY		LOWER LIM	T LATITUDE/I	ONGITU		7"/85°50'51.7"
INVESTIGATORS §	SPT. SML. JKS			LOT N	JMBER	
FORM COMPLETEI	) BY	DATE 6/10/2	005		N FOR SURVEY	
	SPT	TIME 0 <u>940</u>	(AM) PM	112.150		ITY ASSESSMENT
HABITAT TYPES	Indicate the percentage   ☑ Cobble 20 % □ Submerged Macrophyte	Snags%	pe present ☑ Vegetated B ☑ Other (	anks <u>20</u>	_% <b>X</b> 1 Sand_6	0% (gravel)
CAMPLE						
SAMPLE COLLECTION	Gear used 🚨 D-frame	Kick-net	☐ Otner _			_
	How were the samples co	ollected?	wading 🖵 f	rom bank	☐ from bo	at
	Indicate the number of j	abs/kicks taken iı	n each habitat ty	pe.		
	☐ Cobble 4 ☐ Submerged Macrophyte	Snags	X Vegetated B  ☐ Other (	anks_4_	_ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2 (gravel)
	☐ Submerged Macrophyte	es	☐ Other (		)	
GENERAL						
COMMENTS						
	LISTING OF AQUATI l abundance: 0 = Abse		ed, 1 = Rare,	2 = Cor	nmon, 3= Abur	dant, 4 =
Periphyton	(0) 1	2 3 4	Slimes			(0) 1 2 3 4
Filamentous Algae	0 1	2 3 4	Macroin	vertebrat	es	0 1 (2) 3 4
Macrophytes	0 1 (	2 3 4	Fish			0 1 (2) 3 4
FIELD OBSERV. Indicate estimated		ent/Not Observ	ant (>10 orga		anisms), 2 = Co 4 = Dominant (>	
Porifera		isoptera	$\sim$		Chironomidae	0 (1) 2 3 4
Hydrozoa	•	goptera			Ephemeroptera	0 1 2 3 4
Platyhelminthes		miptera			Γrichoptera	0 1 2 3 4
Turbellaria		leoptera			Other (Fish fry)	0 1 2 3 4
Hirudinea		pidoptera		3 4		
Oligochaeta Isopoda	_	lidae rydalidae		3 4 3 4		
Amphipoda		oulidae		3 4		
Decapoda Decapoda	_ ^	npididae		3 4		
Gastropoda		nuliidae		3 4		
_		binidae		3 4		
Bivalvia	0 1 2 3 4 1 14	Jiiiuae	0 1 2	3 4 I		

## Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001.

	Sample Location: Sample Date: Sample Type:	Station SC-1 10-Jun-05 Kick Net		
Taxon:		Common Name	Number	Percent
Tubificida				
Tub	ificidae			
	Bothrioneurum vejdovskyanum	tubeworm	1	1.0%
	Branchiura sowerbyi	tubeworm	3	3.1%
	Ilydrilus templetoni	tubeworm	1	1.0%
	Limnodrilus sp.	tubeworm	23	23.7%
Basommat				
Anc	ylidae			
	Ferrissia rivularis	limpet snail	3	3.1%
Lyn	nnaeidae			0.0%
	Fossaria sp.	pond snail	3	3.1%
Phy	sidae			
	Physa sp.	pouch snail	9	9.3%
Veneroida				
Sph	aeriidae			
	Pisidium sp.	pill clam	3	3.1%
Decapoda				
Can	nbaridae			
	Orconectes sp.	crayfish	1	1.0%
Odonata		·		
Asc	hnidae			
	Aeschna sp.	dragonfly	6	6.2%
Coe	nagrionidae	- '		
	Enallagma sp.	damselfly	7	7.2%
	Ischnura sp.	damselfly	14	14.4%
Coleoptera	_ 			
	plidae			
	Peltodytes sp.	crawling water beetle	1	1.0%
Diptera		-		
Chi	ronomidae			
	Chironomus sp.	midge	1	1.0%
	Natarsia sp.	midge	3	3.1%
	Phaenopsectra obedians gr.	midge	3	3.1%
	Stictochironomus sp.	midge	2	2.1%
	Tanypus sp.	midge	1	1.0%
	Thienemannimyia gr.	midge	12	12.4%
	Total Number of Specimens Total Number of Taxa		97 19	100.0%

#### FISH SAMPLING FIELD DATA SHEET

Page 1 of 1

STREAM NAME Snow Creek	SITE NAME Anniston PCB Site - OU-1/OU-2 Area
STATION# SC-STA-1	LOCATION Anniston, AL
RIVER BASIN	UPPER LIMIT LATITUDE/LONGITUDE: 33°39'43.2"/85°50'55.5"
AGENCY	LOWER LIMIT LATITUDE/LONGITUDE: 33°39'40.7"/85°50'51.7"
GEAR Smith-Root LR24 Electro-shocker	INVESTIGATORS SML, SPT, JKS
FORM COMPLETED BY SPT	DATE 6/10/05 TIME 0700 AM PM REASON FOR SURVEY fish community study

SAMPLE COLLECTION	How were the fish captured? 🛭 back pack	☐ tote barge	□ other
	Block nets used? ☑ YES ☐ NO		
	Sampling Duration Start time	End time	Duration 2,386 seconds
	Stream width (in meters) Max	_ Mean	
HABITAT TYPES	Indicate the percentage of each habitat type p  □ Riffles % □ Pools % ☑ Runs □ Submerged Macrophytes % □ Other	resent	
GENERAL COMMENTS			

SPECIES	TOTAL				n)/WEIG				Al	NOM	ALIES	s*		
	(COUNT)	(25 S	(25 SPECIMEN MAX SUBSAMPLE)						F	L	M	s	Т	Z
Eastern Mosquitofish	110	34/0.5	47/1.2	40/0.9	43/0.9	41/0.9								
(Gambusia holbroo	ki)	44/1.1	45/0.9	46/1.0	46/1.0	47/1.3								
		50/1.6	39/0.8	42/1.0	44/1.0	37/0.6								
		34/0.4	42/0.7	42/0.8	46/1.0	49/1.6								
		34/0.3	40/0.8	38/0.5	45/1.0	41/0.8								
Largescale Stoneroller	15	97/9.4	95/9.5	98/10.8	95/9.4	83/6.4								
(Campostoma oligolep	ois)	83/7.1	79/5.8	89/8.2	89/6.8	92/7.6								
		82/6.3	87/7.6	79/5.4	113/14.6	100/12.5								
Bluespotted Sunfish	2	152/65.3	65/4.6											
(Enneacanthus glor	iosus)													

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME SUC	w creek	LOCATION	SC_	-574
STATION #R	ATION # RIVERMILE			
LATLC	ONG	RIVER BASIN	N	
STORET#		AGENCY		
INVESTIGATORS		_		
FORM COMPLETED BY	KS SOT	DATE 06/1 TIME 7400	2/05 AM (PI	REASON FOR SURVEY
WEATHER CONDITIONS	rain ( showers  60 % W %c.	(heavy rain) (steady rain) s (intermittent) loud cover ear/sunny	Past 24 hours  O O O O O O O O O O O O O O O O O O	Has there been a heavy rain in the last 7 days?  Yes Ono  Air Temperature C  Other
See Location/MAP		te and indicate ا		mpled (or attach a photograph)
STREAM CHARACTERIZATION	Stream Subsystem  Perennial  Int	ermittent 🛭 Tic	ial	Stream Type G Warmwater

☐ Spring-fed
☐ Mixture of origins
☐ Other\_\_\_\_

Catchment Area\_\_\_\_

km²

Stream Origin

Glacial
Non-glacial montane
Swamp and bog

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	Predominant Surrounding Landuse  ☐ Forest ☐ Commercial ☐ Field/Pasture ☐ Industrial ☐ Agricultural ☐ Other ☐ Residential  Indicate the dominant type and record the domi ☐ Trees ☐ Shrubs	Local Watershed PS Pollution  No evidence Some potential sources  Obvious sources  Local Watershed Eroslon  None Moderate Heavy
VEGETATION (18 meter buffer)	dominant species present	Grasses W Herbaceous
INSTREAM FEATURES	Estimated Reach Lengthm  Estimated Stream Widthm  Sampling Reach Area	Canopy Cover Partly open Partly shaded Shaded  High Water Mark Arm from Crake Bottom Proportion of Reach Represented by Stream Morphology Types Riffle % Run 100 %  Channelized Yes No  Dam Present Yes No
LARGE WOODY DEBRIS	LWDm²	ch area)
AQUATIC VEGETATION	Indicate the dominant type and record the dominant type and record the dominant type and record the dominal type and record the dominant species present    Alligation   Alligation   35	Rooted floating Free floating
WATER QUALITY  Servel hade  Violation	Temperature C  Specific Conductance  Dissolved Oxygen  pH  Turbidity  WQ Instrument Used	Water Odors  Normal/None Sewage Petroleum Chemical Fishy Other  Water Surface Oils Slick Sheen Globs Flecks None Other  Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odórs  W Normal Sewage Petroleum Chemical Anaerobic None Other  Oils W Absent Slight Moderate Profuse	Deposits  ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other  Looking at stones which are not deeply embedded, are the undersides black in color? ☐ Yes ☐ No

INC	ORGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach			% Composition in Sampling Area		
Bedrock			Detritus	sticks, wood, coarse plant	10		
Boulder	> 256 mm (10")		1	materials (CPOM)	10		
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic	<i>n</i> –		
Gravel	2-64 mm (0.1"-2.5")	3,0	]	(FPOM)			
Sand	0.06-2mm (gritty)	<b>48</b> 00	Marl	grey, shell fragments			
Silt	0.004-0.06 mm	(0			1_0-		
Clay	< 0.004 mm (slick)		1				

### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME SNOW CREEK	LOCATION SC-STAI
STATION # RIVERMILE	STREAM CLASS
LATLONG	RIVER BASIN
STORET#	AGENCY
INVESTIGATORS	
FORM COMPLETED BY	DATE 06/12/03 REASON FOR SURVEY
SML/JKS/SPT	77.30

	Habitat Parameter		Condition	Category			
	Parameter	Optimal	Suboptimal	Marginal	Poor		
	1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.		
each	SCORE \$	20, .19. 18 17, 16	<u> 15, 14, 13, 12, 11, </u>	10, 10, 18, 179, 19	1.4.2.2.2. F		
Parameters to be evaluated in sampling reach	2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.		
ated	SCORE 14	20 19 18 17 16	15 (17) 13 12 11 11	.10 (9 8 . 7 <b>)</b>	$(5, \sqrt{4}, \sqrt{3}, \sqrt{2}) < 1 < \sqrt{6}$ .		
o be evalu	3. Pool Variability	Even mix of large- shallow, large-deep, small-shallow, small- deep pools present.	Majority of pools large- deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small- shallow or pools absent.		
ters t	score 3	20: 19 . 18 . 14 . 16.	15, 14, 13, 12, 11, 1	10- 9 8 47 6	8 4/872 1 0		
Parame	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.		
{ {	SCORE 4	20 19 18 17 16	15/ 14/ 13 12 (0)	0 9 8 7 6			
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.		
	SCORE 17	20 19 18 17/16	15 314 13 12 11	100 t 2044 30 - 1/2 1/3			

### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

	Habitat		Condition	Category	
	Parameter	Optimal	Suboptimal	Marginal	<u>Poor</u>
	6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	SCORE	20 19 - 18 17 16	15/14 )13 12 11	10 9 8 7 6	5 4 3 12 1 1 0
pling reach	7. Channel Sinuosity  The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)		The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
1 Samp	score 5	20 19 18 17 16	15 14 13 12 H	10. 9. 8. 7.///	5/4 3 2 1 0
Parameters to be evaluated broader than sampling reach	8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
be evalu	SCORE $\frac{9}{4}$ (LB) SCORE $\frac{9}{4}$ (RB)	teit Bank 👉 10 🗘 Rightsank keretis <b>F</b> or			2 . $0$ . $0$ . $0$ . $0$ . $0$ .
Parameters to	9. Vegetative Protection (score each bank)  Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height replaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	SCORE (LB) SCORE (RB)	Left Bank 10 (3) Rightenink 10	230 7 6 3 230 4 7 3 6 3	5 4 3	2 I. 6 2 1 0 0
	10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	SCORE $\underline{C}$ (LB) SCORE $\underline{C}$ (RB)	Left Bank LO: 9		5 4 18 3	2 (150 c. 0), (2), (4) (70,0)

Total Score <u>56766</u> (= 122

# **Snow Creek Station 2**



850 501 10.4 33 39 07.5

#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

STREAM NAME 5	NOW CREEK	LOCATION SC-SI	<u> </u>					
STATION#	RIVERMILE	STREAM CLASS						
LAT	LONG	RIVER BASIN						
STORET#		AGENCY						
INVESTIGATORS			LOT NUMBER					
FORM COMPLETED	L/NES SET	DATE 6/10/05 TIME AM PM	REASON FOR SURVEY					
HABITAT TYPES	Indicate the percentage of Cobble 50% Sn	each habitat type present ags%	anks%					
SAMPLE COLLECTION	How were the samples coll	Gear used D-frame kick-net Other  How were the samples collected? wading from bank from boat  Indicate the number of jabs/kicks taken in each habitat type.  Cobble O Snags Vegetated Banks Sand						
GENERAL COMMENTS	50% IN R.	UN: SANO/RO FORE: ROCK/B	OK MIX LE BINLOOP BMI/PMI RESULTS					
•	ISTING OF AQUATIC	ВІОТА	2 = Common, 3= Abundant, 4 =					

Periphyton	0/1 2 3 4	Slimes	0 1 2 3 4
Filamentous Algae	0(1) 2 3 4	Macroinvertebrates	0 1 2 3 4
Macrophytes	0 1 2 3 4	Fish	$0 \ 1/2) \ 3 \ 4$

#### FIELD OBSERVATIONS OF MACROBENTHOS

Indicate estimated abundance: 0 = Absent/Not Observed, 1 = Rare (1-3 organisms), 2 = Common (3-9 organisms), 3= Abundant (>10 organisms), 4 = Dominant (>50 organisms)

Porifera	0	1	2	3	4	Anisoptera	0		1 (	<b>②</b>	3	4	Chironomidae	0	X	<b>S</b> 2	3	7 4
Hydrozoa	0	1	2	3	4	Zygoptera	0		1	2	3	4	Ephemeroptera	0	Z	<b>)</b> 2	(3)	4
Platyhelminthes	0	1	2	3	4	Hemiptera	0		1	2	3	4	Trichoptera	0	ī	2	3	4
Turbellaria	0	1	2	3	4	Coleoptera	0	(	(ر1	2	3	4	Other	0	1	2	3	4
Hirudinea	0	1	2	3	4	Lepidoptera	0		1	2	3	4						
Oligochaeta	0	0	2	3	4	Sialidae	0		1	2	3	4						
Isopoda	0	1	2	3	4	Corydalidae	0		1	2	3	4						
Amphipoda	0	1	2	3	4	Tipulidae	0		1	2	3	4						
Decapoda	0	1	2	3	4	Empididae	0		1	2	3	4	śń					
Gastropoda	0	1	2	3	4	Simuliidae	0	(	1)	2	3	4						
Bivalvia	0	1	2	3	4	Tabinidae	0	•	ĺ	2	3	4						
						Culcidae	0		1	2	.3	4						

### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

Page 1 of 1

						raye	1 01 1	
STREAM NAME S	NOW CREEK	SITE NAME	ANNISTON	N PCB SITI	E - OU-1/OU-2	2 AREA		
STATION# S	C-STA-2	LOCATION	OCATION ANNISTON, AL					
RIVER BASIN		UPPER LIMIT LATITUDE/LONGITUDE: 33°39'08.5"/85°50'13						
AGENCY		LOWER LIMI	T LATITUDE/L	ONGITUDE		"/85°50'10.4"		
INVESTIGATORS S	PT, SML, JKS			LOT NUM	BER			
FORM COMPLETED	ВУ	DATE 6/10/20	005	REASON F	OR SURVEY			
	SPT	TIME 1 <u>206</u>	AM (PM)	i i	BMI COMMUNI	TY ASSESSME	ENT	
				ı				
HABITAT TYPES	Indicate the percentage of	of each habitat ty	pe present		50 a 1 F/			
	☑ Cobble 50 % ☐ S ☐ Submerged Macrophyte	nags%	☐ Vegetated B☐ Other (	anks%	X1 Sand_50	)%		
GANERY E	0 1 7							
SAMPLE COLLECTION	Gear used ☐ D-frame	KICK-net	☐ Otner _					
	How were the samples co	llected?	wading	rom bank	☐ from boa	it		
	Indicate the number of ja	ıbs/kicks taken ir	n each habitat ty	pe.				
	<ul><li>☑ Cobble 10 ☐ S</li><li>☐ Submerged Macrophyte</li></ul>	nags	☐ Vegetated B☐ Other (		<b>№</b> Sand_10			
	Submerged Macrophyte	s	□ Other (		)			
GENERAL COMMENTS								
COMMENTS								
QUALITATIVE I	ISTING OF AQUATION	C BIOTA						
	abundance: $0 = Absen$	nt/Not Observe	ed, 1 = Rare,	<b>2</b> = <b>Comm</b>	on, 3= Abun	dant, 4 =		
Dominant								
To the control of the	(2) 1	2 2 4	C1.			(0) 1 2	2 4	
Periphyton Alexander	$\sim$	2 3 4	Slimes			$\sim$	3 4	
Filamentous Algae	0 (1)	2 3 4		vertebrates		$\sim$	3 4	
Macrophytes	<u>(0)</u> 1	2 3 4	Fish			0 1 (2)	3 4	
EIELD ODGEDY	THONG OF MACDOD	ENTILOG						
	ATIONS OF MACROB abundance: 0 = Abse		ed 1 = Rare	(1 <b>-3</b> organi	isms) 2 = Cor	mmon (3-9		
marcute estimated		ns), 3= Abunda					)	
Porifera	0 1 2 3 4 Ani	soptera	0 1 (2)	3 4 Chi	ronomidae	0 1 2 (	3)4	
Hydrozoa	0 1 2 3 4 Zyg	goptera	0 1 2	3 4 Eph	nemeroptera	0 1 2 (	$\overline{3}$ 4	
Platyhelminthes		niptera			choptera		3 4	
Turbellaria		eoptera		3 4 Oth	er	0 1 2	3 4	
Hirudinea		oidoptera		3 4				
Oligochaeta	_	lidae		3 4				
Isopoda		ydalidae		3 4				
Amphipoda	_	ulidae		3 4				
Decapoda		pididae	_	3 4				
Gastropoda		nuliidae		3 4				
Bivalvia	0 1 2 3 4 Tab	inidae	0  1  2	3 4				

Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001.

Sample Location: Sample Date: Sample Type:	Station SC-2 10-Jun-05 Kick Net		
Taxon:	Common Name	Number	Percent
Tubificida		l	
Tubificidae			
Bothrioneurum vejdovskyanum	tubeworm	3	2.8%
Limnodrilus sp.	tubeworm	1	0.9%
Arhyncobdellida			
Erpobdellidae			
Mooreobdella sp.	leech	1	0.9%
Basommatophora			
Physidae			
Physa sp.	pouch snail	1	0.9%
Planorbidae			
poss. Planorbella sp. (tent.)	orb snail	1	0.9%
Ephemeroptera			
Baetidae			
Baetis sp.	mayfly	27	25.5%
Odonata			
Coenagrionidae			
Ischnura sp.	damselfly	1	0.9%
Trichoptera			
Hydropsychidae			
Cheumatopsyche sp.	caddisfly	17	16.0%
Coleoptera			
Elmidae			
Stenelmis crenata gr.	riffle beetle	6	5.7%
Diptera			
Ceratopogonidae	100	,	0.00/
Atrichopogon sp.	biting midge	1	0.9%
Chironomidae	• 1	,	0.00/
Cryptochironomus fulvus gr.	midge	1	0.9%
Thienemannimyia gr.	midge	45	42.5%
Empididae	damas fly	1	0.9%
Hemerodromia sp.	dance fly	1	0.9%
Total Number of Specimens Total Number of Taxa		106 13	100.0%

#### FISH SAMPLING FIELD DATA SHEET

STREAM NAME Snow Creek	SITE NAME Anniston PCB Site - OU-1/OU-2 Area					
STATION# SC-STA-2	LOCATION Anniston, AL					
RIVER BASIN	UPPER LIMIT LATITUDE/LONGITUDE: 33°39'08.5"/85°50'13.3"	,				
AGENCY	LOWER LIMIT LATITUDE/LONGITUDE: 33°39'07.5"/85°50'10.4					
GEAR Smith-Root LR24 Electro-shocker	INVESTIGATORS SML, SPT, JKS					
FORM COMPLETED BY SPT	DATE 6/11/05 TIME 0730 AM PM REASON FOR SURVEY fish community study					

SAMPLE COLLECTION	How were the fish captured? ☒ back pack	☐ tote barge	☐ other
	Block nets used? ☑ YES ☐ NO		
	Sampling Duration Start time	End time	Duration 2,146 seconds
	Stream width (in meters) Max	Mean	
HABITAT TYPES	Indicate the percentage of each habitat type pr  ☑ Riffles 30 % ☐ Pools% ☑ Runs ☐ Submerged Macrophytes% ☐ Other	resent 70 % □ Snags %	
GENERAL COMMENTS			

SPECIES	TOTAL				n)/WEIG				Al	NOM	ALIES	s*		
	(COUNT)	(25 S	(25 SPECIMEN MAX SUBSAMPLE)				D	E	F	L	M	s	Т	Z
Largescale Stoneroller	21	72/3.8	115/14	79/6.4	75/4.9	96/10.1								
(Campostoma oligolepis)		86/7.8	75/4.4	81/5.6	98/12.1	88/7.7								
		121/21.9	114/18.2	116/21.8	106/12.5	121/22.4								
		136/30.7	122/22.4	102/12.8	151/46.3	116/19.2								
		122/20.3												
Bluespotted Sunfish	18	193/150.2	76/7.9	84/15.1	92/16	171/110.5								
(Enneacanthus glor	iosus)	132/46.3	72/9.4	81/13.4	109/24.1	89/15.2								
		77/7.8	92/17.6	123/38.4	87/13	132/54.7								
		172/96.7	212/185.8	206/200+										
Unknown Cyprinid #1	12	51/2.0	92/9.6	137/37	122/25	92/9.6								
(Notropis spp.)		120/23	111/20	99/12.5	81/5.2	93/11.3								
		102/11.6	101/12.4											
Unknown Cyprinid #2	5	41/0.7	35/0.5	52/1.4	37/0.5	32/0.5								
(Notropis spp.)														
, , , ,														

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

SPECIES	TOTAL	OPTIO	NAL: LEN	NGTH (m	m)/WEIG	SHT (g)			A	NOM	ALIE		.go 2	OT 2
	(COUNT)	(25 \$	OPTIONAL: LENGTH (mm)/WEIGHT (g) (25 SPECIMEN MAX SUBSAMPLE)			D	E	F	L	M	S	T	Z	
Eastern Mosquitofish	2	51/2.7	44/1.6											
(Gambusia holbro	oki)													
							4							
							-							
									П					
						ļ								
							-							
							-							
							1							
	I								Ī					
	ı													
							4							
							1							
							1							
		<u> </u>					-							
						<u> </u>			_					
							-							
							1							

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME SNO	W CREEN	LOCATION	<i>5</i> C - S	7A2			
	IVERMILE	STREAM CLASS					
LATLC	ONG	RIVER BASIN					
STORET#		AGENCY					
INVESTIGATORS .			_	<del></del>			
FORM COMPLETED BY	SM L ISPT	DATE <u>06</u> TIME <u>14.5</u>	12/05 D AM (PM	REASON FOR SURVEY			
WEATHER CONDITIONS  SITE LOCATION/MAP	rain (	(heavy rain) steady rain) (intermittent) oud cover ar/sunny te and indicate the	Past 24 hours  □ □ □ □  % □ he areas sam	Has there been a heavy rain in the last 7 days?  O'Yes ONO  Air Temperature 5 C  Other  upled (or attach a photograph)			
See Cieldonh Wetchook							
		;	•				
STREAM CHARACTERIZATION	Stream Subsystem   Perennial   Integration   Integration     Stream Origin   Glacial   Non-glacial montant	ermittent 🖸 Tide	d	Stream Type Coldwater Warmwater  Catchment Areakm²			

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSH FEATURES		☐ Fore:	ninant Surrounding Last  St □ Comme  Pasture □ Industri cultural □ Other _ dential	ercial ial	Discondence Som Discondence So	Local Watershed NPS Pollution    No evidence   Some potential sources   Obvious sources   Local Watershed Erosion   None   Moderate   Heavy		
RIPARIAN VEGETATI (18 meter be	ION		e the dominant type and Si ant species present		ominant species present Ho	erbaceous		
INSTREAM FEATURES		Estima Sampli Area in Estima	ted Reach Length  ted Stream Width  ng Reach Area //6  km² (m²x1000)  ted Stream Depth //6  e Velocity //6 //5 n  weg)	m m² km² m	Canopy Cover Part Partly open Part High Water Mark Proportion of Reach F Morphology Types Waiffle / % Pool % Channelized Pes Dam Present Part	m Represented by Stream PRun_90_% □ No		
LARGE WO	DODY	LWD						
AQUATIC VEGETATI	ION	Indicate the dominant type and record the dominant species present  Rooted emergent  Rooted submergent  Rooted floating  Free floating  dominant species present  Portion of the reach with aquatic vegetation						
WATER QU	JALITY June	Specific Dissolv pH Turbid	rature° C c Conductance ed Oxygen ity strument Used		☐ Petroleum ☐	ured)		
SEDIMENT SUBSTRAT		Octors Norm Chen Chen Other	nical Anaerobic	Paper fiber Sand Other The not deeply legsides black in color?				
INOR	GANIC SUBS		COMPONENTS	<del>.</del> -	ORGANIC SUBSTRATE C			
Substrate Type	Diamet	er	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		

INC	ORGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)					
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area			
Bedrock			Detritus	sticks, wood, coarse plant	·¬/			
Boulder	> 256 mm (10")	3	Ţ	materials (CPOM)	<b>/</b> )			
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic				
Gravel	2-64 mm (0.1"-2.5")	30		(FPOM)				
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments				
Silt	0.004-0.06 mm	· · · · · · · · · · · · · · · · · · ·						
Clay	< 0.004 mm (slick)		]		· 			

### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME SLOW CREEK	LOCATION SC - STAZ
STATION #RIVERMILE	STREAM CLASS
LATLONG	RIVER BASIN
STORET #	AGENCY
INVESTIGATORS	
FORM COMPLETED BY  J KS / SM L / SP;	DATE 06/13/05 TIME 19:50 AM PM REASON FOR SURVEY

	Habitat		Condition	Category	
1 1	Parameter	Optimai	Suboptimal	Marginal	Poor
	1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
each	SCORE	20 19 18 17 16	j. 160 j.	10: 9: 8: 7: 6	1,42,0,32,10
Parameters to be evaluated in sampling reach	2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
ated	SCORE 8	20 -19 18 17 16	15 14 13 12 11	0 9/8/7 3	\$ 4, 2, 2, 3, 6
o be evalu	3. Pool Variability	Even mix of large- shallow, large-deep, small-shallow, small- deep pools present.	Majority of pools large- deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small- shallow or pools absent.
ters t	SCORE (	20: 19 18 - 17 16	e 15 - 14 - 15 - 12 - 14 I	210 9 8 47 6	20 64 7 3 3 4 10 7 10
Parame	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
} }	SCORE -	20 :19 18: 17 : 16	15 14 13 12 41	976 Oct. 1977 1978	
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	SCORE IT	20 19 18:7173 36	, 15, 74 13, 12 11.	10. 977 80 45 168	Control of the second

### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

	Habitat		Condition	Category	
	Parameter	Optimal	Suboptimal	Marginal	Poor
	6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	score 17	2019 18 (17 / 16	: ls:: [4   13   12   11	10 9 8 7 6	5 4 3 22 20
pling reach	7. Channel Sinuosity  The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)		The bends in the stream increase the stream length a to 7 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
E SB	SCORE 6	20 19 18 17 16	iś 14 13 12 11	10 9 8 7 ( 6	25 4 3 2 1 0
Parameters to be evaluated broader than sampling reach	8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
be evalus	SCORE $\frac{9}{4}$ (LB)	Left Banks 10 (9)	8 7 6	5 4 4 m 3 m	2 el 0.
Parameters to	9. Vegetative Protection (score each bank)  Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	SCORE $\int$ (LB) SCORE $\int$ (RB)	Left Bank 10 9	(3.8) 7 6 (8.4. 7 6	5 4 3E	2 ]. Q .
	10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	SCORE <u>&amp;</u> (LB) SCORE <u>&amp;</u> (RB)	Left Bank 10 9 1 Right Bank 100 10 9 3	8 7 5 4.8 7 /62	(S) 48	2 1-35-606 200-0-36-620
Tota	l Score 52+	65 -412			
	/	(121)			

# **Snow Creek Station 3**



#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

	now creek	LOCATION SC-STA 3						
STATION #	RIVERMILE	STREAM CLASS						
LAT_	LONG_	RIVER BASIN	-					
STORET#		AGENCY						
INVESTIGATORS			LOT NUMBER					
FORM COMPLETE	D BY	DATE 6/10/05	REASON FOR SURVEY					
	Jus/47	TIME AM PM						
		<u> </u>						
HABITAT TYPES	Indicate the percentage of Cobble 50 % □ S □ Submerged Macrophyte	of each habitat type present Snags% □ Vegetated E s% □ Other (		<b>⊘</b> %				
SAMPLE	Gear used D-frame	kick-net Other						
COLLECTION	How were the samples co	ollected? wading	from bank	oat				
	Indicate the number of ja	abs/kicks taken in each habitat t	type.					
i	Cobble / DS	Snags Uvegetated E	Banks □ Sand_4					
	a Submerged Macrophyte	lia kichs; you difteh up by 5,5,5	<u> </u>					
GENERAL COMMENTS	Bits of mela	lix kichs; you	st duwastream	~ of				
COMMENTED	chamelized	difeh	/. :.	•				
	. Kicha broken	. up by 5,5,5	,5 (2 riffles	g aruns.				
	present)	•						
Dominant  Periphyton Filamentous Algae	<u> </u>	2 3 4 Slimes 2 3 4 Macroin	yvertebrates	0 1 2 3 4 0 0 2 3 4				
Macrophytes		2 3 4 Fish						
	• •			0 1 2 3 4				
Indicate estimated	organisn	nt/Not Observed,1 = Rare ns), 3= Abundant (>10 orga	nisms), 4 = Dominant (>	ommon (3-9				
Indicate estimated	d abundance: 0 = Abseorganism  0 1 2 3 4 Ani	nt/Not Observed, 1 = Rare ns), 3= Abundant (>10 orga  soptera 0 1 2	nisms), 4 = Dominant (2	ommon (3-9 e-50 organisms)				
Indicate estimated Porifera Hydrozoa	0 = Abseorganism 0 1 2 3 4 Ani 0 1 2 3 4 Zyg	nt/Not Observed, $1 = \text{Rare}$ ns), $3 = \text{Abundant}$ (>10 orga  soptera optera $0 = \frac{1}{2}$ $\frac{2}{2}$	anisms), 4 = Dominant (2)  3	0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes	d abundance:     0 = Abserorganism       0     1     2     3     4     Ani       0     1     2     3     4     Zyg       0     1     2     3     4     Her	nt/Not Observed, 1 = Rare ns), 3= Abundant (>10 orga  soptera coptera 0 1 2 niptera 0 1 2	3 4 Chironomidae 3 4 Ephemeroptera 3 4 Trichoptera	0 1 2 3 4 0 0 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria	0     1     2     3     4     Ani       0     1     2     3     4     Zyg       0     1     2     3     4     Her       0     1     2     3     4     Her       0     1     2     3     4     Col	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera optera 0 1 2 niptera 0 1 2 eoptera 0 1 2	3 4 Chironomidae 3 4 Ephemeroptera 3 4 Trichoptera 3 4 Other	0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea	0 1 2 3 4 Ani 0 1 2 3 4 Zyg 0 1 2 3 4 Her 0 1 2 3 4 Col 0 1 2 3 4 Lep	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera optera 0 1 2 niptera 0 1 2 eoptera 0 1 2 idoptera 0 1 2	3 4 Chironomidae 3 4 Ephemeroptera 3 4 Trichoptera 3 4 Other 3 4	0 1 2 3 4 0 0 2 3 4 0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea Oligochaeta	0 1 2 3 4 Ani 0 1 2 3 4 Zyg 0 1 2 3 4 Her 0 1 2 3 4 Col 0 1 2 3 4 Lep 0 1 2 3 4 Sial	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera	Chironomidae Chiro	0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea Oligochaeta Isopoda	0 1 2 3 4 Ani 0 1 2 3 4 Zyg 0 1 2 3 4 Her 0 1 2 3 4 Col 0 1 2 3 4 Lep 0 1 2 3 4 Sial 0 1 2 3 4 Cor	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera	Chironomidae Chiro	0 1 2 3 4 0 0 2 3 4 0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea Oligochaeta Isopoda Amphipoda	0 1 2 3 4 Ani 0 1 2 3 4 Zyg 0 1 2 3 4 Her 0 1 2 3 4 Col 0 1 2 3 4 Lep 0 1 2 3 4 Cor 0 1 2 3 4 Tipi	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera	Chironomidae Chiro	0 1 2 3 4 0 0 2 3 4 0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea Oligochaeta Isopoda Amphipoda Decapoda	d abundance:     0 = Abservation       0 1 2 3 4 Ani     Ani       0 1 2 3 4 Zyg     Col       0 1 2 3 4 Col     Col       0 1 2 3 4 Col     Col       0 1 2 3 4 Cor     Cor       0 1 2 3 4 Tip     Cor       0 1 2 3 4 Emj     Cor	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera	Chironomidae Chiro	0 1 2 3 4 0 0 2 3 4 0 1 2 3 4 0 1 2 3 4				
Porifera Hydrozoa Platyhelminthes Turbellaria Hirudinea Oligochaeta Isopoda Amphipoda	0 1 2 3 4 Ani 0 1 2 3 4 Emp 0 1 2 3 4 Cor 0 1 2 3 4 Emp 0 1 2 3 4 Sim 0 1 2 3 4 Sim	nt/Not Observed, 1 = Rare ns), 3 = Abundant (>10 orga  soptera	Chironomidae Chiro	0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4				

### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

						Page 1	OT 1
STREAM NAME S	NOW CREEK	SITE NAME	ANNISTON	N PCB S	SITE - OU-1/OU-	2 AREA	
STATION# SO	C-STA-3	LOCATION	ANNISTON	N, AL			
RIVER BASIN		UPPER LIMIT LATITUDE/LONGITUDE: 33°38'26.2"/85°49'46.5"					
AGENCY		LOWER LIMI	IT LATITUDE/I	ONGITU		"/85°49'46.0"	
INVESTIGATORS \$	PT. SML. JKS	1		LOT N	UMBER		_
FORM COMPLETED	RV	DATE 6/10/20	005		ON FOR SURVEY		
TORW COMPLETED	SPT	TIME 0142	AM (PM)	KLAISC		ITY ASSESSMEN	Т
							_
HABITAT TYPES	Indicate the percentage of   ☐ Cobble_50_% ☐ S ☐ Submerged Macrophyte	nags%	pe present Uegetated B Other (	anks	_% <b>X1</b> Sand_50	)_%	
SAMPLE	Gear used ☐ D-frame	kick-net	Other _				
COLLECTION		u . 10 54					
	How were the samples co	ollected? XI	wading 🖵 f	rom bank	☐ from boa	ıt	
	Indicate the number of ja	bs/kicks taken ir			Ma 1 40		
	<ul><li>☑ Cobble 10 ☐ S</li><li>☐ Submerged Macrophyte</li></ul>	nags	☐ Vegetated B☐ Other (		_ <b><u>&amp;</u>i</b> Sand_10		
		~ <u></u>			/		
GENERAL COMMENTS							
COMMENTS							
	AISTING OF AQUATION abundance: 0 = Absert		ed, 1 = Rare,	2 = Co	mmon, 3= Abun	dant, 4 =	
Periphyton	(0) 1	2 3 4	Slimes			0 (1) 2 3	4
Filamentous Algae	0 1	2 3 4	Macroin	vartabra	tac	$0 \ (1) \ 2 \ 3$	4
_	0 1	2 3 4	Fish	vertebra	ies	$0 \ 1) \ 2 \ 3$	4
Macrophytes	(0)1	2 3 4	FISH			0 (1) 2 3	4
	ATIONS OF MACROB abundance: 0 = Abse organisn	nt/Not Observ			ganisms), 2 = Coi 4 = Dominant (>		
Porifera		soptera	0 (1) 2	3 4	Chironomidae	0 1 2 3	4
Hydrozoa	, ,	goptera			Ephemeroptera	0 (1) 2 3	4
Platyhelminthes		niptera			Trichoptera	0  1  2  3	4
Turbellaria		eoptera			Other	0 1 2 3	4
Hirudinea		oidoptera		3 4	(Acarina sp.)	_	
Oligochaeta	$\sim$	lidae		3 4			
Isopoda		ydalidae		3 4			
Amphipoda	•	ulidae		3 4			
Decapoda		pididae		3 4			
Gastropoda		nuliidae		3 4			
Bivalvia	0 1 2 3 4 Tab	oinidae	0 1 2	3 4			

### Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001.

Sample Location: Sample Date: Sample Type:	Station SC-3 10-Jun-05 Kick Net		
Taxon:	Common Name	Number	Percent
Lumbricina		I	
Lumbricidae			
Eiseniella tetraeidra	earthworm	1	6.3%
Basommatophora			
Physidae			
Physa sp.	pouch snail	1	6.3%
Ephemeroptera			
Baetidae			
Baetis sp.	mayfly	3	18.8%
Diptera			
Chironomidae			
Orthocladius sp.	midge	4	25.0%
Thienemannimyia gr.	midge	7	43.8%
Total Number of Specimens Total Number of Taxa		16 5	100.0%

		: age : 5: 2	
STREAM NAME Snow Creek	SITE NAME Anniston P	PCB Site - OU-1/OU-2 Area	
STATION # SC-STA-3	LOCATION Anniston,	AL	
RIVER BASIN	UPPER LIMIT LATITUDE/LO	ONGITUDE: 33°38'26.2"/85°49'46.5"	
AGENCY	LOWER LIMIT LATITUDE/LONGITUDE: 33°38'23.4"/85°49'46.0"		
GEAR Smith-Root LR24 Electro-shocker	INVESTIGATORS SML,	SPT, JKS	
FORM COMPLETED BY SPT	DATE <u>6/11/05</u> TIME <u>0930</u> AM PM	REASON FOR SURVEY fish community study	

SAMPLE COLLECTION	How were the fish captured? ☑ back pack  Block nets used? ☑ YES □ NO	☐ tote barge	other
	Sampling Duration Start time  Stream width (in meters) Max	End time	Duration 1,468 seconds
HABITAT TYPES	Indicate the percentage of each habitat type pn   ☑ Riffles 50 % ☑ Pools 50 % ☐ Runs ☐ Submerged Macrophytes % ☐ Other		
GENERAL COMMENTS			

SPECIES	TOTAL	OPTIONAL: LENGTH (mm)/WEIGHT (g)					Al	NOM	ALIES	s*				
	(COUNT)	(25 S	(25 SPECIMEN MAX SUBSAMPLE)			D	E	F	L	M	S	Т	Z	
Unknown Cyprinid #2	8	42/0.8	41/0.7	53/1.6	41/0.7	42/1.1								
(Notropis spp.)		43/0.9	45/0.9	36/0.5										
		<u> </u>					-							
Unknown Cyprinid #3	7	37/0.6	27/0.3	31/0.3	27/0.3	29/0.3					I			
(Notropis spp.)		29/0.3	25/0.1											
							-							
								ı			ı			
Unknown Cyprinid #1	3	78/6.2	94/10.9	81/7.5										Щ
(Notropis spp.)		<u> </u>												
		_					-							
		┢												
Largescale Stoneroller	2	85/8.2	7.5/4.2											
(Campostoma oligolep	is)													
		<u> </u>												

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

SPECIES	TOTAL	OPTIONAL: LENGTH (mm)/WEIGHT (g) (25 SPECIMEN MAX SUBSAMPLE)					A	NOM	ALIE	s*				
	(COUNT)	(25 8	SPECIME	IN MAX S	SUBSAMI	PLE)	D	E	F	L	M	S	T	Z
Creek Chub	1	39/0.4												
(Semotilus atromac	culatus)													
							4							
		<u> </u>					4							
Bluespotted Sunfish	1	193/125.3												
(Enneacanthus glor		100/120/0												
(Emicacantinas gior	10343)						1							
	<u> </u>													
		<u> </u>					-							
							-							
		┝					1							
	Π													
									_					
							4							
		┝					1							
							1							
	1													
							-							
							1							
							-							

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

COMPRANCIAL CO.		T 001 mrov		
	w CREEK	LOCATION		5143
	IVERMILE	STREAM CLA	SS	
	ONG	RIVER BASIN		
STORET#		AGENCY		
INVESTIGATORS				<u></u>
FORM COMPLETED BY	ISPT_	DATE /5.'3 TIME 6/12	O AM PM	REASON FOR SURVEY
				······································
WEATHER CONDITIONS	Now		Past 24 hours	Has∕there been a heavy rain in the last 7 days? Ф∕уеs □ No
CONDITIONS	□ storm	(heavy rain)		Air Temperature $SY^{\circ}C$
l.	l □ showers	steady rain) (intermittent)	5	
	/0 % <b>E</b> %cl	oud cover	<u>-</u> _%	Other
	LI CIE	ar/sunny		
SITE LOCATION/MAP	Draw a map of the sit	e and indicate th	e areas samp	oled (or attach a photograph)
-				
	}		•	
-				
Sel Viel oh	{			
Field !				
nobelrout	}			
ļ			•	
·				
,	,			
	1			
	<u> </u>			
STREAM CHARACTERIZATION	Stream Subsystem Derennial Inte	rmittent 🚨 Tida	; ;	Stream Type  Coldwater Warmwater
CHARACTERIZATION		ammunt = 1102		
	Stream Origin  Glacial	Spring-fee	!	Catchment Areakm²
	☐ Non-glacial montant ☐ Swamp and bog	e O'Mixture o' Other	origins	

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	Predominant Surrounding Landuse  Forest Commercial Field/Pasture Industrial Agricultural Other Residential	Local Watershed MPS Pollution  No evidence Some potential sources Obvious sources  Local Watershed Erosion None Symoderate Heavy
RIPARIAN VEGETATION (18 meter buffer)	Indicate the dominant type and record the dominant Trees Shrubs  dominant species present	Grasses
INSTREAM FEATURES	Estimated Reach Lengthm  Estimated Stream Widthm  Sampling Reach Area!OD_m²  Area in km² (m²x1000)km²  Estimated Stream Depthom  Surface Velocityom/sec (at thalweg)	Canopy Cover Partly open Partly shaded Shaded  High Water Mark 3 m for the Proportion of Reach Represented by Stream  Morphology Types Riffle 3 % Proposition of Reach Represented by Stream  Morphology Types Riffle 3 % Proposition of Reach Represented by Stream  Morphology Types Riffle 3 % Proposition of Reach Represented by Stream  Morphology Types  Channelized Ves No
LARGE WOODY DEBRIS	LWDm²/km² (LWD/ read	ch area)
AQUATIC VEGETATION	Indicate the dominant type and record the domi Rooted emergent Rooted submergent Floating Algae Attached Algae dominant species present  Portion of the reach with aquatic vegetation	Rooted floating
WATER QUALITY	Temperature OC Specific Conductance Dissolved Oxygen  pH Turbidity WQ Instrument Used	Water Odors   Normal/None
SEDIMENT/ SUBSTRATE	Octors  Normal Sewage Petroleum Chemical Anaerobic None Other  Oils  Absent Slight Moderate Profuse	Deposits Sludge Sawdust Paper fiber Sand Cher  Looking at stones which are not deeply embedded, are the undersides black in color? Yes No

INC	RGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock			Detritus	sticks, wood, coarse plant			
Boulder	> 256 mm (10")	40		materials (CPOM)	75		
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic			
Gravel	2-64 mm (0.1"-2.5")	10		(FPOM)			
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments			
Silt	0.004-0.06 mm						
Clay	< 0.004 mm (slick)		1				

### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME SWOW CREEK	LOCATION 5C-STA 3
STATION # RIVERMILE	STREAM CLASS
LAT LONG	RIVER BASIN
STORET#	AGENCY
INVESTIGATORS	
FORM COMPLETED BY  JUSTS ML SPT	DATE 15:70 TIME 04/065 AM EM REASON FOR SURVEY

	Habitat Parameter		Condition	Category	
{	rarameter	Optimal	Suboptimal	Marginal	Poor
	1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
each.	SCORE T	20 - 19 - 18 / 17 / 16	j5 j4 j3 l2 lj	10 9 8 - 75 6	5 . C . L . C . L . O
Parameters to be evaluated in sampling reach	2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
ated	SCORE +	20 - 19 18 17 16	15 14 13 12 11	10 9 8 /1 36	5.4.3,2.1.0
to be evalu	3. Pool Variability	Even mix of large- shallow, large-deep, small-shallow, small- deep pools present.	Majority of pools large- deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small- shallow or pools absent.
ters	SCORE 8	20 19 18 17 16	.15 (4 19 12 .11	io 9/8/12 6	
Parame	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	SCORE \ \	20 .119 . 18 - 19 1/16.	-15, (4 -13 12 sign)	10 ( 4 x 8), 7+30	Kar. 4 i Sel Accessorium
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
1 (	SCORE ( *	20 19 18 (12/16	155414 13 12 11	U . 9 . 3 a Julio	

Cele

# HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

	Habitat		Condition	Category	
	Parameter	Optimal	Suboptimal	Marginal	Poor
	6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	SCORE (8	20 19/18/17 16	7 <b>15</b> 14 13 12 11	10 9 8 7 6	5 42 3 Z L 0
pling reach	7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
samı	score 3	20 19 18 17 16.	45 <b>14</b> 13 12 11	10 9 8 7 6	\$ 4 (3 /2 1 10
Parameters to be evaluated broader than sampling reach	8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
valus	SCORE (LB)	realisable (1/20/10/10)	i / 6	5 4 3	2 1 0
pe e	$SCORE \underline{\mathcal{Y}}(RB)$	itanian de la com			
Parameters to	9. Vegetative Protection (score each bank)  Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
		Len Bank (10/9) Right and (10/9)	3 (7) 6 3 (7) 6	5 4 3	2 1 0
	10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone <5 meters: little or no riparian vegetation due to human activities.
	SCORE $\frac{2}{L}$ (LB) SCORE $\frac{1}{L}$ (RB)	Left Bank 10.09 Right Bank 10.09	2. 8. × . 7 6	5 4 3	(2) E - 6-

Total Score <u>lob + 58</u> = 124

### **Snow Creek Station 4**



#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

STREAM NAME	5NOW CREEK	LOCATION 5C-	TH 4	
STATION #	RIVERMILE	STREAM CLASS		
LAT	LONG	RIVER BASIN	-	
STORET#		AGENCY		
INVESTIGATORS			LOT NUMBER	
FORM COMPLETED  SMC	JUES/SOT	DATE G/10/05 TIME AM PM	REASON FOR SURVEY	
HABITAT TYPES	Indicate the percentage o	f each habitat type present nags%		<u>40</u> %
SAMPLE COLLECTION		llected? wading  fr	om bank	
GENERAL COMMENTS		box culvert.		
-	Q 1	t/Not Observed, 1 = Rare,  2 3 4 Slimes	2 = Common, 3= Abus	ndant, $4 = \begin{bmatrix} 0 & 1 & 2 & 3 & 4 \\ 0 & 1 & 2 & 3 & 4 \end{bmatrix}$
		2 3 4 Fish  CNTHOS  nt/Not Observed, 1 = Rare ( s), 3 = Abundant (>10 organ		
Porifera	0 1 2 3 4 Anis	optera 0 1 2 3	4 Chironomidae	0 1 2 3 4
Hydrozoa		optera 0 1 2 3		0 1 2 3 4
Platyhelminthes		niptera 0 1 2 3	4 Trichoptera	0 (1) 2 3 4
Turbellaria		optera 0 <b>(1)</b> 2 3		0 1 2 3 4
Hirudinea		doptera $0  1  2  3$		
Oligochaeta	0 1 2 3 4 Siali			
Isopoda		dalidae 0 1 2 3	1	
Amphipoda		lidae 0 1 2 3		
Decapoda		ididae $0  1  2  3$		
Gastropoda	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	$\begin{array}{ccc} \text{nlidae} & 0 & (2) & 3 \\ \text{nlidae} & 0 & 1 & 3 & 3 \end{array}$	l l	
Bivalvia		nidae 0 1 2 3	4 4	
	<u> </u>	<u>idae 0 1 2 3</u>	<u> 4.1</u>	

#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

						Page	1 01 1
STREAM NAME S	NOW CREEK	SITE NAME	ANNISTON	I PCB SITE	- OU-1/OU-	2 AREA	
STATION# SO	C-STA-4	LOCATION	LOCATION ANNISTON, AL				
RIVER BASIN	UPPER LIMIT	LATITUDE/LC	ONGITUDE:	33°37'41.8	"/85°49'42.3"		
AGENCY	LOWER LIMI	T LATITUDE/L	ONGITUDE:		"/85°49'41.5"		
INVESTIGATORS S	PT. SML. JKS	ı		LOT NUMB	ER		
FORM COMPLETED	RV	DATE 6/10/20	005	REASON FO	R SURVEY		
	SPT	TIME 0 <u>254</u>	AM (PM)			TY ASSESSME	ENT
		ı					
HABITAT TYPES	Indicate the percentage		pe present				
	☐ Cobble 60 % ☐ S ☐ Submerged Macrophyte	Snags%	☐ Vegetated Ba	anks%	XI Sand_40 )%	)%	
					)70		
SAMPLE COLLECTION	Gear used  D-frame	kick-net	☐ Other _			-	
COLLECTION	How were the samples co	ollected?	wading 🖵 fi	rom bank	☐ from boa	ıt	
			11124				
	Indicate the number of jack Cobble 10 □ S		i each nabitat ty  Vegetated Ba		Xi Sand 10		
	☐ Submerged Macrophyte	es	Other (		)		
GENERAL							
COMMENTS							
	JISTING OF AQUATI abundance: 0 = Abse		ed, 1 = Rare,	2 = Commo	on, 3= Abuno	dant, 4 =	
Periphyton	(0) 1	2 3 4	Slimes			(0) 1 2 3	3 4
Filamentous Algae	0 1			vertebrates		$\sim$	3 4
Macrophytes	0 1	2 3 4	Fish	Citebrates		$\sim$	3 4
Macrophytes	<u> </u>	2 3 7	1 1511			0 1 (2).	<del></del>
	ATIONS OF MACROB abundance: 0 = Abso organisi						ı
Porifera		isoptera	0 1 2	3 4 Chire	onomidae	0 1 2 3	3 4
Hydrozoa		goptera		_	meroptera		3 4
Platyhelminthes	0 1 2 3 4 He	miptera	$0 \ 1 \ 2$	3 4 Trich	optera		3 4
Turbellaria		leoptera	0 (1) 2	3 4 Othe	r	0  1  2  3	3 4
Hirudinea	0 1 2 3 4 Lep	oidoptera	0 1 2	3 4			
Oligochaeta		lidae		3 4			
Isopoda		rydalidae		3 4			
Amphipoda	-	oulidae		3 4			
Decapoda	_	pididae		3 4			
Gastropoda		nuliidae	$\sim$	3 4			
Bivalvia	0 1 2 3 4 Tal	oinidae	0 1 2	3 4			

#### Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001.

Sample Location: Sample Date: Sample Type:	Station SC-4 10-Jun-05 Kick Net		
Taxon:	Common Name	Number	Percent
Basommatophora		l	
Physidae			
Physa sp.	pouch snail	1	3.6%
Ephemeroptera			
Baetidae			
Baetis sp.	mayfly	3	10.7%
Trichoptera			
Hydropsychidae			
Cheumatopsyche sp.	caddisfly	1	3.6%
Diptera			0.0%
Chironomidae			
Ablabesmyia mallochi	midge	1	3.6%
Orthocladius nigritus	midge	1	3.6%
Orthocladius sp.	midge	4	14.3%
Thienemannimyia gr.	midge	17	60.7%
Total Number of Specimens Total Number of Taxa		28 7	100.0%

#### FISH SAMPLING FIELD DATA SHEET

STREAM NAME Snow Creek	SITE NAME Anniston PCB Site - OU-1/OU-2 Area				
STATION# SC-STA-4	LOCATION Anniston, AL				
RIVER BASIN	UPPER LIMIT LATITUDE/LONGITUDE: 33°37'41.8"/85°49'42.3"				
AGENCY	LOWER LIMIT LATITUDE/LONGITUDE: 33°37'39.3"/85°49'41.5"				
GEAR Smith-Root LR24 Electro-shocker	INVESTIGATORS SML, SPT, JKS				
FORM COMPLETED BY SPT	DATE 6/11/05 TIME 1115 AM PM REASON FOR SURVEY fish community study				

SAMPLE COLLECTION	How were the fish captured? ☒ back pack	☐ tote barge	☐ other
	Block nets used? ☑ YES ☐ NO		
	Sampling Duration Start time	End time	Duration 1,678 seconds
	Stream width (in meters) Max	Mean	
HABITAT TYPES	Indicate the percentage of each habitat type pr  ☑ Riffles 30 % ☑ Pools 20 % ☑ Runs ☐ Submerged Macrophytes % ☐ Other	resent 50 % Snags % ( )%	
GENERAL COMMENTS			

SPECIES						Al	NOM	ALIES	s*					
	(COUNT)	(25 S	(25 SPECIMEN MAX SUBSAMPLE)				D	E	F	L	M	s	Т	Z
Largescale Stoneroller	70	83/5.7	90/8.0	92/8.7	93/8.1	91/7.9								
(Campostoma oligolep	ois)	106/10.9	79/5.6	86/7.3	92/8.0	91/7.7								
		91/8.1	87/6.4	119/17.4	85/7.3	84/6.4								
		89/8.7	94/8.6	85/7.0	90/7.5	73/4.2								
		86/5.5	80/5.4	97/8.8	91/8.0	76/4.8								
Unknown Cyprinid #2	62	51/1.3	45/0.7	42/0.8	37/0.4	40/0.6								
(Notropis spp.)		47/1.0	56/1.9	43/0.8	41/0.7	48/1.1								
		40/0.5	41/0.6	43/0.9	41/0.6	42/0.8								
		41/0.5	37/0.5	41/0.6	45/0.8	49/1.2								
		41/0.6	41/0.7	40/0.6	41/0.8	43/0.7								
Unknown Cyprinid #1	23	91/10.2	135/30.3	105/13.6	88/7.3	93/11.4								
(Notropis spp.)		102/13.0	94/10.7	119/22.6	86/7.6	85/8.1								
		94/9.5	86/8.1	77/6.4	89/9.0	118/22.6								
		128/30.9	119/21.4	84/7.2	109/15.7	84/6.7								
		99/11.7	86/8.1	89/8.5										
Eastern Mosquitofish	7	51/3.1	50/1.9	49/1.5	47/1.4	53/2.2								
(Gambusia holbrook	(i)	47/1.3	45/1.2											

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

SPECIES	TOTAL	OPTIO	NAL: LE	NGTH (m	m)/WEIG	HT (g)			A	NOM	ALIE	s*		
	(COUNT)	(25 )	SPECIME	EN MAX S	SUBSAM	PLE)	D	E	F	L	M	S	Т	Z
Bluegill	6	37/0.6	27/0.3	31/0.3	27/0.3	29/0.3								
(Lepomis macrochi	rus)	39/0.4												
, ,	•													
	1													
Bluespotted Sunfish	5	37/0.6	27/0.3	31/0.3	27/0.3	29/0.3								
(Enneacanthus glor	iosus)													
		<u> </u>												
		<u> </u>												
Unknown Cyprinid	3	78/6.2	94/10.9	81/7.5					Ī					
(Cyprinella sp.)														
either a Blacktail or Altamaha	Shiner													
	ı								_					
		<u> </u>												
									ī					

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME 500	W CREEK	LOCATION	5c-	5794			
STATION # R	IVERMILE	STREAM CLASS					
LATLC	ONG	RIVER BASIN	1				
STORET#		AGENCY					
INVESTIGATORS							
FORM COMPLETED BY  JUS   SPH 51		DATE OC/I	2/05 L AM (PA	REASON FOR SURVEY			
WEATHER CONDITIONS	rain ( showers %cl %cl	(heavy rain) steady rain) (intermittent) oud cover ar/sunny	Past 24 hours	Has there been a heavy rain in the last 7 days?  O'Yes ONO  Air Temperature C  Other			
See List without	Draw a map of the sid	te and indicate t	he areas san	npled (or attach a photograph)			
STREAM CHARACTERIZATION	Stream Subsystem Perennial Inte Stream Origin Glacial Non-glacial montane Swamp and bog	Spring-fe  D Mixture of Other	ed.	Stream Type Coldwater Warmwater  Catchment Areakm²			

## PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES	Predominant Surrounding Landuse  Forest Field/Pasture Agricultural Residential	Local Watershed NPS Pollution  No evidence Some potential sources  Obvious sources  Local Watershed Erosion  None Moderate Heavy
RIPARIAN VEGETATION (18 meter buffer)	Indicate the dominant type and record the dominant Trees  dominant species present  Sycamore, a	
INSTREAM FEATURES	Estimated Reach Lengthm  Estimated Stream Widthm  Sampling Reach Area	Canopy Cover Partly open Partly shaded  High Water Mark Proportion of Reach Represented by Stream Morphology Types Riffle Pool W  Channelized Yes W No Dam Present Partly shaded Shaded Rhaded Shaded Rhaded Shaded
LARGE WOODY DEBRIS	LWDm²m²/km² (LWD/ read	ch area)
AQUATIC VEGETATION	Indicate the dominant type and record the domi  Rooted emergent  Rooted submergent  Attached Algae  dominant species present  Portion of the reach with aquatic vegetation	□ Rooted floating □ Free floating
WATER QUALITY	Temperature O C  Specific Conductance  Dissolved Oxygen  pH  Turbidity  WQ Instrument Used	Water Odors  Normal/None Sewage Petroleum Chemical Fishy Other  Water Surface Oils Slick Sheen Globs Flecks None Other  Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained
SEDIMENT/ SUBSTRATE	Octors  W Normal Sewage Petroleum Chemical Anaerobic None Other  Oths Absent Slight Moderate Profuse	Deposits Sludge Sawdust Paper fiber Sand Relict she is Other Looking at stones which are not deeply embedded, are the undersides black in color? Yes No

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)					
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area			
Bedrock			Detritus	sticks, wood, coarse plant				
Boulder	> 256 mm (10")	5,		materials (CPOM)				
Cobble	64-256 mm (2.5"-10")	35	Muck-Mud	black, very fine organic				
Gravel	2-64 mm (0.1"-2.5")	20		(FPOM)	-01			
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments				
Silt	0.004-0.06 mm				-0-			
Clay	< 0.004 mm (slick)							

#### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME SWOW CREEK	LOCATION S C-STA 4
STATION# RIVERMILE	STREAM CLASS
LATLONG	RIVER BASIN
STORET#	AGENCY
INVESTIGATORS	
FORM COMPLETED BY  JKS/SML/SPT	DATE OCIO S REASON FOR SURVEY

Habitat		Condition Category								
Parameter	Optimal	Suboptimal	Marginal	Poor						
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential, adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.						
score 2	20 19 18 12 16	15.14 . 13 (2 /1]	0 9 8 7, 6	5 4 3 7 1 2						
		Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.						
SCORE 2	26 19 18 17 16	18 14 13 12 11	10 9 8 7 76	5 4 3 2 1 6						
3. Pool Variabil	Even mix of large- shallow, large-deep, small-shallow, small- deep pools present.	Majority of pools large- deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small- shallow or pools absent.						
SCORE	20 19 18 17 16	2 5 114 13 12(2)1	/0 9 8 7 6g							
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.						
SCORE 4	200-1191-1181-117-116.	15/14 ) 13 : 12 <del>4</del> 4	10: 19: 8: 7.886	uŠ rak Arijanis b						
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.						
SCORE 7		_15_14 _13 _12_ [1]	10_9 8.4.4.26.							
	Parameter  1. Epifaunal Substrate/Available Cover  SCORE   2- 2. Pool Substrat Characterization  SCORE   4. Sediment Deposition  SCORE   4. Sediment Deposition	1. Epifaunal Substrate/ Available Cover  1. Epifaunal Substrate/ Available Cover  Substrate/ Available Cover  Substrate/ Available Cover  Score   2   3   4   4   5    1. Epifaunal Substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).  Score   2   3   4   4    Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.  Score   2   3   17   16    Even mix of large-shallow, small-shallow, small-shallow, small-deep pools present.  Score   2   3   18   17   16    Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.  Score   4   4   5   5   6    Score   4   5   6    Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Creater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).    SCORE   20	Company   Comp						

#### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

	Habitat		Condition	Category	
}	Parameter	Optimal	Suboptimal	Marginal	Poor_
	6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abuttments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	SCORE 18	20 19/18/17 16	*1 <b>5</b> 14 13 12 11	10 9 8 7 6	5 4 3 20 12 00
pling reach	7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
sam)	SCORE 4	20 19 18 17 16,	15 14 13 12 11	10 9 8 7 6	5 (4 /3 2 1 0
Parameters to be evaluated broader than sampling reach	8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
be evalus	$\frac{\text{SCORE} \cancel{O}_{(LB)}}{\text{SCORE} \cancel{D}_{(RB)}}$	teitBank (10°)0 Richistanco (11950)	8, 7 6 -	S 4 4 3	2 1 0 : 2 2 3 4 4 0 c
Parameters to	9. Vegetative Protection (score each bank)  Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
	SCORE $\frac{9}{10}$ (LB)	to grow naturally.  Left Bank 10-(0)		MANAGE, MINES THE PROPERTY OF	PROGRAMMENT AND
	SCORE LO (RB)	Rizhidado 1,4079	142.864 by Zersen Oc.	5, 4 3	2 1
	10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
	SCORE (LB) SCORE (RB)	Left Bank 10 9 1 Kighi Bank 10 6 4	6 7 6	5 4 3 5 7 5 7 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Total Score \_\_\_\_\_\_ 42+68 = 130

### **Snow Creek Station 5**



#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

STREAM NAME	SNAW CREE	LOCATION SC-	5M5	
STATION #	RIVERMILE	STREAM CLASS		
LAT	LONG	RIVER BASIN		
STORET#		AGENCY		
INVESTIGATORS		. /:	LOT NUMBER	
FORM COMPLETE	ED BY	DATE 6/10/07 TIME AM P	REASON FOR SURVE	Y
HABITAT TYPES		te of each habitat type present  Snags \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	d Banks % Sand	35
SAMPLE COLLECTION	Gear used D-frame How were the samples Indicate the number of Cobble D Submerged Macrophy	collected? wading C  Jabs/kicks taken in each habita  Snags Vegetater	or from bank	l boat
GENERAL COMMENTS	· TIMESTAME	ROCK OUTGROPPIN		GAY SCIME ON HOGE
Indicate estimate Dominant	LISTING OF AQUATed abundance: 0 = Abs	sent/Not Observed, 1 = Rar		oundant, 4 =
Periphyton	<b>2</b> 1	2 3 4 Slimes		0 1 2 3/3 4
Filamentous Alga Macrophytes	$e \qquad \qquad \bigcirc 0 \qquad 1$	2 3 4 Macro 2 3 4 Fish	invertebrates	0(1) 2 3 4
		BENTHOS sent/Not Observed, 1 = Ra sms), 3= Abundant (>10 or		
Porifera		nisoptera 0 1 2	-	0 2 3 4
Hydrozoa		ygoptera 0 1 2	1 4 4	× × × × × × × × × × × × × × × × × × ×
Platyhelminthes		emiptera 0 1 2	3 4 Trichoptera	0 (1) 2 3 4
Turbellaria		oleoptera 0 1 2	3 4 Other	0 1 2 3 4
Hirudinea		epidoptera 0 1 2	3 4	
Oligochaeta		ialidae 0 1 2	3 4	
Isopoda		orydalidae 0 1 2 ipulidae 0 1 2	3 4 3 4	
Amphipoda Decapoda		ipulidae 0 1 2 mpididae 0 1 2	3 4 3 4	
Gastropoda	$\sim$	imuliidae $0 \stackrel{1}{1} \stackrel{2}{2}$	3 4	
Gastropoda Bivalvia		abinidae 0 1 2	3 4	
Divalvia		atimidae 0 1 2	3 4	

#### BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

Page 1 of 1

				r ago r or r			
STREAM NAME S	NOW CREEK	SITE NAME ANNISTO	N PCB SITE - OU-1/OU	-2 AREA			
STATION# S	C-STA-5	LOCATION ANNISTON, AL					
RIVER BASIN		UPPER LIMIT LATITUDE/L	UPPER LIMIT LATITUDE/LONGITUDE: 33°37'00.9"/85°49'32.1"				
AGENCY		LOWER LIMIT LATITUDE/		9"/85°49'31.8"			
INVESTIGATORS S	SPT, SML, JKS		LOT NUMBER				
FORM COMPLETED	SPT SPT	DATE 6/10/2005 TIME 1614 AM PM	REASON FOR SURVEY BMI COMMUN	ITY ASSESSMENT			
HABITAT TYPES		f each habitat type present nags_15_% □ Vegetated I s% ☑ Other (	Banks% <b>XI</b> Sand_3 bedrock outcroppin <u>g15_</u> %	5_%			
SAMPLE Gear used D-frame k kick-net Other							
COLLECTION	How were the samples col	llected? ☑ wading ☐	from bank	at			
Indicate the number of jabs/kicks taken in each habitat type.         ☑ Cobble 8       ☑ Snags 3       ☑ Vegetated Banks 2       ☑ Sand 10         ☑ Submerged Macrophytes       ☑ Other (detritus       ) 2       Other (limestone rock outcred)							
GENERAL COMMENTS							
	LISTING OF AQUATION Absention of the state o	C BIOTA nt/Not Observed, 1 = Rare	, 2 = Common, 3= Abur	dant, 4 =			
Periphyton	(0) 1	2 3 4 Slimes		0 1 (2) 3 4			
Filamentous Algae	0 1	2 3 4 Macroir	vertebrates	0 1 2 3 4			
Macrophytes	<u>0</u> 1	2 3 4 Fish		0 1 2 3 4			
		ENTHOS nt/Not Observed, 1 = Rare ns), 3= Abundant (>10 orga					
Porifera	0 1 2 3 4 Ani:	soptera 0 1 2	3 4 Chironomidae	0 (1) 2 3 4			
Hydrozoa		optera 0 1 2		0 1 (2) 3 4			
Platyhelminthes		niptera 0 1 2		0 1 2 3 4			
Turbellaria	0 1 2 3 4 Cole	eoptera 0 1 2	3 4 Other	$0 \ 1 \ 2 \ 3 \ 4$			

Porifera	0	1	2	3	4	Anisoptera	0	1	2	3	4	Chironomidae	0 (1) 2 3 4
Hydrozoa	0	1	2	3	4	Zygoptera	0	1	2	3	4	Ephemeroptera	0 1 (2) 3 4
Platyhelminthes	0	1	2	3	4	Hemiptera	0	1	2	3	4	Trichoptera	0 (1) 2 3 4
Turbellaria	0	1	2	3	4	Coleoptera	0	1	2	3	4	Other	0 1 2 3 4
Hirudinea	0	1	2	3	4	Lepidoptera	0	1	2	3	4		
Oligochaeta	0	(1)	2 (	3	4	Sialidae	0	1	2	3	4		
Isopoda	0	1	2	3	4	Corydalidae	0	1	2	3	4		
Amphipoda	0	1	2	3	4	Tipulidae	0	1	2	3	4		
Decapoda	0	1	2	3	4	Empididae	0	1	2	3	4		
Gastropoda	0	(1)	2	3	4	Simuliidae	0	(1)	2	3	4		
Bivalvia	0	$\underbrace{1}$	2	3	4	Tabinidae	0	1	2	3	4		
						Culcidae	0	1	2	3	4		

#### Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001.

Sample Location: Sample Date:	Station SC-5 10-Jun-05			i i	
Sample Type:	Kick Net	SC	-5A	SC	-5B
Taxon:	Common Name	Number	Percent	Number	Percent
Lumbricina		I		<u> </u>	
Lumbricidae	earthworm			1	1.9%
Tubificida					
Tubificidae					
Limnodrilus sp.	tubeworm	1	6.3%		0.0%
Mesogastropoda				i ! !	
Hydrobiidae					
poss. Fontigens sp. (tent.)	dusky snail			1	1.9%
Basommatophora				į	
Lymnaeidae					
Stagnicola sp.	pond snail			1	1.9%
Physidae					
Physa sp.	pouch snail			7	13.2%
Planorbidae					
poss. Planorbella sp. (tent.)	orb snail			2	3.8%
Ephemeroptera					
Baetidae					
Baetis sp.	mayfly	9	56.3%	1	1.9%
Trichoptera					
Hydropsychidae					
Cheumatopsyche sp.	caddisfly	1	6.3%	1	1.9%
Coleoptera				İ	
Diptera				•	
Chironomidae					
Ablabesmyia mallochi	midge			7	13.2%
Chironomus sp.	midge			1	1.9%
Cricotopus bicinctus	midge			1	1.9%
Cricotopus/Orthocladius sp.	midge	1		1	1.9%
Dicrotendipes sp.	midge	1		1	1.9%
Orthocladius sp.	midge	1		2	3.8%
Phaenopsectra obedians gr.	midge	1		6	11.3%
Polypedilum tritum	midge	1		4	7.5%
Thienemannimyia gr.	midge	5	31.3%	14	26.4%
Tipulidae		1			
Limonia sp.	crane fly	1		1	1.9%
Limonia canadensis	crane fly	I		1	1.9%
<b>Total Number of Specimens</b>		16	100.0%	53	100.0%
<b>Total Number of Taxa</b>		4		18	

#### FISH SAMPLING FIELD DATA SHEET

STREAM NAME Snow Creek	SITE NAME Anniston PCB Site - OU-1/OU-2 Area				
STATION# SC-STA-5	LOCATION Anniston, AL				
RIVER BASIN	UPPER LIMIT LATITUDE/LONGITUDE: 33°37'00.9"/85°49'32.1"				
AGENCY	LOWER LIMIT LATITUDE/LONGITUDE: 33°36'58.9"/85°49'31.8"				
GEAR Smith-Root LR24 Electro-shocker	INVESTIGATORS SML, SPT, JKS				
FORM COMPLETED BY SPT	DATE 6/11/05 TIME 1310 AM PM REASON FOR SURVEY fish community study				

SAMPLE COLLECTION	How were the fish captured? ☑ back pack  Block nets used? ☑ YES □ NO	☐ tote barge	other
	Sampling Duration Start time  Stream width (in meters) Max	End time	Duration 2,322 seconds
HABITAT TYPES	Indicate the percentage of each habitat type pr  XI Riffles 30 % XI Pools 20 % XI Runs  ☐ Submerged Macrophytes% ☐ Other	resent	
GENERAL COMMENTS			

SPECIES	TOTAL		OPTIONAL: LENGTH (mm)/WEIGHT (g)						Al	NOM	ALIES	s*		
	(COUNT)	(25 S	(25 SPECIMEN MAX SUBSAMPLE)				D	E	F	L	M	S	Т	Z
Largescale Stoneroller	91	86/7.0	111/14.3	85/6.0	99/9.3	79/4.7								
(Campostoma oligolep	nis)	88/7.4	77/5.3	84/6.7	94/8.	113/15.6								
		71/3.4	113/10.5	109/11.5	124/19.4	69/3.4								
		107/10.3	92/7.4	89/7.6	107/10.4	115/15.3								
		83/5.1	61/2.6	89/7.0	104/14.9	97/9.6					_			
Unknown Cyprinid #1	4	112/17.6	117/19.3	90/8.3	84/6.0									
(Notropis spp.)														
Unknown Cyprinid #2	3	42/0.7	41/0.7	38/0.5										
(Notropis spp.)														
								_	_	_				
Longear Sunfish	1	170/88.8							L	L				Щ
(Lepomis megalotis	:)													
(_oponiio mogalono	,													

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

SPECIES	TOTAL	OPTION	OPTIONAL: LENGTH (mm)/WEIGHT (g)						A	NOM	ALIE		ige 2	01 2
	(COUNT)	(25 SPECIMEN MAX SUBSAMPLE)			D	E	F	L	M	S	T	Z		
Black Redhorse	1	111/12.9												
(Moxostoma duques	nei)						4							
							-							
Bluespotted Sunfish	1	88/12.2												
(Enneacanthus glor	iosus)						-							
							1							
Yellow Bullhead	1	88/8.5												
(Ameiurus natalis)							-							
							1							
	•													
Unknown Cyprinid	1	120/15.3							<u> </u>					
(Cyprinella spp.)	01:						1							
either a Blacktail or Altamah	a Shiner						1							
							1							
							1							
									-					
							1							
							1							
									-					
							1							
							1							

<sup>\*</sup> ANOMALY CODES: D = deformities; E = eroded fins; F = fungus; L = lesions; M = multiple DELT anomalies; S = emaciated; Z = other

# PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Show COURT	LOCATION S'C-ST	4 2			
STATION# RIVERMILE	STREAM CLASS				
LATLONG	RIVER BASIN				
STORET #	AGENCY				
INVESTIGATORS					
FORM COMPLETED BY  JUS/SPT/SML	DATE OC/12/05 TIME 76:50 AM RM	REASON FOR SURVEY			
rain (s	(heavy rain)	there been a heavy rain in the last 7 days?  Temperature 6 C			
SITE LOCATION/MAP  Draw a map of the site	e and indicate the areas sampled	(or attach a photograph)			
STREAM CHARACTERIZATION  Stream Subsystem Perennial Inte	Cat  ☐ Spring-fed	eam Type Coldwater Cowarmwater schment Areakm²			

## PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERS FEATUR		∥ ⊔ Fore □ Field	l/Pasture ☐ Industr	ercial ial	Obvious sources Local Watershed Eros	□ No evidence Some potential sources □ Obvious sources  Local Watershed Erosion □ None □ Moderate □ Heavy					
RIPARIA VEGETA (18 meter	TION		Indicate the dominant type and record the dominant species present Trees Shrubs Grasses Herbaceous dominant species present Sychmole Mims H. Willow								
INSTREA FEATUR		Estima Sámpli Area ir Estima	ted Reach Length  ted Stream Width  ng Reach Area  km² (m²x1000)  ted Stream Depth  e Velocity O.5~/.On  weg)	m  m  m  km²  m	High Water Mark  Proportion of Reach H Morphology Types Riffle 25 % Pool 25 %  Channelized • Yes	□ Partly open □ Partly shaded □ Shaded  High Water Markm  Proportion of Reach Represented by Stream  Morphology Types □ Riffle ⊇ 5 % □ Run 5 %					
LARGE V DEBRIS	WOODY	LWD Density	////	) n²/km² ( <b>LWD</b> /	reach area)						
AQUATIO VEGETA		Root Float	ed emergent 💢 🗀 Ro	ooted submerg ttached Algae	ominant species present ant DRooted floati	ng 🗅 Free floating					
		Portion of the reach with aquatic vegetation%									
WATER O	QUALITY	Specific Dissolv pH	rature°C c Conductance ed Oxygen	-	☐ Petroleum ☐	Sewage Chemical Other Globs □ Flecks					
V		l	strument Used		Clear Slightly to	Turbidity (if not measured)  Clear Slightly turbid Turbid Opaque Stained Other					
SEDIMEN SUBSTRA		Odors D Norm Chen Other	nal Sewage nical Anaerobic	Deposits Sludge Sawdust Paper fiber Sand Relict shells Other  Looking at stones which are not deeply							
_	Ojis  Absent Slight Moderate Profuse Profuse No										
INC	ORGANIC SUBS		COMPONENTS		ORGANIC SUBSTRATE C						
Substrate Type	Diamete	er	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area					
Bedrock	Imester	e	80_	Detritus	sticks, wood, coarse plant						
Boulder	> 256 mm (10")				materials (CPOM)	(trave)					
Cobble	64-256 mm (2.5	"-10")		Muck-Mud	black, very fine organic (FPOM)	0					
					ı ,						

grey, shell fragments

Marl

Gravel

Sand

Silt

Clay

2-64 mm (0.1"-2.5")

0.06-2mm (gritty)

0.004-0.06 mm < 0.004 mm (slick) w

10

#### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME SNOW CREEK	LOCATION JC-STAS
STATION#RIVERMILE	STREAM CLASS
LAT LONG	RIVER BASIN
STORET#	AGENCY
INVESTIGATORS	
FORM COMPLETED BY VKS/SML (SPT	DATE 06(12/65) TIME 16:50 AM PM

	Habitat	Condition Category							
	Parameter	Optimal	Suboptimal	Marginal	Poor				
	1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
each	SCORE ( )	20 - 19 . 184 17/16	AS 04 13 12 11	10 9 8 7 6	5 4 5 2 1 0				
Parameters to be evaluated in sampling reach	2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.				
ated i	SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 48 7 5	*5 (a /3 2 . 1 . b				
o be evalu	3. Pool Variability	Even mix of large- shallow, large-deep, small-shallow, small- deep pools present.	Majority of pools large- deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small- shallow or pools absent.				
ters t	score /5	20 19 18 14 16	Assylvantist to	30 9 8 89 - 46	35.14.35.35.44.30.				
Parame	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
	SCORE / 7	20 119 18 <b>(_11)</b> 16	15 14: 13: 12 sty	410 · 9 · 60 - 73 8 <b>110</b>	er in the second				
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.				
	SCORE   &		[15] [14] [15] [12] [13]	10 90 812 6	3.57.00.0020.004				
L		\	· · · · · · · · · · · · · · · · · · ·						

#### HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

	Habitat	Condition Category							
}	Parameter	Optimal	Suboptimal	Marginal	Poor				
	6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.				
	SCORE 9	20 . 19 . 18 . 17 . 16	J\$ <b>1</b> 4 13 12 11	10(9) 8 7 69	(5) 1 3 2 -1 0				
pling reach	7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.				
Sam	SCORE (	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0				
Parameters to be evaluated broader than sampling reach	8. Bank Stability (score each bank)			Moderately unstable; 30- 60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.				
be evalus	SCORE $\boxed{0}$ (LB) SCORE $\boxed{0}$ (RB)	tenBank: a 10 0 Right Bank of Bill (9)	8 7 6	S 4 3	2 1 0 2 10 0				
Parameters to b	9. Vegetative Protection (score each bank)  Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent, more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.				
	SCORE $\frac{1}{2}$ (LB) SCORE $\frac{1}{2}$ (RB)	Lett Bank 10 9 Right Banks (10/9)	8 <i>(7)</i> 6	5 4 31. 5 4 95	2. 1. 0 m. 2. 4. 70 m. 0				
	10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.				
	$\frac{1}{\text{SCORE}} \frac{1}{2} \text{(LB)}$ $\frac{1}{2} \text{(RB)}$	Left Bank 10 9 Right Bank 10 9	(18) 17 6 (28) 17; 6	s 40 3 3 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3	2: (124-10); 20); 10:120				

Total Score 71+54 = 125

A-10

#### Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001 (Alabama).

Sample Date:	10,13 June 2005 Kick Net			"	Master Li	st''		
Sample Type:	Kick Net	1		S	ample Stat	ion		
Taxon:	Common Name	RP-01	SC-1	SC-2	SC-3		SC-5A	SC-5B
Lumbricina		1						
Lumbricidae	earthworm	1						1
Eiseniella tetraeidra	earthworm				1			
Tubificida								
Tubificidae		1		_				
Bothrioneurum vejdovskyanum	tubeworm	1	1	3				
Branchiura sowerbyi	tubeworm	1	3					
Ilydrilus templetoni	tubeworm	1	1 23	1			1	
Limnodrilus sp. Arhyncobdellida	tubeworm	1	23	1			1	
Erpobdellidae		1						
Mooreobdella sp.	leech			1				
Rhyncobdellida	iccen	1		•				
Glossiphoniidae								
Helobdella papillata	leech	2						
Mesogastropoda								
Hydrobiidae								
poss. Fontigens sp. (tent.)	dusky snail							1
Basommatophora		1						
Ancylidae								
Ferrissia rivularis	limpet snail	1	3					
Lymnaeidae	, ,,	1						
Stagnicola sp.	pond snail	1	2					1
Fossaria sp.	pond snail		3					
Physidae <i>Physa sp.</i>	pouch snail	1	9	1	1	1		7
Planorbidae	pouch shan		7	1	1	1		,
poss. <i>Planorbella sp.</i> (tent.)	orb snail			1				2
Veneroida	oro shan	1						_
Sphaeriidae		1						
Pisidium sp.	pill clam	1	3					
Hydrachnidia	•							
Limnesiidae								
Limnesia sp.	mite	13						
Decapoda		1						
Cambaridae								
Orconectes sp.	crayfish	1	1					
Ephemeroptera		1					0	
Baetidae				27	2	2	9	1
Baetis sp. Callibaetis sp.	mayfly mayfly	120		27	3	3		1
Caenidae  Caenidae	mayny	120						
Caenis sp.	mayfly	3						
Odonata	mayny							
Aschnidae		1						
Aeschna sp.	dragonfly	8	6					
Anax sp.	dragonfly	1						
Coenagrionidae		1						
Enallagma sp.	damselfly	54	7					
Ischnura sp.	damselfly	1	14	1				
Libellulidae (early instar)	dragonfly	1						
Erythemis simplicollis	dragonfly	3						
Hemiptera Pelastamatidas		1						
Belostomatidae  Belostoma sp.	giant mater has	4						
Corixidae	giant water bug	4						
Hesperocorixa sp.	water boatman	1						
неѕрегосотха sp. Sigara sp.	water boatman	2						
Gerridae	water boatman							
Gerris sp.	water strider	2						

#### Benthic Macroinvertebrates Collected by BBL Science for Project Number 10213.001 (Alabama).

Sample Date: 10,13 June 2005 "Master List" Sample Type: Kick Net						st''		
Sample Type.	NICK INCL			Sa	ample Stat	ion		
Taxon:	Common Name	RP-01	SC-1	SC-2	SC-3		SC-5A	SC-5B
Mesoveliidae								
Mesovelia mulsanti	water treader	6						
Naucoridae								
Pelocoris femoratus	creeping water bug	9						
Notonectidae								
Notonecta indica	back swimmer	36						
Trichoptera								
Hydropsychidae	11: 6			15				
Cheumatopsyche sp.	caddisfly			17		1	1	1
Coleoptera								
Dytiscidae	11.1.1.1	_						
Ilybius sp.	diving beetle	5						
Haliplidae	li	_						
Haliplus sp.	crawling water beetle	2 1	1					
Peltodytes sp.	crawling water beetle	1	1					
Hydrophilidae <i>Berosus sp.</i>	scavenger beetle	1						
Tropisternus sp.	scavenger beetle	22						
Elmidae	scavenger beene	22						
Stenelmis crenata gr.	riffle beetle			6				
Noteridae	Time occue			U				
Hydrocanthus sp.	burrowing water beetle	1						
Diptera	buildwing water beetle	1						
Ceratopogonidae								
Atrichopogon sp.	biting midge			1				
Palpomyia gr.	biting midge	4		•				
Chaoboridae	288-							
Chaoborus punctipennis	phantom midge	1						
Chironomidae	1							
Ablabesmyia mallochi	midge					1		7
Chironomus sp.	midge		1					1
Cricotopus bicinctus	midge	1						1
Cricotopus/Orthocladius sp.	midge							1
Cryptochironomus fulvus gr.	midge			1				
Dicrotendipes sp.	midge							1
Endochironomus nigricans	midge	6						
Larsia sp.	midge	10						
Natarsia sp.	midge		3					
Orthocladius nigritus	midge					1		
Orthocladius sp.	midge				4	4		2
Parachironomus chaetoalus	midge	5						
Paratanytarsus sp.	midge	1	_					
Phaenopsectra obedians gr.	midge		3					6
Polypedilum tritum	midge		2					4
Stictochironomus sp.	midge		2					
Tanypus sp.	midge		1	4.5	7	1.7	_	1.4
Thienemannimyia gr.	midge		12	45	7	17	5	14
Culcidae		_					•	
Culex sp.	mosquito	5					<b>!</b>	
Empididae <i>Hemerodromia sp.</i>	domas fly			1				
Stratiomyiidae	dance fly			1			•	
Odontomyia sp.	soldier fly	1						
Tipulidae	soluter try	1						
Limonia sp.	crane fly							1
Limonia sp. Limonia canadensis	crane fly							1
ынона саншены	crane my	1					•	1
<b>Total Number of Specimens</b>	I	331	97	106	16	28	16	53
Total Number of Taxa		31	19	13	5	7	4	18

### **Field Notes**



Wildlife Codes

Ct: calling Fh= flight
FG= foraging FE- feeling
RS. resting or perchang

.

SC. Scat SL. Rlide DHB- den, hut, burrow TR: tracker DB= day bed CA- call NE- rest FG: browne/frage

GPA Oversight. harry horns horkelee harrin

DEND DAVE BENTHIC SHEETS

Reach # 1 9:40 th 6/10/05 JKS

Sun Swelling Clying over

EW Blackfuld staning on veg along

creek.

Morekine hild taing in free over

creek.

The swellow flying over area

just about and

flue east rank the veg has been

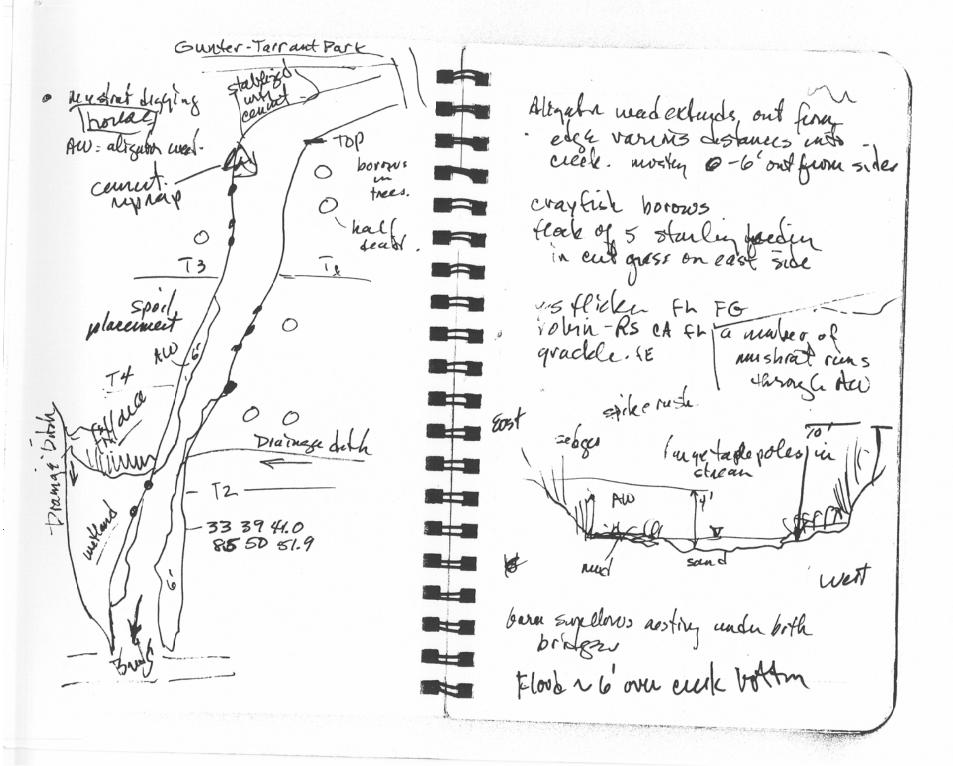
recently cut beck to 10 ft of

water.

from bank edes in upper section d' cach (peran)

eomore and minussa the sallers

chamielized stream with sport



chiming swith flying over creek Vila leaf. Ving, Brever american toad in grass Barbara's Buttons - Kershallia trinervia V Daisy Flowbane 2 Brazilian verbena 2 ground rest 2 Soft rush 2 w. either Spike rush 2 E. Prun ose Broad leaved Caltail 2 6600le 9 00000 Battereup Frimose Pathe Bush 2 gand Raqueed. 2 water penny 2 Red Clories. 2 sweet white clover Fox Sidge v Bitter dock Common Plantein GARAGE BUX ELDER Syc. criv, vetch Oats princt to a Pye weed

Show Creek 2 - 12.06

Rock Dove FL

Thuse Sparrow RS

Michigbird CA

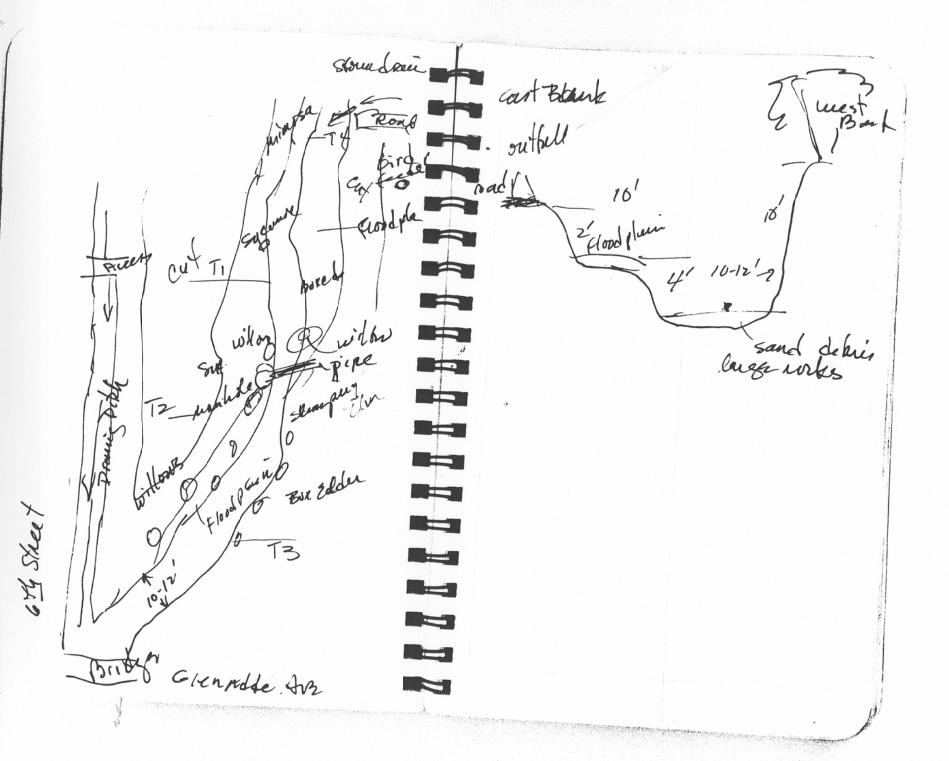
lower luit 33°39'08.5" 85°50'13.3

Pobri CA FL Starling FL

cat day TR rat TR around man hole catbird CA grachle CA CB

muchaut horows around man-hole

maning Dook Rs



Red hulldown 13:40 up 33 38 26.2 2000 85 49 46.6 suallan water will m rain- on and off-Puolie (6 80-100 20 michan bird starling 140-50 1 high RS Cardinal Harolina Chicada Co rat. TR Kolein FE empties into the Station

Trees Ishub. Truson both Box Elder sider au youror. edge trees シースプ Catalpa 00 Strey Elm Silver Marple Shear echiad met Creeken Munosa sotray auros Heven ioac Haw thoin Eusten Led Junion 20 due to June caussy

gast oc st.4 14:54 Kningfishen was sitting in tree when we arrived the FG Rock Dor FL food . debvis covider. hoths sides and botter A metal salvage yard is just upstream. not TR mushrat TR

Trus. (west) lange stas exposedentes for grape red multay: frost gape golderras B. verden Vap. honeysuda Com. Plainten bin weed red top grass rutzu q. raguad con vetch toild lettree with dode clearneed oats. rugued. soff rush Lucy prim 1050 suttoreup pumose 6. speciosa with lettuce Tirgin hower - Clematis virginiana red top-grass munosa silver maple Pelcan a Pum rosel

Juna Sinclais unten water sample under ecel banks 3 37 00.9° 25° 49 32.1" 33"36 593" 85 49 309" T2

frest gløpe I til oft? Stor hage Eldalsern Ba Elder Sye. Lunenoisa Luiet Kil haibenn T, Creepin B, Verein Rector ques. J. Hongender SCTST-1. green jurys crayfish cooler colon month much trulle during samples bull frogs singing while dorng fishpat flying own cut when pelling nets at uppe sorting fish samples.

rain list dind. SC ST-2 7:23 The Sur is feeling over creek E 15 Spa Dry- surjey Been Swallow feeder ovacret Cordual Kobri keeling vorneg und nest bruilding F F Ish shocking SC ST-3 9:6 -11:00 6 bain swellows ness fish shocking.

SC ST-4 11:30. Fishingoclain -Cloudy light borns. starling, mockey wird, barn sweller to CA (6

quel cont soft hell tentle 4 x 4.5 "carpace 2 line salamander copperhead snuke 112"

copper land 18:05. - 18:00.

quel west soft shell 212"

copper land 218.

King Jishn- F6

SC Statu 1 13:43 6-12-05 - cloudy- 10.20 mph wind Blue Jay in trees.

Transect 1 8. Bank. 33° 39'41.1"
85' 50' 57.4

15' open wada

6' Aweed

4' seder- 14' high

40' clover dominant field

6-12'

Transpet 2 & Bank 33 39 42.3 85 50 54.1

2' wide sedse/6. Equal doct
40' clover down about Field
6-12" ligh
cumpmen 50'-60' high from
one tree

Transect 3 west Bank 33 39 41.8

20' openwater 16" deep

10' steep slope in to 10' lingh
slope at tent dominated
by grass. Munair scedli

10' cut clover field 6.12" high
with 10190 cano py cover

(10 penair 136" dish
50-60' high.

Transect of West Bank 33 39 40.0

with

10' Open with - c' day

4' A weed.

10' steep stope 10' high

40' cut cliver field

SC Stabin 2 14:48 Transcet | west side width 33 39 08.1 85 50 12.6 20 open water 5' wansit 10'up fevre water undert, donnated by grasses 40 cut field grassis clover Transcet 2 west 33 39 67.5 85 50 11.2 20' gam Wash 10' flood plain 4' above usely 35 uncut for suppling BW. Shrub MER 30' aut Liela, 10' hairage detch wall with Street.

Manged 3 east, 33 39 08.0 20' Open Water 10' super) slope up to 10'
Bux Eday. Sanin Elm 30' morved larm not well noise Transect + east 33 39 08.8 85 50 13.1 15' open wich 20' flost plain 4'up fern næter drunak by heil. 10 slepslope t'up to cut laun 40' laun cut house

DC \$1-3, 15:30 Brown Thrash FG East side is a building and Transect 1" heest 33 38 25.6 struck yard voide free area 30-40'high 85 49 46.4 30' open water nunosa Sye. TOH Cluma berry Nunosa S. Haeleberry 10' wide flood plain that receives 6' finn wate. 30' high can ogy which S. purit elderkery. extends across stream muj. Syc. Bux. elda - hazolia hatlithon " large rock ripray for stablish RR. stablish RR. 6' to rail, road tracks. 3 sets of tracks. Transcet 2 men 33 38 24.3 85 49 46.2 30' open war 6' track yield 10 30 high trees canopy aus with. duniale Syc. Boxelder 10' treated with herbrade for RR 3 sets of RR. 

SC ST-4 - 15:54 clear sung 10-15 mph wint vew lower end pt 33 37 39.3 85 49 41.5 1400 open with 33 37 41.8 new upper 85 49 42.3 traul EAST-33 32 40.2 85 49 41.8 open woon 10' steep usis 201 bein cut sayling enning in. Syc TOH humins S. Elm. ing myed grasses ranset. 2 Fast 33 37 41.5 85 49 42.3 40' open gortu flood plain visus to 4" , syc plack wills 10 uses steeply for up 15'
12' moved area to asplat
1'arking lot. -

steepest of clope and

junk yard.

mature hedge now heibstat on
steep stope is 25 ft

ton 40 60' lugh trees.

Steep strelder - Black w: 1403

privil approximately

over with approximately

18

Se 375 16:45 clear sunny 10.15 mysh new lower and 3336 58.9 8549 31.8 T- Nauset 1 W 33 37 00.5 85 49. 32.3 90 20 canopy of stream just below faills. 30 open worken 10' vertial up-20' tree have been out telephone 40-50' high St puming Bradde. 100 Importenza fros grape 20' de fir 11 that is pero Lical

purling lot

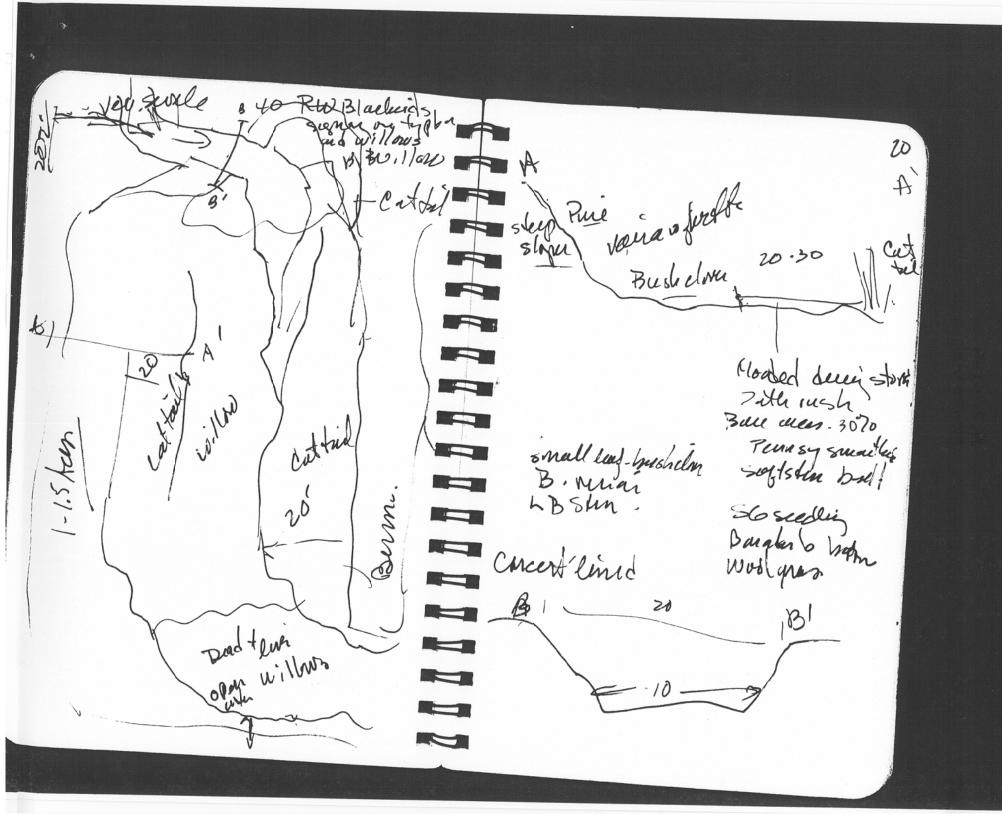
30' open worden us the big
20' comes up to' in kight
vegetalab with hees
50' 60' that have been
ent for telephone wires
Silver leagles humines Box E
privet TOH
Asphalt parking (H.

33 36 59.5 85 49 31.7

haused 2 W

East site half of the side has been runored of trees - referred with encert fill and will frest area has been treated on Rail wad with her hirde some veg and height

villow 6-13-05 Tracu m - 1/102 Church Scutt getting under 4 pead willow cigm m tree. Ban Suellon oull - Aren is funced - Fift high - Walkwan radepole cants evild be fin exert rheims



Roud ix mo wed alot of neadow mouse 21 Swill Bliz. Value Willas Mywrs vict vunan for h 185. Caltail BWillow C fellow hint Poke berry. Box elder Bindereed Dary Cleabares nunna runni water Red Clase. B. Dlackery Bonset

Estail hank en ova struvala fec. TI- 33 39 10.5 85 50 53.7 Dihe stru Maved vareyours up & wetland feede hydevis mot glove sweed (outen slopemul no tracks jumps. s. elm.

Days down seval times ended unhat in a trutle pop. area is dof-truet & colonze belause of with correct to the strumeter fueld is suple and water im the Symusus. 100 

2 hours fell 2 hours pres on wries Lichen but on wire 30 blue den on wie mas butten on tence 1 Tampatine RT tauth deer tracks. in les. vrt. fufte

South Landfell 7:35 6/4/05 clear-sunne 50 goists 964
Burn sevellnis FG von finds.

Kottank inabue pein chased by

sure indrue being chased by account in fine fine fine frager in free sures sure for across

Stat End TA 35 38 56.2 85 51 00.5 33 38 57.6 85 50 55.9 3 Lev blackwils flew into memora trees 2 Buch day flue oute frestedya 1 Starling === 18 33 38 566 85 51 00.6 33 38 579 85 50 56.1 Bu blad I you over Ingo bunter in fortest edge Te 33 38 56.9 85 51 00.5 13 38 58.0 85 50 56.1 2 Redtail abult flying over on termal more ( 13m apart clove / gras for/ of 2 mgh Red & valile clover des bane Dangflesberes num onom - Universe SIX tree 855 Ansiet A 33 3854.0 333854.8 88 51 02.0 48 50 585 13/72/1 cquis on T.-B 33 38 58.7 33 38 54.1 55 51 01.9 85 50 584 no signs of wildleft pursel runs, tracks 333853.8 85 51019 85 50 58.4 nothers 

grass oresperlater weed Dock cat perio

Carbrial flux ucurs

Rew Bluelion of Lew across

Rung Dwa flux across

parrow Huck priced Is

possible grass hoppe and

fau

summe Janeau 9 lew was

1 Rw Bluehor flux across

2 Rw Bluehor flux across

10109

100

Leid. 1415. feight 2-3 high TA 33 38 495 33 38 55.5 85 51. 05.0 15 51 571.1 TB 33 38 49.9 50.0 TC 33 38 50.1 19.1 85 51 05.1 19.1

Le vis de de some one aux

Shrubby Cinque forl

a readed Cromed it Tield Sunteld be the save one z' dia boron in whenter rest in till sossible squile Armindela borrowing wear Rw Machbud feeder in he. M. RT Hayek flying rea th Ground is coulded with fifter fullic within will lambel and borowing asimals claus lipkin for place Dain simplow flying orthe Wha horars who fince in smath material. 10:57 40'-50' eaugy - of a member of trus. no shout 10% -CFIR Trea 12115-Jourt 33 39 02.6 End. Jukey oak willow cak see Jukey oak Willow cak see No SHA Dunkara Notem tint correst how use as a park for employees. 33 39 00.4 55 5109.5 85 51 09.1 TB 53 39 02.2 23 39 00.3 85 51 09.0 85 51 08.7 10 1 33 39 63.1 33.39.00.4 97 % Everage of herbs/ pus 85 51 085 85.51079 private Nakarass

many partly downey 90+ no wound 22 huxed monded field- p-2 high Clover yord - PMG-2 while clover - secound to 22-4" · 100 %, cover Rid Clover OAL. C. danson - crale gran Morein Doves on wies Swett White Cloth Such Y. clara Dasin fleabour polderods?

Con plantain

Answerse her vir.

WBC seeding desped? 2 F6 3 TILA 1 cripu. TB Uppland Brost TC W. Clover C. Maintain C. danson Cgrass 2-" high Benneda Gran -Meadon fack sitting nost Inputure Gestown in fire de 100 % corrue ----- 4 no willife 15

× may s

Box Elder.

Mimoria

Peren

S. Elm B. Willow

B. Willow

R. Lulbern

Prue

S. Hack keerry

Cat

Silves haple

E. Red Cesan

vice of Haven

lacolea

China kerry

Buchoin Bunnella

Oreen Joh

VXXV

1 2 3 4 5 R V X X X X V

VXXXX

Sterets

El der berry
Harbour

Provit

ALL-WEATHER WRITING PAPER

## FIELD

All-Weather Spiral

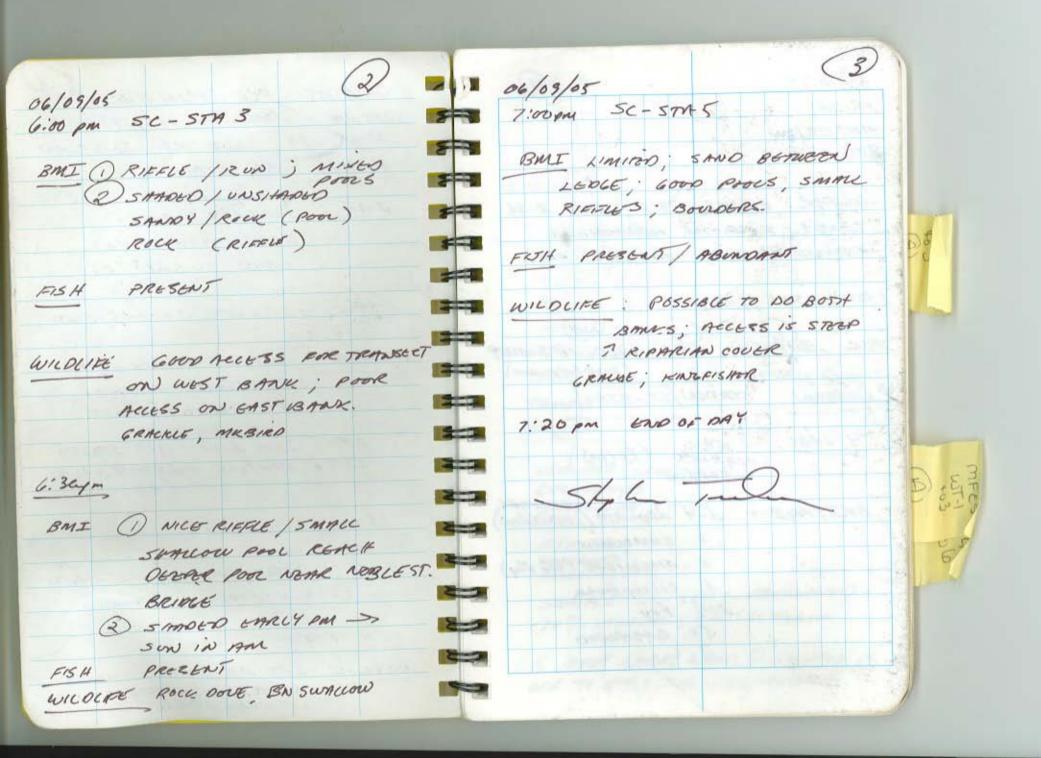
SOLUTIA ANNISTON 00180028003 HABITAT / BIOTA SURE -JUNE 2005 4 516" x 7" - 64 Pages



Pine Environmental Services, Inc. www.pine-environmental.com

06/09/05 PRE RECON SURVEY GAYLE MACOLLY CREW: SML, VKS, SPT 5:08 pm P: 252-231-8412 90 : BUE SKY 80% CLOUD 6: 176 - 355 - 1526 50-5741 LOCATION WAYNE LAMBERT (vaca) 1+431TATE BMI : ALLIGHTER LETED (1) P: 256-231-8400 5AND/COBBLE 6" (2) 124" (3) 5 AND SAFETY TRAINING RONALD HAYNES (on-site supervises) OBSERVED SHINERS / SUNS F154 P: 256-231-8497 LET/RT BANKS EASNOLY WILDLIFE TOM COLLINS Cen. plant conductor ASSEBSED; MUSKIENT, BN. SWALLOWS, SWIFT P: 256-231-8490 START 20M BUZOW 14TH STREET SHE FOR GMERGENCY / LOCATING PEOPLE END I STHET OF ALLIGHTER WEED (Aw) GUARD AT SOLUTIA GATE 5:38 pm 5C-5TAL P:256-231-8408 >100 M BMI (1) RIFGLE DOWNSTREAM OF BRIDGE LUDWILL (2) RUN/POOLS UPSTREAM 410 381-3035 HOME. FISH PRESENT: SUN 443 812- 8836 PERSON LETIRT BANKS / HARREL CELL WILDLIFE DE FROM BRIDGE

WITT DE



06/10/05 06/10/05 FRIDAY MOSILIZATION 8:00 -Reach # middle of reach 9:40 WEATHER: CLONDY, 79°F, LIGHT E-SE DI4 8.18 WINDS. HURRICANE APPROACHING cm 6.332 SHUR O BE HERE TOMORROW PM. trib. 0.0 DO 10.36 CREW: SML, JKS, SPT ten. 23.5 THISK: BIBELLOW, BMI, WILDLIFE SURVEY 277 (post hurriane) with vel. 1.13 ft average of 5 to. STATION SC-STAI TASK 1 read in SAMPLE BIORECON 20 jals : 4 JABS: 1 SANO (RECON) ZYGOPTERA ODOWATA (COLUMGEION) 6ASTROPONS 3-4 ODONATA (COENALION) SIMULIONE (RIXA?) BMI/PMI: CHIECKOMID FISH ERY CHIRONOMIO NEMATOR SIMULIDAE ( 6/4 Fly) OUGOCHAETI SAMPLE SC-STAI PRESERVED Coleep tevan 70 % O ETHANOL; 4 m1 GLYCERLOC 3-4 Fry GASIROPOD 11:15 MEET LARRY LYONS & SOLUTIA GFE TO STAI FOR HES/ DEBRICE

12:06 arrived 06/10/05 06/10/05 SC-ST ST2 12:50 20 JABS water sample in unddle of seehin 33° 39'08.0 65'50'iz.1" - 10 in SAND ROCK (RUN) - 10 in COBBLE (RIEPLE) Elm ft/sec 2.29 / COLEOPORTERM (?) ALL WARLY INSTAK 10+ EPHEMEROPION 8.30 1 CERCH Preserved cand. 0.328 101 TANIPODINAE Trib. 5 SIMULIDAE temp. 24.5 ROP 230 12:30 4 JABSS (BIORELOW) 2 SAND/ROCK (RUN) 2 COBBLE (RIFFLE) BMI / PMI 3-4 CROWATA (COEN) EARLY INSTAR 2 SIMULIDAG TANYPOOINAS GLILBLUARTA preserved 75% start

06/10/05 13:42 SC-5T3 B 6/10/05 33° 28' 25.5 85° 44' 46.2" 14:45 END OF STATION ARRIUN SC-St4 14:54 0,257 to 33 37 44.2 85 49 44.1 bothom - 330 37 41.3 25.9 85 49 42.1 wahr cauge at bottom of reach 4 JABS (BIORECON) 4.83 ft/see vel 1400: 1 RIFFLE UP 8.64 , POOL UP em d. 0.256 I RINFLE AN 5,1 POOL DN tens 25,1 9,13 BMI: ROP 15 + SIMULIDAE 192 THAN POOINAE 4 KICKS/JABS KICKS/ (BIORELOW) 20 JABS 2 RUN 2 RIFFLE PRESERVED 1 water mitt 75% ETOH 5 MANYPODINAT NOTE: LARGE STORM WATER OUTFACE 4 sulywal OLIGOCHMETA PRESENT, EVERYTHING UPSTREAM EPHEMEROPTERA RIFFILE ( 100M TO NOBLE STREET O DOWATA EXOSCUTON ANISDPIECE 8101068

10 06/10/05 06/10/05 5 C ST-5 EVERYTHIN, DOWNSMEAN 16:14 RUN IMBITAT (FOR 50 M UNTIL CHANCE TO ZIETLE). flow 2.82 ft/see BMI 1 consupross 8.03 PH. 2 MANPODIANE and 0.266 2 SIMULIDAE turb, 21.7 CPHEMEROPIERA Do 8.45 24.4 teup 20 KICKS ROP 256 4 KICKS BMI 5 SIMULIDAG 1 MAYELY (ESPIREM) 2 THINY POMINAE MANYPORD CPHEM EN OPTER 1 TRICHOPTERA 645TROPODA UARIOUS EXOSKELLETON 20 KICKS 2 ROOT MATTS UNPERCUT 3:50 two smow 9 SAND LWO COBBLE ALGAE. (4 EPHEM) DETRITUS ( DIDERCE) OBSERVED MUD TUBES (OLICOCHAETE?)

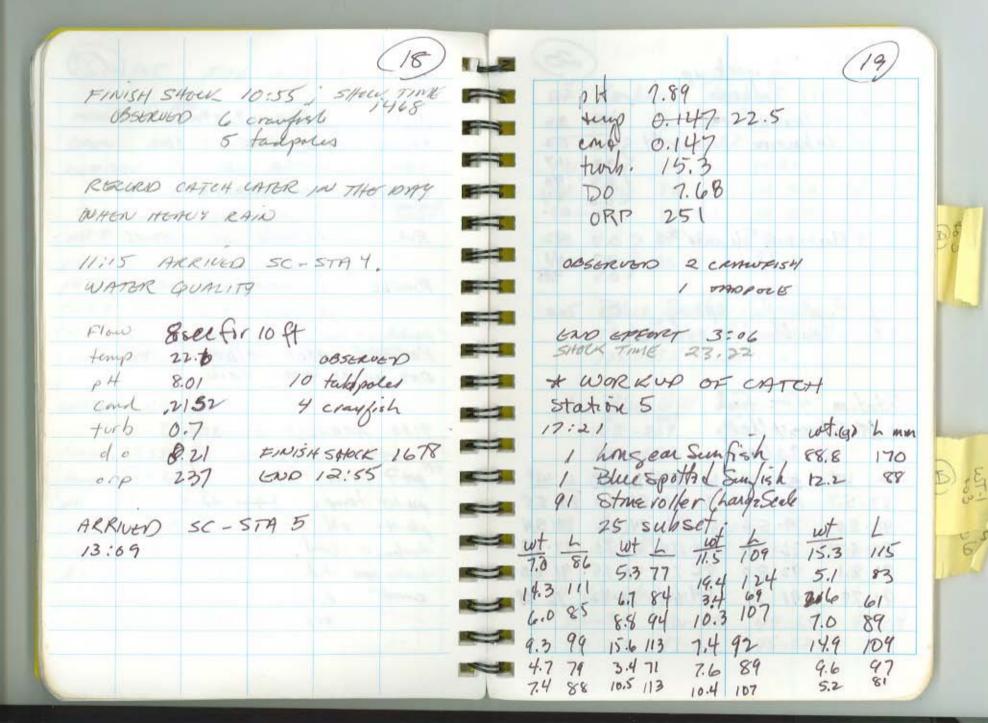
12) 66/10/0x 06/10/05 13 7 EpHononeprek 1500: ELECTROSITOCIENE 2 MANYPODIME WEATHER: CLOUDING UP; SAME (KEW) SIMULIANE GASTRAPOD 5C-5TA1 TRICIPIPITARIAN OLIGOCHMOTH SET BLOCK NETS APPROACH: SHOCK DOWN -> UP. SCHOIM TO LAB BALL SAMPLES LIVEWERL CATOR WORK UP CATCH SC-STA SA (MASOR HABITATS) START TIME: 1900 SAND (ROCK) ALGHE SC-STA SB ( SMALL DETRITUS AND END TIME : 20.10 CNOBE CUS AMES) WATER QUALITY MEASUREMENTS 18:00 END OF STATION. FLOW DH COND TURE DO ORP TEMP 0.52 8.28 0.324 0.7 8.27 222 25-1 TOTAL SHOCK TIME 23.86 AVE. AMP 3.0 VOLIS 2001

ATT	14:	10 T	APPORE	5 CAUL	47		6	MBUS	in <	007					
			BSTRUC				80	wr		(mm					
	7	224	AYEISH OBSERU	201			1.	0.5	34	(MAN	21	0.3	34		
							1	1.2	47		22	0.8	40		
	-/	30014	CEN C	ETPHED	,,		,	0.9	40		23	0-5			
1000	1100 1	51-	son 1				1	6.9	43		24	1.0	45		
0000	HER 1.		INCH)		-100%	5	-	0.9	41		25	0.8	41		
1	9.47.8			BLUESPOR	TED SOW	4		1.1	44		- 61	-		i l	
2	14.95.1	4 7/16		65.3	6 11 150	2		09	45	119	- 50	cour	5		
3	9.5	33/4	15 2			7	-	1.0	46	+	25				
4	12.5	3 15/16			STORE	9		F.0	46		A Ques				
5	10.8	3 7/8			104	/	0	1.3	47		110				
6	9.4	33/4				1	,	1.6	50				a 59		
7	4.4	31/4	-			/-	2	0.8	39						
8	7,1	31/4	63			13		1.0	42						
9	5.8		9		1	14	1	40	44						
10	8.2		29			5.	5	0.6	37						
11	4.8	3/3	89		NAME OF	11		0.4	34						
12	7.6	35/8			THE R. L.	17	,	0.7	42						
13	6.3		ED.	The same	Take 1	18		0.8	42			- 49			
14	7.6	37/1	87			19		1.0	46						
15	5.4	3/19				20	)	1.6	49						

000

WIT S

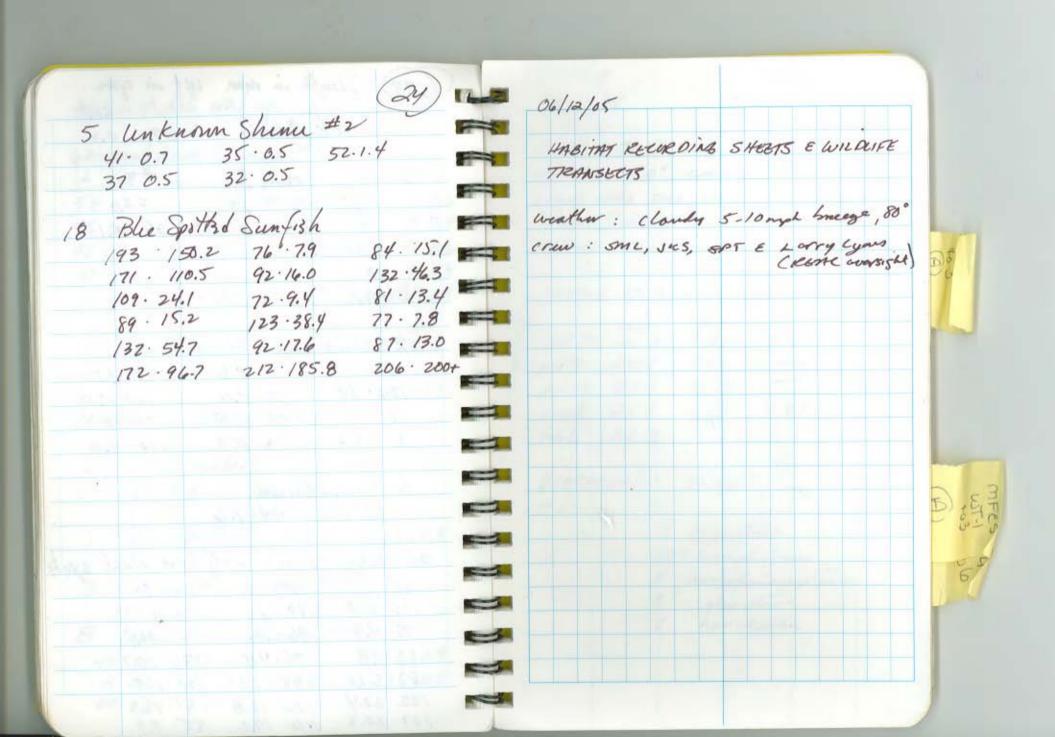
TREFLUE STA 2 7:23  LARCY LYONS  CREW: SMC, NKS, SPT , OVERSHAT  WHATTER: ARLEVE APPROMETING PAST  FIRST RAIN BAMOS MERC - "  CATCUT OBSERVATIONS RECORDS  AMEL: AND  LATER: AND  RUN: 2 CRAYFISH, 13 TADABUCS  RIKELE: 3 CRAYFISH, 13 TADABUCS  RIKELE: 3 CRAYFISH, 1 TADABUCS  RIKELE: 4 TADAB					Company Co.	
CREW: SUC, JKS, SPT OUERSIGHT  OUERSIGHT  FIRST RAIN BAMOS MERE - 2"  LATTER; AND  Homp After offer experiences  PH 7 19.1 7.16 200  PH 9 20.4 9.16 4.08  White 20.5 72.3 75.0 (use 4 calabrate)  MATERIA 20.7 1.59  LATTER OFFER GUALITY  PH 22.6  PH 7.70  CATCH OBSERVATIONS RECORDED  ROW: 2 CRAYFISH, 13 TADARICS  RIKELE: 3 CRAYFISH, 13 TADARICS  RIKELE: 3 CRAYFISH, 1 TADARICS  RIKELE: 3 CRAYFISH, 1 TADARICS  RIKELE: 3 CRAYFISH, 1 TADARICS  PAYDO 20.5 72.3 75.0 (use 4 calabrate)  MATERIA 20.7 1.59  1.41  PARCORD CATCH LATER IN THE  DAY WHEN MEAN'S RAIN.  COMPLETE GUALITY  PH 10 form: 3.47.9  LATTER GUALITY  PH 10 form: 3.7.74  LATTER GUALITY  PH 10 form: 3.7.74  LATTER GUALITY  PH 10 form: 3.7.74	orp	242	# T		e- 20-11	orp. 248
CREW: SMC, JKS, SPT OUERSHAT  OUERSHAT  FIRST RAIN BAMOS HERE -3"  LATEL : ARLEAGE APPROXIMINE PAST  FIRST RAIN BAMOS HERE -3"  LATEL : AND  LATEL :	d.o.					const d.o.; 7,94
CREW: SMC, JKS, SPT OVERSIGHT  WIMMITTER: ARLEQUE APPROMISHING PAST  FIRST RAIN BAMOS MERE-2"  LAMPER: AMD  TOTAL SHOW TIME 21.46  CATCH OBSERVATIONS RECORDED  AMER: AMD  ROW: 2 CRAYEISH, 13 TADROLES  PH 7 19.9 7.16 4.08  RIKELE: 3 CRAYEISH, 1 TADROLE,  AND O PUH  WINDO 20.4 2.4 0.0  WINDO 20.5 72.3 75.0 (wen't coldinate)  MARTER QUALITY  FLOW 258 F/s  Henry 22.6  PH 7.70  COMM 0,288  TOTAL SHOW TIME 21.46  CATCH OBSERVATIONS RECORDED  AMERICAN  CHICK OBSERVATIONS RECORDED  AMERICAN  CHICK OBSERVATIONS RECORDED  AMERICAN  CHICK OBSERVATIONS RECORDED  AMERICAN  ROW: 2 CRAYEISH, 13 TADROLES  RIKELE: 3 CRAYEISH, 1 TADROLE,  O PUH  ROW DAY WHEN MEAU'S RAIN.  OAY WHEN MEAU'S RAIN.  SIT PATE DING: 541  PH TO TOMP: 794 22.49  PH TO						Jucho 100 + 16: 9.3
CREW: SUC, NESSPT OUERSIGHT  OUERSIGHT  FIRST EARL BAPPRACHINE PAST  FIRST EARL BAME APPRACHINE PAST  FIRST EARL BAME APPRACHINE PAST  FIRST EARL BAME APPRACH BAPPRACH BAPPRA						Juston 0 Cmd: 0:13/
CREW: SUC, JKS, SPT OVERSIGHT  WIMMTHER: ARLEVE APPRIACHING PAST  FIRST RAIN BAMOS HERE -2"  CHTCH OBSERVATIONS RECORDED  HOMP hofire after experience  THE 19.1 7.14 7.00  THIS 20.3 10.21 10.08  THY 20.4 4.16 4.08  THY 20.4 2.4 0.0  THIS 20.5 72.3 75.0 (won't calchinate)  THE 20.7 1.59 1.41  WHITER QUALITY  FLOW 2.58 F/s  Homp 22.6  FLOW 2.58 F/s  Homp 22.6	5 /4	1.5702.970.00				p4 4 p4: 3 3-13+ 7.89
CREW: SUC, JKS SPT OUERSIGHT  WIMMTHER: ARLEQUE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LATTER: AMD;  PH 7 19.9 7.16 9.00  PH 9 20.4 4.16 4.08  PH 9 20.4 2.4 0.0  WHO 20.5 72.3 75.0 (Wen't celebrate)  RECORD CATCH LATER IN THE  CHICH OB SERVATIONS RECORDED  RUN: 2 CRAYFISH, 13 TADPOILS  RIKELE: 3 CRAYFISH, 13 TADPOILS  PH 9 20.4 4.16 4.08  RIKELE: 3 CRAYFISH, 1 TADPOIL,  WHO 20.5 72.3 75.0 (Wen't celebrate)  RECORD CATCH LATER IN THE  DAY WHEN MEANUY RAIN.  CHATER QUALITY  9:30 ARRIVED SC-STA 3  FLOW 2.58 F/s  WHITER QUALITY						- 14 to temp: 299 22.4
CREW: SMC, JKS, SPT OVERSIGHT  WILMITHER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LARGE AND TONY RECORDS  HOMP LARGE AND TONY RECORDS  PH 7 19.7 7.16 7.00  PH 9 20.4 4.16 4.08  HUBO 20.5 72.3 75.0 (wen't cellinte)  MATER QUALITY  WHERE QUALITY  WHERE QUALITY  10.08  RECURD CATCH LATER IN THE  CHICK OF ARREVED SC-STA 3  WHERE QUALITY	9		-/5			JOST 7 P. 200: 3171
CREW: SHE, JES, SPT OUERSIGHT  OUMNITTER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LAMPER; AND  PH 7 19.9 7.14 7.00  PH 10 20.3 10.21 10.08  PH 4 20.4 4.16 4.08  PH 5 20.4 2.4 0.0  White 20.5 72.3 75.0 (wen't celebrate)  TOTAL SHOW TIME 21.46  CATCH OBSERVATIONS RECORDED  RINTER: AND  RINTER: 3 CRAYFISH, 13 TADPOLES  PH 4 20.4 4.16 4.08  PH 5 20.4 2.4 0.0  White 20.5 72.3 75.0 (wen't celebrate)  PRIOR D CATCH LATER IN THE  CHAPTER QUALITY  OAY WHEN HEAVY RAIN.	n	2 -0	CI.			unter gonzity
CREW: SMC, JKS, SPT : OVERSIGHT  OULMITTER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LATTER: AND  PH 7 19.9 7.16 7.00  OH 10 20.3 10.21 10.08  OH 4 20.4 4.16 4.08  WHO 20.4 2.4 0.0  WHO 20.5 72.3 75.0 (wen't colchinate)  MIND 20.7 1.59 1.41  PROPOSED  TOTAL SHOCK TIME 21.46  CATCH OBSCHOUATIONS RECORDS  CATCH: AND  RIWEL: 3 CRAYFISH, 13 TADPOLES  OF SH 4 20.4 4.16 4.08  RIWELE: 3 CRAYFISH, 1 TADPOLE,  OF SH 4 20.7 1.59 1.41  RECORD CATCH LATER IN THE  OAY WHEN MEAU' RAIN.	UMTER	gor42	///			9:30 ARRIVED 5C-STA 3
CREW: SMC, JKS, SPT : OUERSIGHT  WEMPHER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LATTER: AND  HUMP Lift after  PH7 19.9 7.16 7.00  1410 20.3 10.21 10.08  144 20.4 4.16 4.08  WHO 20.4 2.4 0.0  WHO 20.5 72.3 75.0 (Wen't cellbinde)  My RECORD CATCH LATER IN THE			i			
CREW: SMC, JKS, SPT : OUERSIGHT  WEMPHER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LATTER: AND  HUMP Lift after  PH7 19.9 7.16 7.00  1410 20.3 10.21 10.08  144 20.4 4.16 4.08  WHO 20.4 2.4 0.0  WHO 20.5 72.3 75.0 (Wen't cellbinde)  My RECORD CATCH LATER IN THE	and	20.7	1,37	7. 76		DAY WHEN HEAU? RAIN.
CREW: SUC, UNS, SPT OUERSIGHT  OURMINER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE -2"  LIMP LIPE AFTER AND TODAY  PH 7 19.9 7.14 7.00  PH 10 20.3 10.21 10.08  PH 4 20.4 4.16 4.08  FIRETE: 3 CRAYFISH, I TADROLE,  OF SHIP AND OF SHIP AND OF STATE OF SHIP AND OF SHIP	8			13.00	higher	RECORD CATCH LATER IN THE
CREW: SMC, JKS, SPT DUERSIGHT  WEMPHER: ARLEWE APPROACHING PAST  FIRST RAIN BAMOS MERE-2"  LATEL; AND  HUMP IN THE GENERAL TON'S RECORDED  PH 7 19.9 7.16 7.00  PH 10 20.3 10.21 10.08  PH 4 20.4 4.16 4.08  RIKELE: 3 CRAYFISH, I TADPOLE,					Cum 4 . lehinte	
CREW: SUC, JKS, SPT OVERSIGHT  TOTAL SHOCK TIME 21.46  WHITHER: ARLEVE APPROACHING PAST  FIRST RAIN BANDS HERE-2"  EXECTED TOTAL SHOCK TIME 21.46  CATCH OBSERVATIONS RECORDED  LATER; AND  PH 7 19.9 7.16 7.00  PH 7 19.9 7.16 7.00  PH 10 20.3 10.21 10.08			200 2000	A 0211 / 1-0-1		O FISH
CREW: SMC, JKS, SPT OVERSIGHT  TOTAL SHOCK TIME 21.46  WEMPITER: ARLENE APPROACHING PAST  FIRST RAIN BANDS HERE-2"  EXPERSO  TOTAL SHOCK TIME 21.46  CATCH OBSERVATIONS RECORDED  LATTER; AND  PH 7 19.9 7.16 7.00  RUN: 2CRAYFISH, 13 TADADES						RIKFLE: 3 CRAYFISH, ) TROPORE,
CREW: SMC, JKS, SPT OVERSIGHT  WEMPITER: ARLEVE APPROACHING PAST  FIRST RAIN BARDS HERE-2"  LATEL; AND			V-10-11-11-11-11-11-11-11-11-11-11-11-11-			
CREW: SMC, JKS, SPT OVERSIGHT  OVERSIGHT  OVERSIGHT  FIRST RAIN BAMPS HERE -2"  FIRST RAIN BAMPS HERE -2"  LATTEL SHOCK TIME 21.46  CATCH OBSERVATIONS RECORDED	12		hofre	1	70047	RUN: 2 CRAYFISH, 13 TADPOLES
CREW: SMC, JKS, SPT OVERSIGHT TOTAL SHOCK TIME 21.46  WILMITTER: ARLEQUE APPROACHING PAST					EXPERSO	LATTER; AND
CREW: SMC, JKS SPT OVERSIGHT TOTAL SHOCK TIME 21.46	ULMITH	ER: A	PLEASE	APPRO	MCHING FIST	CETCH OBSERVATIONS RECORDED
I APPLY LYONS	CREW.	· SMC	, 155,	SPT	OUGRESIGHT	77770 08000
FINISHAY SHOCK 1.01	mercio	en 57	792	7:23	LARRY LYONS	TETAL SHACK TIME 21.46
50		5	c	2		FINISHEYD SHOCK 9:09
06/11/05 FISH SURVEY (16) 06/11/05	06/11	105	FISH	SURVET	(19)	



Station 5-fish we	kup.		(20)		1763			-	154		( 0	21)
1 Black Redh	nse,	12.9	111		23	Ulan	known	Sh	inner	#1		
1 , Yellow bull	read	8.5	88				4			wt	6	wt
of unknown ?	hinner	#/ S17.6			91			10.7	-	6.4		15.
	14-2	519.3	117		135					9.0		6.7
		(8.3	90		105	13.6	1000000			22.6	100	11.7
					88	7.3		8.1	35	30.9		8.1
3 Unjeroun St	inner #	250.7	42	7.		11.4		9.5		21.4		8.5
3 Unteroun St		10.7	41			13.0		8.1		1. 7.2		
1 Cyprinella Blacktuil	r xetan	naha	120		5	73 -	18 Sp.	95	1-16.	5	86-1	w 3.3
Station 4- fire Station 4- fire Stationary		S 14	W.C.		6		-35.5 ee Gil					
25 Subsei						131-	45.9	6	21-1	12		
L Lot. b wt		L wit	L wt 1				47.9					
83-5.7 106-109			86-5.5			1	101	0		. /		
90-8.0 79-5.6	87-64	94.8.6	80.5.4		3	Cuo	rinell	4 54	, ?			
92.8.7 86.7.3						114	rinell	1211	- 219	10	4 - 10	27
93.8.1 92.8.0	85 7.3					7 7 - 1	3.7	127	21.1	10	1 10	./
91.79 91.77			76 4.8		7 (	Gan	busia					
	0.1	1, 1,0	16 10								47	,,1

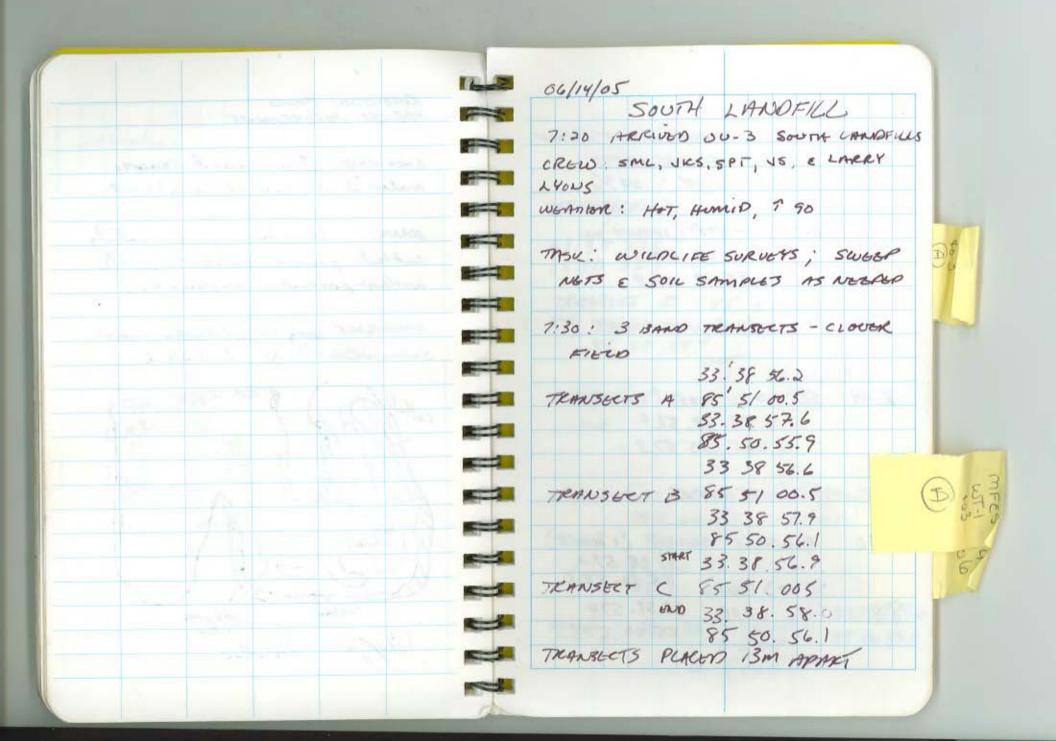
Station 4 fish work up. 22	2 601
62 Umknown Shinner #2	1 Creek Chub 39 0.4
L wt L wt. L wt. Lwt	7 14 14 14 14 14 14 14 14 14 14 14 14 14
51.1.3 47 1.0 40 05 41.05 41.0.6	7 leuknown Shinne #3
45.0.7 56 1.9 41 0.6 37.05 41.0.7	
1	
42·0.8 43 0.8 43 0.9 41 0.6 40 6.6 31·0.4 41·0.7 41 0.6 45·0.8 41·0.8	3/- 0.3
40.0.6 48.1.1 42 08 49.1.2 43 0.7	10111
1 Suckermorthellinnon 93 6.3	
	51-2.0 92.9.6 137.37.0
0//: 2////	122.25 92.9.6 120.23.0
Station 3 - fish writing.	111-20 99 12.5 101.12.4
	81.5.2 93 11.3 102.11.6
2 Straterollers 85.8.2 75-4.2	
85.8.2 75-4.2	2 6 ambusia 51.2.7 44.1.6
71 -11/0 6/	51.2.7 44.1.6
1 Blue Spotted Sunfish 193 125.3	
3 (inturan Spinnie #1	21 Stone rollers half have black spots
5 anna	72-3.8 115-14.0 114-18.2
78. 6.2 94. 10.9 81. 7.5	1 6. / /06/2.3
8 Cenknown Shinner #2	
42.0.8 531.6 42-1.1 45.0.9	86.7.8 75.4.4 136.30.7
41.0.7 41.0.7 43.0.9 36.0.5	, , , , , , , , , , , , , , , , , , , ,
24	122.22.4 102.12.8 151.46.3
	122.20.3 116 19.2 88.7.7

WITT OF



04/13/05 5154 E 13MI Sampling in RP-1 weather: 80°, sunny ; law wind crew: VKS. SMC, SPT, Larry Lyons. Volin Schell, wormer Hot hund near 900 WATER QUALITY CALIBRATION pH 7 26.3 p44 269 4.09 pH10 27.0 10.08 and 26.7 1,60 turb 26.5 BIORGION 12:02 4 Kely 4 3ygaptera 10+ humpheran 1 emplumengler 5 + colecutive 1 hardener

RETENTION POND HABITAT ASSESSMENT 20 kielis SUBSTRATE: 1 silt, sand - coarse 1000 + dayshina 25 17 coleoptina naturial > than these absent. 25+ hemptiva BANK: vege tation predementaly 251 105 cuttail, grasses, Forts - stable amounters willow present in beclivaler. / erches water Quality botalin 13:41 33 39 10.5/ 85 50 54.6 SUBMERICAT vg - allegeter weed. 155 6.78 0.107 19 6.87 blk cattal Udwigu 6/6 willia



OBSERVATIONS: SEVERAL LANGE WOLF SPIDERS, OLD FIRE AND NESTS 50%0 2108 . 50%0 ABAMPONDO 8:15 SL-01 SWEEP (IMINOTE) 33.38 57.6 85 50 59.8 INIT. OBS. VARIOUR GRASSHOPPERS 8.24 SL- 02 SWEEP (IMINOR) 33. 38. 57.4 85.50.57.8 INIT UBS. LEHF HERRYES DOGBANT SOUTH (I MINUTE) 8:30 33 38 57.2 85 50. 58.0 5L-03 (we) SOIL GRAB 33.38. 57.4 8:40 85.50.57.8

7:00 3 BAND TRANSTERS TALL GRASS HUBITAT TRANTECT A 33 38 54.0 85 51 02.0 33.38 54.8 85 50 58.5 STHAT 33 38 53.7 TRANSBET B 85 51 01.9 on 33 38 54.1, 85 50 .58.4 33 38 53.3 TRUNSECT C 85 51 01.9 33 38 53.8 85 50 58.4 observators nue velule frachs TALL GRUSS ITABITAT 9:27 SL-04 (sweep) 33 38 53.9 85 51 00.6 SL-05 (Swep) 33.38536 Feele 8550550 9.40 SL- 06 (CUE)

12 10:11 3 3AND TRANSECTS LESIBEDEZA HABITAT START GND TRANSECT A 33 38 49.5 33 38 491 85 51 05.0 85 51 07.8 TRANSECT 3 33 38 45.9 33 38 50.0 85 51 05.0 85 51 07.3 33 38 50.1 33 38 50.5 TRANSECT C 85 51 05.0 85 5/07.1 SPARROW HAUR FEEDING PERCH ON UTIL POLES GATING GRASSITOPPERS 16:40 5L-07 (sweep) 33 38 50.3 85 57 05.2 10:50 SL-68 (Sweep) 33 38 50.1 85 51 07.1

Observations: spraces sup. heatles granhymus 54-09 (come) 12:10 FACILITY OPEN AREA : 3 WILDLIFE TRANSGETS stort TRANS 3339 02.6 3 33 59 00.4 85 51 05,5 85 51 09.1 TRANS 33 39 02.2 33 39 00.3 B 8551 09.0 8551 08.7 TKANS 33 39 03,1 33 39 00,4 C 85 51 08.5 85 51 07.9 armadillo excuvation; chipminh

12:35 OPEN AREA 01 33 39 02.1 OA-01 (SWOOP) 8551 08.6 12:40 33 38 01.4 MF6-01 (core) 85 51 10.0 12:55 33 39 02 + 03.8 MF6-02 85 51 09= 13.8 (core) MAINTAINED FAILITY TRANSECT A 33 39 08.1 33 35 11.0 85 51 12.0 85 51 11-6 START TRANSECT B 3338 08.2 and 3539 11.0 8551 11.3 8551 11.2 SMAT TRANSECT C 33 39 08.2 3335 11, 1 and 8551 10.7 8551 10.7 streams fire ants

MF6-03 (core) 33 39 09.7 85 51 11.6 MFG - 04 (core) 33 39 08.7 85 51 10-1 MF6 - 04 (core) 33 39 07.4 1:30 leavy MFG

2:10 WEST LANGEILL WILDLIFE SURVEY TRINGS 33 38 54.8 33 38 56.2 85 51 30.7 8551 27.0 TRANS 3338 552 3338 56.8 85 51 31.0 85 51 27.4 33 38 55.6 33 38. 57.5 TRANS C 85 51 36.9 85 51.27.9 2:40 WESTLAND FILL WLF - 61 Sweep 33 38 55.4 85 51 29.8 WLF - 02 (core) **E** 

WIF -03 ( sweep) 33 38 54.9 85 51 29.0 end effert

#### Appendix B

#### Fish Sampling Photograph Log





Description: Crayfish from SC-STA1



Description: Mosquitofish from SC-STA1



Description: Stonerollers from SC-STA1



Description: Sunfish from SC-STA1



Description: Tadpoles from SC-STA1



Description: Unknown fish from SC-STA5



Description: Notropis sp from SC-STA5



Description: Shiner and catfish from SC-STA5



Description: Sunfish from SC-STA5



Description: Sunfish from SC-STA5



Description: Assorted fish samples from SC-STA5



Description: Assorted fish samples from SC-STA5



Description: Fish catch from SC-STA5



Description: Stonerollers from SC-STA5



Description: Stoneroller count from SC-STA5



Description: Processing fish samples from SC-STA5

#### Appendix C

#### **Scientific Collector Permits**





#### STATE OF ALABAMA

DEPT. OF CONSERVATION AND NATURAL RESOURCES  This Permit Authorizes STEVE P TRUCHON	☐ Birds ☐ Mammals ☐ Fish ☐ Reptiles ☐ Other Species as Listed Below
Of BBL INC  COMPANY  CITY STATE  to take and possess species indicated for SCIENTIFIC purposes under the rules and regulations of this department.  3322  Joeanne St. John, Issuing Agent For Commissioner of Conservation	Report MUST be received by Jun 06 before renewal permit can be issued
STATE OF ALABAMA DEPT. OF CONSERVATION AND NATURAL RESOURCES  This Permit Authorizes JOSEPH SHISLER	<ul> <li>□ Amphibians</li> <li>□ Birds</li> <li>□ Mammals</li> <li>☑ Fish</li> <li>□ Reptiles</li> <li>□ Other Species as Listed Below</li> </ul>
Of BBL INC  COMPANY   Report MUST be received by Jun 06 before renewal permit can be issued	
STATE OF ALABAMA DEPT. OF CONSERVATION AND NATURAL RESOURCES  This Permit Authorizes SCOTT M LAREW	☐ Amphibians ☐ Invertebrates ☐ Birds ☐ Mammals ☐ Fish ☐ Reptiles ☐ Other Species as Listed Below

This Permit Authorizes SCOTT M LAREW

Of BBL INC

CRANBURY, NJ

CITY STATE

to take and possess species indicated for SCIENTIFIC purposes under the rules and regulations of this department,

3324 Number

Joeanne St. John, Issuing Agent For Commissioner of Conservation

Expires: 6/7/2006 Issued: 6/8/2005

**Amphibians** 

Invertebrates

6/7/2006

6/7/2006

Report MUST be received by Jun 06 before renewal permit can be issued