



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / No

WIN Station Name: Hurricane Creek Below Hurricane Lake Road **Date:** 12/21/2020
WIN/Field ID: G4nw0160 **WBID:** 83 **ENR:** **Latitude:** 30.943222
County: OKALOOSA **Org ID:** 21FLPNS **Longitude:** -86.746888
Receiving Body of Water: Pensacola **RQ:** 2020-12-21-36

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Heather Schmuki	x		x		
☒	Christopher Stopher Slade		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Meter	
Secchi Equipment ID:	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☐ Gasoline Motor

Water Level: ☐ Normal ☒ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 154179 (PRODSS)					
Photos: No		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☐ LVS ☒ LVI Other:											
SBIO ID Numbers: Visit ID 81732. RPS ID 9627. HA ID 16711											
Notes:											

Duplicate Sample

Time Zone: CEN	Time: N/A	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID: _____			

Blank

Time Zone: _____	Time: N/A	Field ID: N/A	(Blank Type_DDDMMYYY)
DI Source: N/A		Location: N/A	
DI Type: N/A		Equipment ID: N/A	

LIMS EVENT ID: _____ **WIN Import ID:** _____
Enter Field Parameters, Verify Station ID In LIMS DMT: _____ **QC Station ID, Field Parameters In LIMS DMT:** _____
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets _____ **Migrate Data to WIN:** _____ **Verify Data In WIN:** _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2020-12-21-36

Customer: WQAP

Project ID: SMP

Collected By: Heather Schmuki, Christopher Stopher Slade

Field Report Prepared By: Heather Schmuki

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G4nw0160

Location: Hurricane Creek Below Hurricane Lake Road

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT)
12/21/2020	1100 CEN	9.69	91	12.7	4.85	0.2	0.4 ☒ VOB (S)	0.4	18.9	0.01

Central Lab please use top row for login purposes

	CEN									

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4*	☒ <2	1	A
	Lot # Sa0293040 Exp: 10/19/21				
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO3*	☒ <2	1	A
	Lot # Na0038050 Exp: 2/07/21				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # 17097890				
	Syringe Lot # 0079929				
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	A
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	A
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☒ Ice		1	A
Molecular (QPCR-P-500ML)	☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐	☐ Ice			
Tracers (BG-500ML)	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice		1	A
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☒ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)	☒ Ice		4	A
		☐ Ice			

Name:
Heather Schmuki
Christopher Stopher Slade

Signature:

Date:

12/21/2020

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

Site Name Hurricane Creek below Hurricane Lake Road

Field ID 64NWD160 Storet 64NWD160

Visit ID 81732

RPS ID 9627

Macro ID —

HA ID 16711

Date: ^{HS} ~~12/20~~ 12/21/20

Project: SMP

RQ: 2020-12-21-36

LIMS ID: 2215479

WBID: 83

☒ SCI

☒ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial JS

☒ RPS entered in SBIO Initial JS

☒ LVS entered in SBIO Initial —

☒ Date and Initial QA: 12/23/2020, FB

☒ Date and Initial QA: 12/23/2020, FB

☐ Date and Initial QA: —

☒ < 2 m² vegetation

☐ Plants getting verified

Date submitted: —

☐ Plants verified

Date returned: —

☒ RPS authorized in SBIO

☒ Date and Initial: 12/23/2020, FB

☒ RPS score: 0.0

☐ Macro authorized in SBIO

☐ Date and Initial: —

☐ LVS Score: N/A

☒ SCI complete: T. Risk, 3/10/2021

SCI Score: 42

☒ Add SBIO-ID, HA-ID, RPS-ID, MACROPHYTE-ID and LIMS# to field sheet in database

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID 81732 ORG ID ZIFLPS LATITUDE 30.943222
 COUNTY Okaloosa STORET # 64NW0160 LONGITUDE -86.746808
 DATE 12/21/20 TIME 1100 SAMPLING AGENCY NW RDC
 SITE NAME Hurricane Creek below Hurricane Lake Road
 FIELD ID/NAME AWI 64NW0160 RECEIVING BODY OF WATER Hurricane Creek

RIPARIAN ZONE / STREAM FEATURES

WBID 83 Basin: Blackwater River

LIMS ID: 2215479

WBID 83

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):

Forest/Natural ☒ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐

Landscape Development Intensity Index (LDI)

1.14 (SBIO 2014)

Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank: >18 Right Bank: >18

Hydrologic Modification Score (per FT 3101)

3-4

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

2 m wide

0.17 m/s 0.17 m/s 0.17 m/s

High Water Mark: 0.2 + 1.0 = 1.2
 (m) (above present water level) (present depth) (above bed)

Artificially Impounded

☐ Yes ☒ No

0.4 m deep 0.4 m deep 0.4 m deep

Artificially ☒ No ☐ Mostly recovered, more sinuous

Channelized: ☐ Some recovery ☐ Recent, severe

Canopy Cover %

☐ Open ☐ Lightly Shaded (11-45%)
☐ Heavily Shaded ☒ Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils

☒ Absent ☐ Slight
☐ Moderate ☐ Profuse

Sediment Odors

☒ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☐ Anaerobic
☐ Other (Specify):

Smothering of Substrates

Sand Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐
 Silt Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐
 Algae Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐

SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☐ LVS

☐ LCI ☐ BioRecon
 % Coverage INVERT # Times Sampled PERI # Times Sampled

Woody Debris (Snags) 15.38 5
 Undercut Banks / Roots 7.00 5
 Leaf Packs or Mat 8.63 5
 Aquatic Vegetation
 Rock or Shell Rubble.....
 Sand..... 67.99 2
 Mud / Muck / Silt
 Other Gravel 0.6 2
 Other Fontanills 0.4 1

WATER QUALITY

Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)
 Top: 0.2 12.7 4.85 9.10 9 18.9 0.01 0.7
 Mid: 9.69 9.10
 Bottom: 0.4
 Meter ID: 154179

Water Odors Normal ☒ Petroleum ☐
 Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☒ Sheen ☐
 Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
 Sample Preserved? ☒ Yes ☐ No
 Lot Number: Exp:

Color Tannic ☐ Green (Algae) ☐
 Clear ☒ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☒ No
 Sample Preserved? ☐ Yes ☐ No
 Lot Number: Exp:

Clarity Clear ☒ Slightly Turbid ☐
 Turbid ☐ Opaque ☐

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

HNO3
 LOT# NA0038050
 EXP: 02/07/2021

H2SO4
 LOT# SA0293040
 EXP: 10/19/2021

Old Storet ID 33030058. Last
 sampled 1/27/2015
 Impounded upstream at Lake

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

H. Schuch, S. Slade

SIGNATURE:

H. Schuch

DATE:

12/21/20

Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Project: SMP
Sampled By: S. Shukla
Date: 12/24/2020

Snag	00
Root	00
LP	
Plant	
OTR	
Snag	000
Root	00
LP	00'
Plant	
OTR	03
Snag	00000
Root	00000
LP	000
Plant	
OTR	
Snag	00
Root	0
LP	0
Plant	
OTR	
Snag	00000
Root	00
LP	0
Plant	
OTR	
Snag	00000
Root	0
LP	0
Plant	
OTR	
Snag	0000
Root	0
LP	0000
Plant	
OTR	074
Snag	00
Root	0
LP	00
Plant	
OTR	
Snag	0000
Root	0
LP	00'
Plant	
OTR	
Snag	000000
Root	000
LP	00
Plant	
OTR	0.1

	Depth <u>0.3</u> Width <u>0.3</u> <u>6.4</u>
	Depth <u>0.3</u> Width <u>2</u> <u>2</u>
	Depth <u>0.3</u> Width <u>1</u>
	Depth <u>0.6</u> Width <u>1.5</u>
	Depth <u>0.5</u> Width <u>2</u>
	Depth <u>0.7</u> Width <u>2</u>
	Depth <u>0.9</u> Width <u>2</u>
	Depth <u>0.7</u> Width <u>2.5</u>
	Depth <u>0.7</u> Width <u>2</u>
	Depth <u>0.7</u> Width <u>2.5</u>
	Depth <u>0.6</u> Width <u>2.5</u>
	Depth <u>0.6</u> Width <u>2.5</u>

High New market 1.2m

Downstream

73' 1. 73' 1.

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>NW RDC</u>		STORET STATION NUMBER: <u>64NW0160</u>	DATE (MM/DD/YY): <u>12/21/20</u>	RECEIVING BODY OF WATER: <u>Mule Creek</u>
REMARKS: <u>ID: 16711</u>	COUNTY: <u>Okauchosy</u>	LOCATION: <u>Hurtian Creek</u>	FIELD ID/NAME: <u>64NW0160</u>	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>13</u>	20 19 18 17 16	15 14 <u>13</u> 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>18</u>	Greater than 30% major productive habitat present at site 20 19 <u>18</u> 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>13</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 <u>13</u> 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>7</u> ----- Primary Score <u>51</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 <u>7</u> 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>20</u>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>10</u> Left Bank <u>10</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. <u>10</u> 9	Only meets 2 of the 3 requirements for optimal bank stability. <u>8</u> <u>7</u> 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>10</u> Left Bank <u>10</u>	Width of vegetation greater than 18 m <u>10</u> 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank <u>10</u> Left Bank <u>10</u> ----- Secondary Score <u>45</u> <u>75</u>	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. <u>10</u> 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

45 + 75 + 126 TOTAL SCORE

Date: <u>12/21/2020</u>	Analyst: <u>Heather Schumaker</u> <u>Stephan Shick</u>	Signature: <u>Heather Schumaker</u> <u>Stephan Shick</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Hurricane Creek
64NW0160

County: Glenn

Date: 12/21/20

Investigators: H. Schmitt

STORET Station Number: 64NW0160

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1	1			60	1	1			
	2					2				
	3					3				
	4					4				
	5			55		5			55	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	1			70	1	1			
	2					2				
	3					3				
	4					4				
	5			55		5			45	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	1			80	1	1			
	2					2				
	3					3				
	4					4				
	5			60		5			65	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	1			90	1	1			
	2					2				
	3					3				
	4					4				
	5			55		5			70	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	1			100	1	1			
	2					2				
	3					3				
	4					4				
	5			50		5			40	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	1				1	1			
	2					2				
	3					3				
	4					4				
	5			5		5				
	6					6				
	7					7				
	8					8				
	9					9				

Secchi depth 0.4
Estimated? N

points ranked 4-6 0
total points assessed 99
% points ranked 4-6 0

Check accompanying data collected at same site/date.
Algal mat sample ☐
Linear Veg Survey ☐
Habitat Assessment ☒
SCI/Biorecon ☒
Water sample ☒
RQ- 2020-12-21-36

Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

RPS IP: 9627

SBIO ID 81732

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

[illegible]

Hurricane Creek Below Hurricane Lake Road

WBID: 83

LIMS ID: 2215479 Benth ID 45323

Storet: G4NW0160

RQ-2020-12-21-36

SBIO ID: 816732

Sample Date: 12/21/2020

Variable Name	Rep 1	Rep 2
AmphipodPct	0	0
ChironPct	18.57	23.18
ChironTaxa	8	7
ClingerTaxa	4	7
ColeopteraPct	5	1.99
DecapodaPct	0	0
DipteraPct	34.29	41.06
DominantPct	50.71	43.05
Dominant Taxa	Cheumatopsyche	Cheumatopsyche
EPTTaxa	5	7
EphemPct	3.57	1.99
EphemTaxa	2	2
FFBrowGrazPct	0	0
FFEpiColDepPct	8.57	4.3
FFParasitePct	0	0
FFPIPiercePct	0	0.66
FFPredCarnPct	12.14	14.57
FFScavPct	0.36	0
FFScrapePct	3.57	1.99
FFShredPct	7.14	6.95
FFSubColDepPct	0	0
FFSuspFiltPct	68.21	71.52
FFUnknownPct	0	0
GastropodaPct	0	0
IsopodaPct	0	0
LongLivedTaxa	0	2
OdonataPct	0	1.99
OligocPct	0	0
OligocTaxa	0	0
PelecypodaPct	0	0
PlecopPct	0	0.66
PolychaetePct	0	0
PolychaeteTaxa	0	0
SCI_2012_Rep	33.33946035	50.12442645
SensitiveTaxa	4	6
TanytarsiniPct	2.14	11.26
TotalDBar	0	0
TotalDensity	0	0
TotalNind	140	151
TotalTaxa	18	20
TrichopPct	57.14	51.66
TrichopTaxa	3	4
TrombidPct	0	0
VeryTolerantPct	0.71	0.66

Average SCI 2012	42
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Hurricane Creek Below Hurricane Lake Road
 WBID: 83 LIMS ID: Benth ID 45323

Storet: G4NW0160
 RQ-2020-12-21-36

SBIO ID: 816732
 Sample Date: 12/21/2020

					Taxa			Abundance		
Phylum	Class	Order	Family	Taxon Name	Rep 1	Rep 2	Pooled	Rep 1	Rep 2	Pooled
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	Eurylophella doris	1		1	1		1
			Heptageniidae	Heptageniidae		1	1		1	1
			Leptophlebiidae	Leptophlebiidae	1	1	1	4	2	6
		Plecoptera	Perlidae	Perlesta placida complex		1	1		1	1
		Trichoptera	Hydropsychidae	Cheumatopsyche	1	1	1	71	65	136
			Hydroptilidae	Hydroptila	1	1	1		1	1
			Leptoceridae	Oecetis georgia	1	1	1	5	8	13
				Triaenodes					4	4
				Triaenodes perna/helo	1		1	4		4
		Coleoptera	Elmidae	Dubiraphia vittata	1	1	1	4	3	7
				Microcylloepus pusillus	1		1	1		1
				Stenelmis	1		1	1		1
			Gyrinidae	Dineutus	1		1	1		1
		Diptera	Chironomidae	Glyptotendipes	1		1	1		1
			Chironominae	Polypedilum flavum	1		1	1		1
				Polypedilum illinoense grp.		1	1		1	1
				Stenochironomus	1	1	1	4	4	8
				Xenochironomus xenolabis		1	1		1	1
			Orthocladinae	Cricotopus or orthocladius	1		1	1		1
			Tanypodinae	Ablabesmyia mallochi	1		1	4		4
				Thienemannimyia grp.	1	1	1	12	12	24
			Tanytarsini	Rheotanytarsus exiguus grp.	1	1	1	2	14	16
				Rheotanytarsus pellucidus		1	1		1	1
				Tanytarsus sp. I epler complex	1	1	1	1	2	3
			Simuliidae	Simulium	1	1	1	22	27	49
		Megaloptera	Corydalidae	Corydalus cornutus		1	1		1	1
		Odonata	Calopterygidae	Calopteryx		1	1		1	1
			Coenagrionidae	Coenagrionidae		1	1		1	1
			Libellulidae	Macromia		1	1		1	1
		Totals					19	19	28	140