

send the data to: Streamkeepers Database, Department of Fisheries and Oceans,
 Suite 400, 555 W. Hastings Street, Station 321, Vancouver, B.C. V6B 5G3
 fax to (604) 666-0292

Stream Location and Conditions

(use a new data sheet for each stream segment surveyed)

Module 4

Stream Name/Nearest Town <i>Paul Creek / Clearwater</i>	Date <i>Feb 17 2001</i>
Organization Name <i>Paul Creek Streamkeepers</i>	Watershed code <i>349-956-400</i>
Contact Name <i>Bonnie Brooke</i>	Stream Segment # <i>1</i>
	Stream Section # <i>1</i>
	Phone # <i>555-1414</i>

Survey Location

Mapsheet number <i>P9 28</i>	Type <i>Municipal</i>	Scale <i>1:2500</i>
Location (distance from known stream landmark) <i>At BM from Mod 2, Feb 17, 2001</i> <i>1591 Hope Rd</i> <i>Behind Hope's Grocery</i>		
Time: <i>4:15</i>	Weather	<input checked="" type="checkbox"/> clear <input type="checkbox"/> shower (1-2.5 cm in 24 hr) <input type="checkbox"/> snow
		<input type="checkbox"/> overcast <input type="checkbox"/> storm (<2.5 cm in 24 hr) <input type="checkbox"/> rain on snow
Water turbidity (cm visibility) <i>> 53cm</i>	Temperature °C (leave thermometer 2 min.) air <i>7</i> water <i>8</i>	
Bankfull Channel width <i>5</i> (m)	depth <i>.19</i> (m)	
Wetted Channel width <i>3.45</i> (m)	depth <i>.12</i> (m)	

First and Last Measurements taken .1 m from streambank edge

Left Bank	.1	.5	1	1.5	2	2.5	3	3.5	4	4.5	5	Right Bank
Wetted Depth	X	X	X	1	4	12	17	16	20	23	6	Wetted Depth
Bankfull Depth	4	12	8	8	12	21	28	28	33	39	25	Bankfull Depth

Take measurements every 0.5m in streams less than 5m. wide, every 1m in streams 5 to 15m.

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Invertebrate Survey Field Data Sheet

(use a new data sheet for each stream section surveyed)

Module 4

Stream Name <i>Paul Creek</i>		Date <i>Feb. 17, 2001</i>	
Stream Segment # <i>1</i> Stream Section # <i>1</i>		Sampling location <i>at BM</i>	
sampler used, mesh size, total area sampled <i>D-net, 363 micron, .27 m²</i>		# of 30cm x 30cm samples <i>3</i>	
COLUMN A Pollution Tolerance	COLUMN B Number Counted	COLUMN C Number of Taxa	COLUMN D Common Name
CATEGORY 1 (pollution intolerant)	<i>11</i>	<i>7</i>	Caddisfly Larva (EPT) *
			Dobsonfly (hellgrammite)
			Gilled Snail
	<i>507</i>	<i>7</i>	Mayfly Nymph (EPT) *
			Riffle Beetle
	<i>22</i>	<i>2</i>	Stonefly Nymph (EPT) *
Sub-total	<i>540*</i>	<i>16</i>	Water Penny
CATEGORY 2 (somewhat tolerant of pollution)			Alderfly Larva
			Aquatic Beetle
			Aquatic Sowbug
			Clam, Mussel
	<i>3</i>	<i>2</i>	Cranefly Larva
			Crayfish
			Damselfly Larva
			Dragonfly Larva
			Fishfly Larva
			Scud
Sub-total	<i>3</i>	<i>2</i>	Watersnipe Larva
CATEGORY 3 (pollution tolerant)	<i>1</i>	<i>1</i>	Aquatic Worm
	<i>5</i>	<i>1</i>	Blackfly Larva
			Leech
	<i>12</i>	<i>1</i>	Midge Larva (chironomid)
	<i>9</i>	<i>1</i>	Planarian
			Pouch and Pond Snails
			True Bug Adult
Sub-total	<i>6</i>	<i>2</i>	Water Mite
TOTAL	<i>576</i>	<i>24</i>	

Stonefly and Caddisfly adults in area

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Invertebrate Survey Interpretation Sheet

(use a new data sheet for each stream section surveyed)

Module 4

Stream Name <i>Paul Creek</i>	Date <i>Feb. 17, 2001</i>
Stream Segment # Stream Section # <i>1</i>	Sampling location <i>@ B M</i>
sampler used, mesh size, total area sampled <i>D-net 363 micron .27m²</i>	# of 30cm x 30cm samples <i>3</i>

A) ABUNDANCE AND DENSITY

ABUNDANCE: total number of organisms from **Column B** = 576

DENSITY: invertebrate density per square meter
(total # counted) ÷ (# of 30cm x 30cm samples x .09m²) = 2133/54 m

576 ÷ (3 x .09m²) = 2133

B) PREDOMINANT TAXON

Mayfly

C) WATER QUALITY ASSESSMENTS

POLLUTION TOLERANCE INDEX: use the total number of broad taxonomic groups found in each tolerance category, from Field Data Sheet (**Column D**)

POLLUTION TOLERANT INDEX			
Good	Acceptable	Marginal	Poor
>22	22-17	16-11	<11

3 x (# of category 1) 3 = 9
+ 2 x (# of category 2) 1 = 2
+ (# of category 3) 5 = 16

EPT INDEX: total number of EPT taxa from **Column C**, Field Data Sheet

EPT INDEX			
Good	Acceptable	Marginal	Poor
>8	5-8	2-5	0-1

EPT are stonefly, caddisfly and mayfly = 16

EPT TO TOTAL RATIO: total number of EPT organisms from **Column B**, Field Data Sheet divided by the total number of organisms

EPT TO TOTAL RATIO			
Good	Acceptable	Marginal	Poor
0.75 - 1.00	0.5 - 0.75	0.25 - 0.50	0 - 0.25

of EPT *540* + total = .94

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Invertebrate Survey Interpretation Sheet

(use a new data sheet for each stream section surveyed)

Module 4

Stream Name <i>Paul Creek</i>	Date <i>Feb. 17, 01</i>
Stream segment # <i>1</i>	streaming location <i>@ B M</i>
Stream section # <i>1</i>	# of 30cm x 30cm samples <i>3</i>
sampler used, mesh size, total area sampled <i>D-net, 363 micron .27m²</i>	

D) DIVERSITY ASSESSMENT

TOTAL NUMBER OF TAXA: from Column C, Field Data Sheet

24

PREDOMINANT TAXON RATIO: divide the number of invertebrate in the predominant taxon by the total number of invertebrates counted:

$$\frac{507}{576} = .88$$

predominant total

PREDOMINANT TAXON RATIO			
Good	Acceptable	Marginal	Poor
0 - 0.40	0.40 - 0.60	0.60 - 0.80	0.80 - 1.0

*↓
mayfly*
today*

.88

E) SITE ASSESSMENT

RATING:

Assign a rating between 1 and 4 to each index or ratio, then average the results to produce a general site assessment.

SITE ASSESSMENT RATING			
Good	Acceptable	Marginal	Poor
4	3	<i>2</i>	1

SITE ASSESSMENT RATING	
Index or Ratio	Rating
Pollution Tolerance Index	<i>2</i>
EPT Index	<i>4</i>
EPT to Total Ratio	<i>4</i>
Predominant Taxon Ratio	<i>1</i>
Total	<i>11</i>
Average	<i>2.75</i>

General Comments -
Unknown Bugs

*many adult stone &
caddisfly in area,
come back earlier or
in summer*

see page 13 and 14 of Module 4 for further information