Field Data Sheet

CMC Macroinvertebrate Monitoring Program

Sampling Information

Record the information about today's sampling event in the boxes below.

Monitor Name(s)	Biology 131 A Tuesday lab class			
Date	09/19/2017	Time	2:00pm	
Stream Name	Holtz Run	Site Name	Holtz Run #1	
Weather Conditions	X Clear	Partly Cloudy	Cloudy	Fog/Haze
Precipitation	X None	Drizzle	Rain	

Site Information

Draw a diagram of the 100-foot stream reach you have chosen to monitor. Record the latitude and longitude coordinates of the upstream and downstream endpoints.

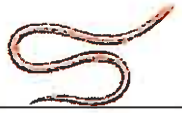
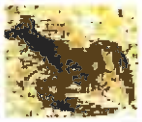
Red flag marks beginning of 100 foot stretch of stream surveyed.

Upstream	Lat: 40° 16' 32.26"	Long:76° 57' 8.70"
Downstream	Lat: 40° 16' 31.41"	Long: 76° 57' 8.05"

Identification & Scoring Sheet

CMC Macroinvertebrate Monitoring Program

Rare (R) = 1 – 9 organisms
Common (C) = 10 – 99 organisms
Dominant (D) = ≥ 100 organisms

Group I Sensitive	Count	Group II Somewhat Sensitive	Count	Group III Tolerant	Count
Water Penny Larvae 	9	Beetle Larvae 	1	Aquatic Worms 	4
Hellgrammites 	0	Clams 	2	Blackfly Larvae 	0
Mayfly Nymphs 	5	Cranefly Larvae 	1	Leeches 	0
		Crayfish 	0		
Gilled Snails 		Damselfly Nymphs 	0	Midge Larvae 	0
		Scuds 	136		
Riffle Beetles (adult) 	1	Sowbugs 	1	Snails 	0
Stonefly Nymphs 	3	Fishflies 	4	Site Designation:	
		Alderflies 	0		
Non Net-Spinning Caddisfly Larvae 	2	Net-Spinning Caddisfly Larvae 	3	Team Members:	

Calculating the Water Quality Score

(From EPA Volunteer Monitoring Methods Manual)

To calculate the water quality score:

1. Record the number of R's, C's, and D's found for each Macroinvertebrate Group in box A.
2. Multiply each number (A) by the weight factor listed (B) and record the number in box C.
3. Add the three numbers in box C to get a total value for each Macroinvertebrate Group.
4. Add the totals for all three Groups to get the water quality score for the stream reach monitored.

Group I Sensitive				**Group II** Somewhat Sensitive				**Group III** Tolerant			
	A	B	C		A	B	C		A	B	C
# R's	5	x 5.0	25	# R's	6	x 3.2	19.2	# R's	1	x 1.2	1.2
# C's	0	x 5.6	0	# C's	0	x 3.4	0	# C's	0	x 1.1	0
# D's	0	x 5.3	0	# D's	1	x 3.0	3	# D's	0	x 1.0	0
Group I Total =			25	Group II Total =			22.2	Group III Total =			1.2

Water Quality Score = 25 + 22.2 + 1.2

(Group I Total) (Group II Total) (Group III Total)

Water Quality Score = 48.4

Water Quality Scores	
> 40	Good water quality

Stream Physics and Chemistry

Water Temperature ___20 C^0 Conductivity 61.1 µS/L pH 6.75

Total Hardness 280 mg/L Calcium Hardness 200 mg/L alkalinity 240 mg/L

Nitrate 0.4 mg/L NO_3-N Orthophosphates 0.01 mg/L PO_4-P

Silica 1.5 ppm CO_2 4.3 ppm Dissolved Oxygen 9 mg/L

Notes; Stream rocky bottom.

Macro data from three kick seines at bottom of three separate riffles within 100 ft of red flag. Chemical data from LaMotte Water test kits.

ALLARM Verified Nitrates and Orthophosphates

Thank You Mr. and Mrs. Irv Stambaugh for allowing Dickinson College students access to Holtz Run through your property.
The stream is in good shape. We noted many minnows in the stream and an acceptable diversity of macro-invertebrates. We noted some sediment in the slower moving segments of stream.