



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 131A Tuesday Lab Class			
Date	10/2/2017	Time	2:00pm	
Stream Name	Enola Run	Site Name	Enola Run # 1	
Weather Conditions	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Partly Cloudy	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Fog/Haze
Precipitation	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Drizzle	<input type="checkbox"/> 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.



Picture taken from downstream of 100 foot assessed section of Enola Run











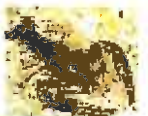



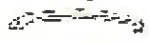












Upstream	Lat: 40°16'45.68"N	Long: 76°55'59.82"W
Downstream	Lat:	Long:



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 	5	Beetle Larvae 		Aquatic Worms 	14
Hellgrammites 		Clams 		Blackfly Larvae 	20
Mayfly Nymphs  		Cranefly Larvae 	1	Leeches 	
		Crayfish 			
Gilled Snails  		Damselfly Nymphs 		Midge Larvae  	14
		Scuds 	36		
Riffle Beetles (adult) 	39	Sowbugs 		Snails 	
Stonefly Nymphs  	5	Fishflies 		Site Designation:	
		Alderflies 			
Non Net-Spinning Caddisfly Larvae  	7	Net-Spinning Caddisfly Larvae 	21	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	3	x 5.0	15	# R's	1	x 3.2	3.2	# R's	0	x 1.2	0
# C's	1	x 5.6	5.6	# C's	2	x 3.4	6.8	# C's	3	x 1.1	3.3
# D's	0	x 5.3	0	# D's	0	x 3.0	0	# D's	0	x 1.0	0
Group I Total =		20.6		Group II Total =		10		Group III Total =		3.3	

$$\text{Water Quality Score} = \underset{\text{(Group I Total)}}{20.6} + 10 + \underset{\text{(Group II Total)}}{3.3} + \underset{\text{(Group III Total)}}{3.3}$$

$$\text{Water Quality Score} = \underline{33.9}$$

<p>Water Quality Scores</p> <p>> 40 Good</p> <p>water quality</p>
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Stream Physics and Chemistry

Water Temperature 18 C⁰ Conductivity 84.5 μS/cm Ph 7.00

Calcium Hardness 260 mg/L Total Hardness 280 mg/L alkalinity 260 mg/L

Nitrates 1.9 mg/L NO₃-N Orthophosphate 0.04 mg/L PO₄-P

Silica 10 ppm CO₂ 8.6 ppm Dissolved Oxygen 7.4 mg/L

This stream segment was at the upper reach of the closed landfill. This stream is an emergent stream that runs through the Enola School complex and along many cultured lawns. Its sub-par macro-score may be the result of low oxygen events, pesticides, other toxins and storm water events. There were many minnows observed in the stream, however, there were no crayfish observed.

Notes and pictures with captions. Include macro-assessment method. Rocky bottom or muddy bottom.

