

STREAM QUALITY MONITORING  
ASSESSMENT FORM INSTRUCTIONS

- 1) Enter the station number (given to you at beginning of monitoring season), the sample number (May is sample #1, June is #2, etc.), the names of the sample crew, Metro Park and stream name, the date, the time, and location on the stream (describe in relation to nearest landmark such as a bridge, trail, etc.).
- 2) Check the box that most describes the last time it rained.
- 3) Describe the water conditions (color, odor, vegetation or fungus growth, surface scum, rate of water flow, etc.).
- 4) Estimate the width and measure the depth (using the yard stick) of the stream at the sample site.
- 5) Measure the water temperature with the thermometer. Keep the thermometer under water for at least 1 minute.
- 6) Check the boxes that most describe the rate of stream flow and the clarity of the water.
- 7) Estimate the substrate composition of the stream bed. Write the percentage of silt, sand, gravel, cobbles, and boulders in the boxes. These percentages should add up to 100%. Silt is very fine-grained sediment usually composed of clay or mud, sand is composed of tiny rock particles <math>< \frac{1}{4}</math>” in diameter, gravel is rock particles  $\frac{1}{4}$ ”-2” in diameter, cobbles are 2”-10” in diameter, and boulders are >10” in diameter.
- 8) After you place the macroinvertebrates in the sorting trays (filled with water), count the number of each type of organism that you found. If you have from 1-9 individuals of the organism type, place a letter “A” next to the name of that organism on the data sheet. If you have from 10-99 individuals, place a letter “B” next to the name of the organism. If you have >100 individuals, place a letter “C” next to the name of the organism. These letters will not make a difference in the cumulative index value.
- 9) Macroinvertebrates are grouped into 3 categories:
  - Group 1 (sensitive to pollution or good water quality indicators)
  - Group 2 (organisms that can exist in both extremes of water quality)
  - Group 3 (pollution-tolerant or poor water quality indicators)
- 10) Count up the number of types of organisms in each group (column) and put this number in the “Number of taxa” row of each column. The organisms in the 3 groups are assigned a group index value.

Group 1 = 3 points

Group 2 = 2 points

Group 3 = 1 point

In each column, multiply the number of taxa by the number of points for that group (group index value) and place these values in the “index value” row.

<b>Example:</b>	<b><u>Group 1 Taxa</u></b>	<b><u>Group 2 Taxa</u></b>	<b><u>Group 3 Taxa</u></b>
	Caddisfly(s)	Dragonfly(s)	Blackfly(s)
	Stonefly(s)	Crayfish	midge(s)
	Mayfly(s)	Clam(s)	
		Damselfly(s)	
	3 taxa x 3 = 9	4 taxa x 2 = 8	2 taxa x 1 = 2

Cumulative index value = 9 + 8 + 2 = 19

10) The respective group index values are then added together to find the cumulative index value. By referring to the following chart, the stream quality assessment can thus be determined.

<u>Stream Quality Assessment</u>	<u>Cumulative Index Value</u>
Excellent.....	23 and above
Good.....	17 - 22
Fair.....	11-16
Poor.....	10 or less

## STREAM ASSESSMENT FORM

Submit data to:  
 Marlo Perdicas  
 Metro Parks, Serving Summit County  
 975 Treaty Line Road  
 Akron, Ohio 44313  
 330-865-8057x226  
 Fax: 330-865-8068

Station: \_\_\_\_\_ Sample #: \_\_\_\_\_ Individuals: \_\_\_\_\_

Metro Park/Stream: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Location: \_\_\_\_\_

Rainfall:  today  yesterday  2 days ago  > 2 days ago

Describe Water Conditions (Color, Odor, Bedgrowths, Surface Scum, Etc.): \_\_\_\_\_

Width At Site (Feet): \_\_\_\_\_ Depth At Site (in): \_\_\_\_\_ Water Temp. (°F): \_\_\_\_\_

Stream Flow Rate: high  normal  low  Stream Appears: clear  cloudy  muddy

Bed Composition Of Riffle (%): Silt \_\_\_\_\_ Sand \_\_\_\_\_ Gravel (1/4"-2") \_\_\_\_\_

Cobbles (2"-10") \_\_\_\_\_ Boulders (>10") \_\_\_\_\_

MACROINVERTEBRATE COUNT			ESTIMATED COUNT LETTER CODE		
Sensitive (Group 1)	Letter code	Somewhat Sensitive (Group 2)	Letter code	Pollution Tolerant (Group 3)	Letter code
Water penny larvae		Damselfly nymphs		Blackfly larvae	
Mayfly nymphs		Dragonfly nymphs		Aquatic worms	
Stonefly nymphs		Crane fly larvae		Midge larvae	
Dobsonfly larvae		Beetle larvae		Pouch snails	
Caddisfly larvae		Crayfish		leeches	
Riffle beetle adult		Scuds		planaria	
Other snails		Clams			
		Sowbugs			
		Alderfly larvae			
		Watersnipe larvae			
		Fishfly larvae			
Number of taxa		Number of taxa		Number of taxa	
(times)		(times)		(times)	
Index Value 3		Index Value 2		Index Value 1	

Cumulative Index Value =

Stream Quality Assessment:

Excellent (>22)  Good (17-22)   
 Fair (11-16)  Poor (<11)