Revised Oct 2024; original form
adopted from the ALLARM program

Form has been updated for ease of use - data
interpretation or collection methods have not changed.

Biosurvey: Field Data Sheets *(p 1 of 3)*

Macroinvertebrate Survey

Date: year_____month_____day_____   Time:_____hour_____minute
(NOTE: Time hr./min. on 24-hour clock, as 10:10 for AM or 22:10 for PM)

Site ID#_____   Creek:_____

Recorder Information
Name_____

Monitor Information
Name_____

Monitor Information
Name_____

Monitor Information
Name_____

Monitor Information
Name_____

Precipitation In the past 24 hours:
___ Storm (heavy rain > 1in)
___ Rain (steady rain ¼in to 1in)
___ Showers (intermittent rain up to ¼in)
___ Overcast
___ Clear

Current:
___ Storm (heavy rain > 1in)
___ Rain steady rain ¼in to 1in)
___ Showers (intermittent rain up to ¼in)
___ Overcast
___ Clear

Type of Stream
_____ Rocky-bottom
_____ Muddy-bottom

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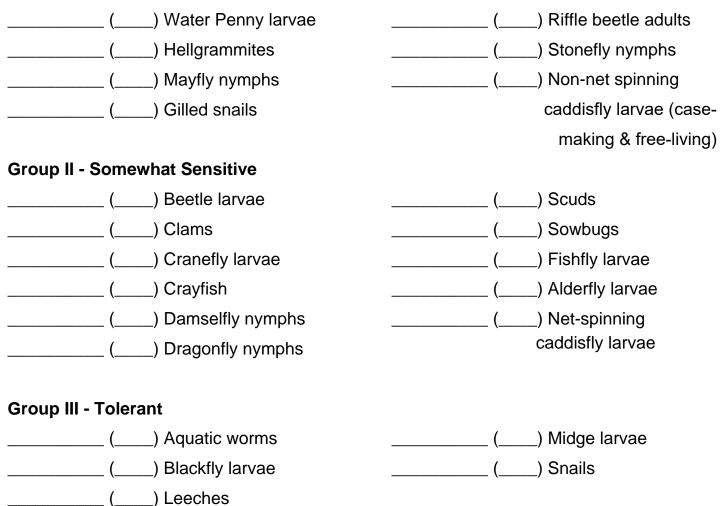*Please return this form to Amanda Goldsmith and/or Noelle Cudney at the Lancaster County Conservation District*

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Macroinvertebrate Count

Identify the macroinvertebrates (to order) in your sample using the identification sheets. We are only concerned with organisms that appear on the identification sheets. Record the number of organisms below and then assign them letter codes based on their abundance:

 R (rare) = 1-9;   **C** (common) = 10-99;   **D** (dominant) = 100 plus organisms.

   example: 20 (C) WaterPenny larvae

Group I - Sensitive

_____ (____) Water Penny larvae   _____ (____) Riffle beetle adults

_____ (____) Hellgrammites   _____ (____) Stonefly nymphs

_____ (____) Mayfly nymphs   _____ (____) Non-net spinning

_____ (____) Gilled snails   caddisfly larvae (case-

                                                                                 making & free-living)

Group II - Somewhat Sensitive

_____ (____) Beetle larvae   _____ (____) Scuds

_____ (____) Clams   _____ (____) Sowbugs

_____ (____) Cranefly larvae   _____ (____) Fishfly larvae

_____ (____) Crayfish   _____ (____) Alderfly larvae

_____ (____) Damselfly nymphs   _____ (____) Net-spinning

_____ (____) Dragonfly nymphs   caddisfly larvae

Group III - Tolerant

_____ (____) Aquatic worms   _____ (____) Midge larvae

_____ (____) Blackfly larvae   _____ (____) Snails

_____ (____) Leeches

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Water Quality Rating

To calculate the <u>index value</u>, add the number of **letters** found in the three groups above and multiply by the indicated weighing factor.

Group I – Sensitive

(# of R's) _____ x 5.0 = _____
(# of C's) _____ x 5.6 = _____
(# of D's) _____ x 5.3 = _____

Sum of the <u>Index Value</u> for Group I = _____

Group II – Somewhat Sensitive

(# of R's) _____ x 3.2 = _____
(# of C's) _____ x 3.4 = _____
(# of D's) _____ x 3.0 = _____

Sum of the <u>Index Value</u> for Group II = _____

Group III – Tolerant

(# of R's) _____ x 1.2 = _____
(# of C's) _____ x 1.1 = _____
(# of D's) _____ x 1.0 = _____

Sum of the <u>Index Value</u> for Group III = _____

To calculate the water quality score for the stream site, **add together the index values for each group.** The sum of these values equals the water quality score.

Water Quality Score = _____

Compare this score to the following number ranges to determine the quality of your stream site.

_____ Good > 40 _____ Fair 20-40 _____ Poor <20

- *Note: The tolerance groupings (Group I, II, III) and the water quality rating categories were developed for streams in the Mid-Atlantic states.*

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