

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# _____

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

Muddy-bottom Sampling Only: Record the number of jabs taken in each habitat type.

- Vegetated Bank Margin
- Snags and Logs

- Aquatic Vegetation Beds
- Silt/sand/gravel Substrate

Biosurvey: Field Data Sheets (p 2 of 3)

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 caddisfly larvae
_____ (____) Gilled snails	

Group II - Somewhat Sensitive

_____ (____) Beetle larvae	_____ (____) Scuds
_____ (____) Clams	_____ (____) Sowbugs
_____ (____) Crane-fly larvae	_____ (____) Fishfly larvae
_____ (____) Crayfish	_____ (____) Alderfly larvae
_____ (____) Damselfly nymphs	_____ (____) Net-spinning caddisfly larvae
_____ (____) Dragonfly nymphs	

Group III - Tolerant

_____ (____) Aquatic worms	_____ (____) Midge larvae
_____ (____) Blackfly larvae	_____ (____) Snails
_____ (____) Leeches	

Biosurvey: Field Data Sheets (p 3 of 3)

Water Quality Rating

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

Group I – Sensitive

$$(\# \text{ of R's}) \times 5.0 = \underline{\hspace{2cm}}$$

$$(\# \text{ of C's}) \times 5.6 = \underline{\hspace{2cm}}$$

$$(\# \text{ of D's}) \times 5.3 = \underline{\hspace{2cm}}$$

$$\text{Sum of the Index Value for Group I} = \underline{\hspace{2cm}}$$

Group II – Somewhat Sensitive

$$(\# \text{ of R's}) \times 3.2 = \underline{\hspace{2cm}}$$

$$(\# \text{ of C's}) \times 3.4 = \underline{\hspace{2cm}}$$

$$(\# \text{ of D's}) \times 3.0 = \underline{\hspace{2cm}}$$

$$\text{Sum of the Index Value for Group II} = \underline{\hspace{2cm}}$$

Group III – Tolerant

$$(\# \text{ of R's}) \times 1.2 = \underline{\hspace{2cm}}$$

$$(\# \text{ of C's}) \times 1.1 = \underline{\hspace{2cm}}$$

$$(\# \text{ of D's}) \times 1.0 = \underline{\hspace{2cm}}$$

$$\text{Sum of the Index Value for Group III} = \underline{\hspace{2cm}}$$

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.

$$\text{Water Quality Score} = \underline{\hspace{2cm}}$$

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

$$\underline{\hspace{2cm}} \text{ Good } > 40 \quad \underline{\hspace{2cm}} \text{ Fair } 20-40 \quad \underline{\hspace{2cm}} \text{ Poor } < 20$$

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