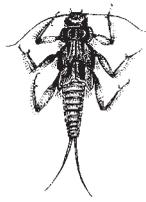# Group 1: These are sensitive to pollutants. Circle each animal found.

Stonefly Larva

Dobsonfly Larva
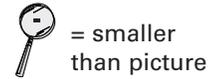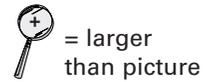
Alderfly Larva

Water Snipe Fly Larva

No. of group 1 animals circled:

Relative Size Key:

⊕ = larger than picture

⊖ = smaller than picture

Group 2: These are semi-sensitive to pollutants. Circle each animal found.
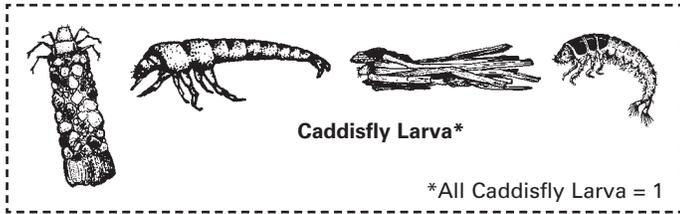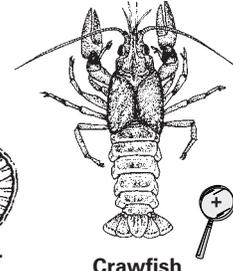
Caddisfly Larva*

*All Caddisfly Larva = 1
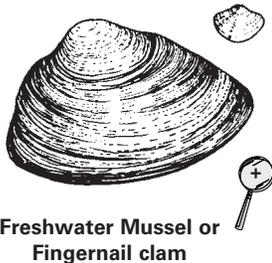
Dragonfly Larva

Water Penny

Crawfish ⊕

No. of group 2 animals circled:

Crane Fly Larvae ⊕

Freshwater Mussel or Fingernail clam ⊕

Mayfly Larva

Damselfly Larva

Damselfly tail (side view)

Riffle Beetle Larva* ⊖

Riffle Beetle Adult* ⊖

*All Riffle Beetles = 1

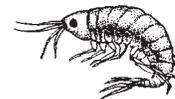# Group 3: These are semi-tolerant of pollutants. Circle each animal found.

Black Fly Larva ⊖

Non-Red Midge Larva ⊖

Snails: Orb or Gilled (right side opening)

*All Snails = 1

Amphipod or Scud

No. of group 3 animals circled:

Group 4: These are tolerant of pollutants. Circle each animal found.

Pouch Snail (left side opening)
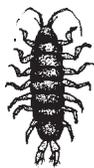
Isopod or Aquatic Sowbug

Bloodworm Midge Larva (red) ⊖

Leech

Tubifex Worm

No. of group 4 animals circled:

For more information, call (608) 265-3887 or (608) 264-8948.

Download and print data sheets from
watermonitoring.uwex.edu/wav/monitoring/sheets.html

Water Action Volunteers

Recording Form for the Citizen Monitoring Biotic Index

Name: _____ Date: _____

Stream Name: _____ Time: _____

Location: _____ Site: _____
 (County, Township, Range, Section, Road, Intersection, Other)

At this point, you should have collected a wide variety of aquatic macroinvertebrates from your three sites. You will now categorize your sample, using the *Key to Macroinvertebrate Life in the River* to help you identify the macroinvertebrates found. **The number of animals found is not important; rather, the variety of types of macroinvertebrates and their tolerance to pollution tells us the biotic index score**. Before you begin, check off the habitats from which you collected your sample (see right).

☐ Riffles

☐ Undercut banks

☐ Snag areas, tree roots, submerged logs

☐ Leaf packs

1. You should have removed large debris (e.g. leaves, rocks, sticks) from your sample and placed this material in a separate basin (after removing macroinvertebrates from it).

2. Check the basin with the debris to see if any aquatic macroinvertebrates crawled out. Add these animals to your prepared sample.

3. Fill the ice cube tray half-full with water.

4. Using plastic spoons or tweezers, (be careful not to kill the critters – ideally, you want to put them back in their habitat after you're finished) sort out the macroinvertebrates and place ones that look alike together in their own ice cube tray compartments. Sorting and placing similar looking macroinvertebrates together will help insure that you find all varieties of species in the sample.

5. Refer to the *Key to Macroinvertebrate Life in the River* and the *Citizen Monitoring Biotic Index* to identify the aquatic macroinvertebrates:

   A. On the back of this page, circle the animals on the index that match those found in your sample.

   B. Count the number of types of animals that are circled in each group and write that number in the box provided. Do not count individual animals in your sample. Only count the number of types of animals circled in each group.

   C. Enter each boxed number in work area below.

   D. Multiply the entered number from each group by the group value.

   E. Do this for all groups.

   F. Total the number of animals circled.

   G. Total the calculated values for all groups.

   H. Divide the total values by the total number of types of animals that were found: **TOTAL VALUES (b.) / TOTAL ANIMALS (a)**.

   I. Record this number.

   SHOW ALL MATH (Use space below to do your math computations)

No. of animals circled from group 1 _____ x 4 = _____

No. of animals circled from group 2 _____ x 3 = _____

No. of animals circled from group 3 _____ x 2 = _____

No. of animals circled from group 4 _____ x 1 = _____

TOTAL ANIMALS (a): _____   TOTAL VALUE (b): _____

Index score:

[ ]

How Healthy is the stream?
Excellent_____ 3.6+
Good_____ 2.6 - 3.5
Fair _____ 2.1 - 2.5
Poor _____ 1.0 - 2.0

Divide totaled value (b)_____ by total no. of animals (a) _____ for index score:

Report your results online at **www.uwex.edu/erc/wavdb** *or submit your data to your local coordinator.*
Call your local monitoring coordinator if you have questions about sampling or determining the Biotic Index Score.