THE IZAAK WALTON LEAGUE OF AMERICA

Creek Freaks

Stream Quality Survey

Date _____

Time _____

Name _____

Please refer to the Izaak Walton League's volunteer stream monitoring protocol and identification guides to learn how to complete this form. Please use the League's *Field Guide to Aquatic Macroinvertebrates* to complete portions of this stream quality survey form. For assistance, please call (800) BUG-IWLA or send an e-mail to sos@iwla.org.

Stream _____ Station # _____ County/City _____

Location (GPS coordinates) _____

Weather Conditions (last 72 hours) _____

_____ _____ _____ _____

Rocky Bottom Sampling

Before sampling, record riffle composition on the back of this form. Take 3 samples in the same riffle area, fill out this form, and keep the highest scoring sample for your records. To help track the number of samples you have collected, check one of the boxes below:

☐ Sample 1 ☐ Sample 2 ☐ Sample 3 ☐ Is this your highest score sample?

Muddy Bottom Sampling

Record the total number scoops taken from each habitat type and provide details to best describe the specific habitat on the lines below.

☐ Steep bank/vegetated margin _____

☐ Woody debris with organic matter _____

☐ Rock/gravel/sand substrate _____

☐ Silty bottom with organic matter _____

Macroinvertebrate Count

Consult the stream monitoring instructions on how to conduct the macroinvertebrate count. Use letter codes (A = 1-9, B = 10-99, C = 100 or more) to record the numbers of organisms. Add up the number of organism types (or number of letters) found under each category (sensitive, less sensitive, etc.) and multiply by the indicated index value. Although A, B, and C ratings do not contribute to the water quality rating, the letters track the population size in each category to see how the macroinvertebrate community changes over time.

SENSITIVE	LESS SENSITIVE	TOLERANT
_____ Caddisflies (except net spinners) _____ Mayflies _____ Stoneflies _____ Watersnipe flies _____ Riffle beetles _____ Water pennies _____ Gilled snails	_____ Dobsonflies _____ Fishflies _____ Common net spinning Caddisflies _____ Crane flies _____ Damselflies _____ Dragonflies _____ Alderflies _____ Crayfish _____ Scuds _____ Aquatic sowbugs _____ Clams _____ Mussels	_____ Aquatic worms _____ Black flies _____ Midge flies _____ Leeches _____ Lunged snails
____ # of letters multiplied by 3 =_____	____ # of letters multiplied by 2 =_____	____ # of letters multiplied by 1 =_____
Now add the three totals from each column for your stream's index value. Total index value = _____		

Compare the final index value to the following ranges of numbers to determine the water quality of the stream sample site.

Water Quality Rating

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

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Tally Form

Under each type of macroinvertebrate on the tally sheet, write the number found in your net. Use the boxes with your group number. If none are found of that type, leave it blank.

SENSITIVE

Caddisfly larva (except common net spinning caddisfly)

1 | 2 | 3

Riffle Beetle (adult and larva)

1 | 2 | 3

Mayfly nymph

1 | 2 | 3

Water Penny larva

1 | 2 | 3

Stonefly nymph

1 | 2 | 3

Gilled Snail

1 | 2 | 3

Water Snipe Fly larva

1 | 2 | 3

SOMEWHAT SENSITIVE

Dobsonfly larva

1 | 2 | 3

Damselfly nymph

1 | 2 | 3

Fishfly larva

1 | 2 | 3

Dragonfly nymph

1 | 2 | 3

Common Net Spinning Caddisfly larva

1 | 2 | 3

Alderfly larva

1 | 2 | 3

Crane Fly larva

1 | 2 | 3

Crayfish

1 | 2 | 3

Scud

1 | 2 | 3

Aquatic Sowbug

1 | 2 | 3

Clam

1 | 2 | 3

Mussel

1 | 2 | 3

TOLERANT

Aquatic Worm

1 | 2 | 3

Black Fly larva

1 | 2 | 3

Midge Fly larva

1 | 2 | 3

Leech

1 | 2 | 3

Lunged Snail

1 | 2 | 3

GROUP 1

Add the totals from your group for the stream's index value.

Sensitive: _____ # of boxes filled in X 3 =

Somewhat Sensitive: _____ # of boxes filled in X 2 = +

Tolerant: _____ # of boxes filled in X 1 = +

Total index value Group 1 =

GROUP 2

Add the totals from your group for the stream's index value.

Sensitive: _____ # of boxes filled in X 3 =

Somewhat Sensitive: _____ # of boxes filled in X 2 = +

Tolerant: _____ # of boxes filled in X 1 = +

Total index value Group 2 =

GROUP 3

Add the totals from your group for the stream's index value.

Sensitive: _____ # of boxes filled in X 3 =

Somewhat Senstive: _____ # of boxes filled in X 2 = +

Tolerant: _____ # of boxes filled in X 1 = +

Total index value Group 3 =