SAVE OUR STREAMS

IZAAK WALTON LEAGUE OF AMERICA

Biological Monitoring Data Form for Stream Monitors

Name of Stream: _____ Name of monitoring site: _____

Name of Certified Monitor(s): _____

Group/Organization: _____ Number of participants: _____

City/State: _____ Latitude: _____ Longitude: _____

Survey Date: _____ Start time: _____ End time: _____

Description of site location: _____

ROCKY BOTTOM SAMPLING

Before sampling, record the riffle composition on the back of this form. Using a kick-seine net, take one 60-second sample in a riffle area (40 seconds to rub rocks, 20 seconds to disturb the streambed). Ensure you sample the entire 3'x3' area in front of the net. If you do not collect at least 100 macroinvertebrates in the first net, take a second sample in the same riffle. Please place a checkmark next to the number of samples collected.

_____ Sample 1   _____ Sample 2

MUDDY BOTTOM SAMPLING

Use the lines below to record the number of scoops taken from each habitat type. The total number of scoops must add up to 20 scoops.

Steep bank/vegetated margin _____   Woody debris with organic matter _____

Rock/gravel/sand substrate _____   Silty bottom with organic matter _____

MACROINVERTEBRATE COUNT

Please consult biological monitoring instructions to conduct the macroinvertebrate count. Use the table below to track numbers of each macroinvertebrate found. Once sampling and identification are complete, place a checkmark next to each type of macroinvertebrate identified and list the total number found. Add up the number of checkmarks in each category (sensitive, less sensitive, tolerant) and multiply those numbers by the indicated index value.

Sensitive (Ex: ☑ _10_ Caddisflies)	**Less Sensitive** (Ex: ☑ _2_ Dobsonflies)		**Tolerant** (Ex: ☑ _3_ Leeches)
☐_____Caddisflies (except net spinners) ☐_____Mayflies ☐_____Stoneflies ☐_____Watersnipe flies ☐_____Riffle beetles ☐_____Water pennies ☐_____Gilled snails	☐___Dobsonflies ☐___Fishflies ☐___Crane flies ☐___Damselflies ☐___Dragonflies ☐___Alderflies ☐___Common net spinning Caddisflies	☐___Crayfish ☐___Scuds ☐___Aquatic sowbugs ☐___Clams ☐___Mussels	☐_____Aquatic worms ☐_____Black flies ☐_____Midge flies ☐_____Leeches ☐_____Lunged snails
___# of checkmarks multiplied by 3 = ___	___# of checkmarks multiplied by 2 = ___		___# of checkmarks multiplied by 1 = ___
Now add the three totals from each column for your stream's index value. Total index value = _____ Total number of macroinvertebrates in sample: _____			

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

WATER QUALITY RATING

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

WATERSHED CONDITIONS (check all that apply)

	Sunny	Overcast	Intermittent Rain	Steady Rain	Heavy Rain	Snow
Today:	☐	☐	☐	☐	☐	☐
Yesterday:	☐	☐	☐	☐	☐	☐
Day Before Yesterday:	☐	☐	☐	☐	☐	☐

Water Temperature _____°F or °C   Avg. Stream Width _____ft.   Avg. Stream Depth _____ft.   Flow Rate _____
(circle °F or °C)   (above or below average)

Fish populations: ☐ scattered individuals ☐ scattered schools ☐ no fish seen	**Barriers to fish movement:** ☐ beaver dams ☐ man-made dams ☐ waterfalls (>1 ft.) ☐ none ☐ other _____	**Refer to the SOS Biological monitoring instructions to learn how to score these stream characteristics**	
Stability of streambed (bed sinks beneath your feet in): ☐ no spots ☐ a few spots ☐ many spots	**Stream channel shade:** ☐ >80% excellent ☐ 50%-80% high ☐ 20%-49% moderate ☐ <20% almost none	**Streambank erosion:** ☐ >80% severe ☐ 50%-80% high ☐ 20%-49% moderate ☐ <20% slight	**Odor:** ☐ rotten eggs ☐ musky ☐ oil ☐ sewage ☐ other_____ ☐ none
Surface water appearance: ☐ clear ☐ clear, but tea-colored ☐ colored sheen (oily) ☐ foamy ☐ milky ☐ muddy ☐ black ☐ grey ☐ other _____	**Streambed deposit (bottom):** ☐ grey ☐ orange/red ☐ yellow ☐ black ☐ brown ☐ silt ☐ sand ☐ other _____	**Streambank composition** (=100%): _____% trees _____% shrubs _____% grass _____% bare soil _____% rocks _____% other	**Riffle composition** (=100%): _____% silt (mud) _____% sand (1/16"-1/4" grains) _____% gravel (1/4"-2" stones) _____% cobbles (2"-10" stones) _____% boulders (>10" stones) (not applicable to Muddy Bottom Sampling)

LAND USES IN THE WATERSHED (UPSTREAM AND SURROUNDING SAMPLING SITE):
Indicate whether the following land uses within a one-mile radius of your sampling site have a high (H), moderate (M), slight (S), or no (N) potential impact on the quality of your stream.

_____ Oil & gas drilling	_____ Urban uses (parking lots, highways, etc.)	_____ Agriculture (type: _____)
_____ Housing developments	_____ Sanitary landfill	_____ Trash dump
_____ Forestry	_____ Active construction	_____ Fields (lawn or sports field)
_____ Logging	_____ Mining (type: _____)	_____ Other: _____

COMMENTS: Indicate the current and potential future threats to the stream's health.

_____
_____
_____
_____