



# Haw River Watch Survey

Return to: Haw River Watch Program,  
 P.O. Box 187, Bynum, NC 27228  
 (919) 542-5790/ kaitlyn@hawriver.org

Data entered: _____
Date entered: _____
Office use only

The purpose of this form is to aid you in gathering & recording important data about the health of your stream and to document changes in water quality. Refer to the Haw River Watch Manual & the Macroinvertebrates ID Chart for additional information.

## TEAM INFORMATION

Team Name \_\_\_\_\_ Site ID \_\_\_\_\_ # of participants: \_\_\_\_\_  
 Stream \_\_\_\_\_ Location \_\_\_\_\_ County \_\_\_\_\_  
 Survey Leader \_\_\_\_\_ Phone # \_\_\_\_\_ Email \_\_\_\_\_  
 Date \_\_\_\_\_ Start time \_\_\_\_\_ End time \_\_\_\_\_ Survey Scribe \_\_\_\_\_

## STREAM INFORMATION

Air temperature \_\_\_\_\_°F Water temperature \_\_\_\_\_°F Flow rate:  High  Normal  Low  
 Weather conditions (last 3 days) \_\_\_\_\_

Chemical testing: pH \_\_\_\_\_ Transparency (in inches): \_\_\_\_\_

## MACROINVERTEBRATE COUNT INFORMATION

Search several likely habitats: look under stones in riffle areas; use net to sample bottom in several places; and sample under bank, leaf mat, & woody debris. Once sampling & identification are complete, place a checkmark next to each type of macroinvertebrate identified & list the total number found. Add up the number of checkmarks in each category (pollution sensitive, semi-pollution sensitive, & pollution tolerant) & multiply those numbers by the indicated index value.

Pollution Sensitive (ex: <input checked="" type="checkbox"/> 10 Caddisfly)	Semi-Pollution Sensitive (ex: <input checked="" type="checkbox"/> 9 Clam)	Pollution Tolerant (ex: <input checked="" type="checkbox"/> 10 Leech)
<input type="checkbox"/> Caddisfly (no net spinners) <input type="checkbox"/> Gilled Snail (right-handed) <input type="checkbox"/> Mayfly <input type="checkbox"/> Riffle Beetle <input type="checkbox"/> Stonefly <input type="checkbox"/> Water Penny <input type="checkbox"/> Watersnipe Fly Larva	<input type="checkbox"/> Alderfly Larva <input type="checkbox"/> Beetle Larva <input type="checkbox"/> Caddisfly (net spinners) <input type="checkbox"/> Clams <input type="checkbox"/> Crane Fly Larva <input type="checkbox"/> Crayfish <input type="checkbox"/> Damselfly Nymph <input type="checkbox"/> Dobsonfly (Hellgrammite) <input type="checkbox"/> Dragonfly Nymph <input type="checkbox"/> Fishfly Larva <input type="checkbox"/> Mussels <input type="checkbox"/> Scud <input type="checkbox"/> Sowbug	<input type="checkbox"/> Aquatic Worm <input type="checkbox"/> Black Fly Larva <input type="checkbox"/> Leech <input type="checkbox"/> Midge Fly Larva <input type="checkbox"/> Mosquito Larva <input type="checkbox"/> Pouch (and other) Snails
# of checkmarks x 3 = __ index value	# of checkmarks x 2 = __ index value	# of checkmarks x 1 = __ index value
<b>Water Quality Rating:</b> Now add the three totals from each column for your stream's index value. Total index value = _____ _____ Excellent ( > 22 ) _____ Good ( 17 - 22 ) _____ Fair ( 11 - 16 ) _____ Poor ( < 11 )		

## ALGAE

[Phytoplankton type algae] Is water discolored (green, bright blue, red)? \_\_Yes \_\_No  
 [Filamentous type algae] Is there a thick algal mat of "hairlike" strands (green, blue-green, black, yellowish)? \_\_Yes \_\_No  
 [Periphyton type algae] Are rocks & logs covered with beard-like growth (green, blue-green, golden brown)? \_\_Yes \_\_No  
 [Diatomaceous type algae] Is there brown slimy algae on rocks? \_\_Yes \_\_No  
 Algae is located: Everywhere  In Spots  \_\_\_\_\_% of stream covered (for one stream-width by one stream-width area)  
 Are you seeing an unusual amount of algae? \_\_Yes \_\_No

<b>FOAM</b> <input type="checkbox"/> No foam  <input type="checkbox"/> Natural foam [ivory brownish; <8" high; earthy, fishy or fresh cut grass smell]  <input type="checkbox"/> Unnatural foam from human activity [bright white; >8" high; fragrant, perfumed or soapy odor]	<b>ODOR</b> <input type="checkbox"/> Rotten Eggs <input type="checkbox"/> Musky <input type="checkbox"/> Petroleum <input type="checkbox"/> Sewage <input type="checkbox"/> None <input type="checkbox"/> Other (_____)	<b>SURFACE WATER APPEARANCE</b> <input type="checkbox"/> Clear <input type="checkbox"/> Clear but tea-colored <input type="checkbox"/> Cloudy <input type="checkbox"/> Muddy <input type="checkbox"/> Milky <input type="checkbox"/> Colored sheen (oily) <input type="checkbox"/> Grey <input type="checkbox"/> Black <input type="checkbox"/> Foamy <input type="checkbox"/> Green (suspended algae) <input type="checkbox"/> Other (_____)	<b>BARRIERS TO FISH</b> <input type="checkbox"/> Did you see fish? If yes, roughly how many? ____  <input type="checkbox"/> Beaver dams <input type="checkbox"/> Man-made dams <input type="checkbox"/> Waterfalls (> 1 ft.) <input type="checkbox"/> None <input type="checkbox"/> Other (_____)
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**STREAM HABITAT SURVEY:** The following aspects of the stream don't change often. Fill in this section on your first survey, & be sure to keep a copy to refer to. Thereafter, fill in an item only if it changes. Take initial photos of upstream and downstream views of your monitoring site. Include additional photo(s) to record any notable change thereafter.

**STREAM CHANNEL:** Select area (stream length four times stream width) to answer the questions below.

Avg. stream width \_\_\_\_ ft. Avg. stream depth \_\_\_\_ ft.

Has the stream been channelized? \_\_Yes \_\_No

Is the stream channel natural or meandering? \_\_Yes \_\_No

Does the stream have access to its floodplain? \_\_Yes \_\_No

Is there rip-rap in the stream? \_\_Yes \_\_No

**STREAM BUFFER**

Natural vegetation (trees, shrubs, mosses) looking downstream: \_\_\_\_ ft. left of bank \_\_\_\_ ft. right of bank

Description of stream buffer by completing the following table below:

<b>Stream Sides</b> Are banks eroding? __Yes __No  ____% Bare soil on banks (no rocks, logs, plants)  Are the banks becoming higher? __Yes __No  Is the stream widening? __Yes __No	<b>Stream Shade</b> Check the box that best describes the level of shade:  <input type="checkbox"/> Best (25 - 90% - sun dappled)  <input type="checkbox"/> Good (>90% - almost total shade)  <input type="checkbox"/> Poor (<25% - almost no shade)	<b>Stream Bed (bottom) (=100%)</b> ____% silt (mud ) ____% sand (1/16" - 1/4" grains) ____% gravel (1/4" - 2" stones) ____% cobble (2" - 10" stones) ____% boulders (>10" stones) ____% dead leaves Bed sinks beneath your feet: no spots few spots many spots	<b>Stream Buffer Composition (=100%)</b> ____% trees ____% shrubs ____% grass ____% bare soil ____% rocks ____% other (_____)
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**LAND USES IN THE WATERSHED** (Indicate if the following land uses are present in watershed. (1 mi. upstream))

<b>Agriculture Uses</b> <input type="checkbox"/> Animal Operations (type) _____ <input type="checkbox"/> Cropland (type) _____ <input type="checkbox"/> Livestock Pasture <input type="checkbox"/> Logging <input type="checkbox"/> Biosolid/Sludge <input type="checkbox"/> None	<b>Homes &amp; Roads</b> <input type="checkbox"/> Housing Construction <input type="checkbox"/> Housing Development <input type="checkbox"/> Urban Uses Please describe: _____ _____ <input type="checkbox"/> Road Construction <input type="checkbox"/> None	<b>Industrial Uses</b> <input type="checkbox"/> Mining (type) _____ <input type="checkbox"/> Gas & Oil Drilling <input type="checkbox"/> Sanitary Landfill <input type="checkbox"/> Trash Dump <input type="checkbox"/> Litter (type) _____ <input type="checkbox"/> None
Other land uses: _____		

**Discharging Pipes**

Any present? \_\_Yes \_\_No If yes, how many? \_\_\_\_

What type of pipes?  Runoff (field/ stormwater)  Sewage treatment  Industrial (type) \_\_\_\_\_

Other comments on your stream's health condition: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_