Haw River Watch Survey

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

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	Semi-Pollution Sensitive	Pollution Tolerant
(ex: ☑10 Caddisfly)	(ex: ☑9 Clam)	(ex: ☑10 Leech)
☐ ___ Caddisfly (no net spinners)	☐ ___ Alderfly Larva	☐ ___ Aquatic Worm
☐ ___ Gilled Snail (right-handed)	☐ ___ Beetle Larva	☐ ___ Black Fly Larva
☐ ___ Mayfly	☐ ___ Caddisfly (net spinners)	☐ ___ Leech
☐ ___ Riffle Beetle	☐ ___ Clams	☐ ___ Midge Fly Larva
☐ ___ Stonefly	☐ ___ Crane Fly Larva	☐ ___ Mosquito Larva
☐ ___ Water Penny	☐ ___ Crayfish	☐ ___ Pouch (and other) Snails
☐ ___ Watersnipe Fly Larva	☐ ___ Damselfly Nymph	
	☐ ___ Dobsonfly (Hellgrammite)	
	☐ ___ Dragonfly Nymph	
	☐ ___ Fishfly Larva	
	☐ ___ Mussels	
	☐ ___ Scud	
	☐ ___ Sowbug	
___# of **checkmarks** x 3= ___ index value	___# of **checkmarks** x 2= ___ index value	___# of **checkmarks** x 1= ___ index value

Water Quality Rating: 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

FOAM	ODOR	SURFACE WATER APPEARANCE	BARRIERS TO FISH
☐ No foam ☐ Natural foam [ivory brownish; <8" high; earthy, fishy or fresh cut grass smell] ☐ Unnatural foam from human activity [bright white; >8" high; fragrant, perfumed or soapy odor]	☐ Rotten Eggs ☐ Musky ☐ Petroleum ☐ Sewage ☐ None ☐ Other (_____)	☐ Clear ☐ Clear but tea-colored ☐ Cloudy ☐ Muddy ☐ Milky ☐ Colored sheen (oily) ☐ Grey ☐ Black ☐ Foamy ☐ Green (suspended algae) ☐ Other (_____)	☐ Did you see fish? If yes, roughly how many? ___ ☐ Beaver dams ☐ Man-made dams ☐ Waterfalls (> 1 ft.) ☐ None ☐ Other (_____)

STREAM HABIAT 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 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:

Stream Sides	Stream Shade	Stream Bed (bottom) (=100%)	Stream Buffer Composition (=100%)

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
	Check the box that best describes the level of shade:
	
	☐ Best (25 - 90% - sun dappled)
	
	☐ Good (>90% - almost total shade)
	
	☐ Poor (<25% - almost no shade)
		____% 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
			____% trees
			
			____% shrubs
			
			____% grass
			
			____% bare soil
			
			____% rocks
			
			____% other (_____)

LAND USES IN THE WATERSHED (Indicate if the following land uses are present in watershed. (1 mi. upstream)

Agriculture Uses	Homes & Roads	Industrial Uses
☐ Animal Operations (type) _____ ☐ Cropland (type) _____ ☐ Livestock Pasture ☐ Logging ☐ Biosolid/Sludge ☐ None	☐ Housing Construction ☐ Housing Development ☐ Urban Uses Please describe: _____ _____ ☐ Road Construction ☐ None	☐ Mining (type) _____ ☐ Gas & Oil Drilling ☐ Sanitary Landfill ☐ Trash Dump ☐ Litter (type) _____ ☐ 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: _____

_____

_____

_____

_____