Name _____ Class _____

Land Use and Water Quality Testing Data Sheet-Streams & Rivers

Assess a 200 foot segment of your stream, preferably near where the chemical tests are taking place.

Stream width:

Measure the stream at three different spots and find an average: _____

Water appearance/odor:

___ clear ____ clear-brown _____ milky _____ greenish
___ foamy ____ muddy _____ multi-color _____ other (describe)

Stream flow:

Step 1: Stream segment length

Measure out a specific length of your stream (if it is a small stream that is moving very slowly, you will probably want to use a shorter length).

Stream segment length: _____ ft

Step 2: Stream segment width

Find the average width of your stream segment at the top, middle, and bottom end of your segment.

Width top: _____
Width middle: _____
Width bottom: _____
Average: _____ ft

Step 3: Stream segment velocity

Using your segment, drop a ping pong ball or a tennis ball (depending on the perceived velocity of your stream-a ping pong ball works better in slower moving water) and record the speed at which the object travels the length of the segment. You should do this at the left, middle, and right side of the stream, and then average your measurements.

Left side (sec)	Middle (sec)	Right side (sec)	Average
Average of all three segments (time in seconds)			

Step 4: Stream depth. Stretch a tape measure across the stream at the mid-point of your stream segment. At 1 foot intervals across the stream, measure the depth (in feet) and record it in the table below.

Distance (ft)	Depth		Distance (ft)	Depth
0	0		6	
1			7	
2			8	
3			9	
4			10	
5			11	

Sum of depths: _____ / number of samples taken = _____ average depth of stream

Step 5: Flow calculation

Now that you have all your measurements, simply plug in the numbers in the equation:

[____ ft (length) x _____ ft (width) x _____ ft (depth)] ÷ _____ (time secs) = _____ cubic feet/sec

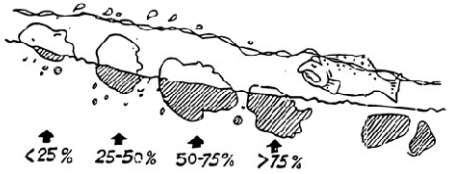
Habitat:

	Many	Some	Few/none
Riffles (fast areas, <2' deep)			
Runs (fast areas, >2' deep)			
Pools (slow areas, >2' deep)			
Glides (slow areas, <2'deep)			
Shelter for fish (logs, stumps etc)			
Patches of aquatic plants			

Substrate size: Rank the substrate sizes from most common (1) to least common (6)

Silt/clay/sand	Sand (up to 0.1")	Gravel (0.1-2")	Cobbles (2-10")	Boulders (>10")	Bedrock (solid rock covering bottom)

Cobble Embeddedness: Pick up several cobbles (if present) to estimate the average embeddedness of your site.



Average embeddedness: _____ %

Image from Hudson Basin River Watch Guidance Document

Natural Vegetation: extends beyond the banks for: _____ < 6 yards _____ 6-12 yards
(if the 2 banks are different, evaluate both and average them) _____ 12-36 yards _____ >35 yards

Stream banks:

	In no or few areas	In some areas	In many areas
Covered with vegetation			
Eroding			
Mowed			
Artificially protected			

Human Impacts and Land Use:

___ stream channel altered ___ farms ___ industry
___ storm drain pipes ___ recreation ___ housing
___ sewage treatment plant pipes ___ garbage ___ logging
___ dams ___ mining ___ roads

Other: _____

For more in-depth survey guidelines, see Behar, S. and M. Cheo. 2004. "Hudson Basin River Watch Guidance Document."