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

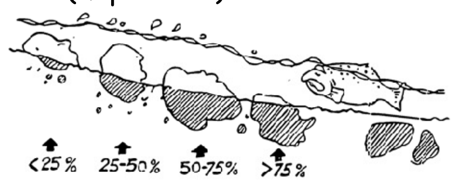
Habitat:

	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."