10/20/12

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Calculate the River's Water Quality Based on Macroinvertebrates

1. Identify the macroinvertebrates you collected. Use page 5 of this document.
2. In the chart below, put a check next to the name of all the macroinvertebrates you found.
3. Add up the number of checks in each column. This is the number of **TAXA** (different kinds of) macroinvertebrates that belong to that group.
4. Multiply the number of taxa by the group's weighting factor. This gives you the **GROUP SCORE**.
5. Add up all the group scores. This will give you the **TOTAL GROUP SCORE**.
6. Add up the number of taxa from all the columns. This is the **TOTAL NUMBER OF TAXA**.
7. Divide the total group score (from step 5) by the total number of taxa (from step 6). This will give you the **WATER QUALITY INDEX** for your river.
8. Using the table at the bottom right of the page, find how the river's water quality index ranks.

	GROUP 1 Intolerant to pollution	GROUP 2 Moderately intolerant to pollution	GROUP 3 Fairly tolerant to pollution	GROUP 4 Very tolerant to pollution
Macro-invertebrates (check all the ones you found)	Alderfly ___ Dobsonfly /// Snipe Fly ___ Stonefly ___	Caddisfly ___ Clam/Mussel X Cranefly ___ Crayfish X Damselfly X Dragonfly X Mayfly ___ Riffle Beetle ___ Water Penny ___	Black Fly ___ Midge ___ Right-handed or other snails X Scud X Sowbug X	Aquatic worm ___ Blood worm midge ___ Leech X Left-handed snail ___
# of TAXA (add up checks)	0	~~3~~ 4	3	1
WEIGHTING FACTOR	x 1	x 2	x 3	x 4
GROUP SCORE (TAXA x weighting factor)	= 0	= ~~6~~ 8	= 9	= 4

= ~~19~~ 21

TOTAL GROUP SCORE (add up the group scores from all the columns)	~~19~~ 21
TOTAL NUMBER OF TAXA (add up the number of taxa from all columns)	~~7~~ 8
WATER QUALITY INDEX (total group score ÷ total number of taxa)	~2.86 (2.6)

Water Quality (circle one)

Excellent	1.0 – 2.0
Good	2.1 – 2.5
Fair	2.6 – 3.5
Poor	greater than 3.6

Fish (Axel)
-golden shiner X