

## Aquatic Macroinvertebrate Inquiry Analysis

### *Field Biology*

This is an **individual** assignment! When you are finished, please e-mail your completed work as a Microsoft Word attachment to your instructor with the subject “per *X your name* MI Inquiry”.

Using the class data posted on the website, answer the following questions:

1. Which site (rocky or muddy) had more individual organisms?
2. Which site had a greater diversity of taxa?
3. Using the table on page 12-11 of the OWEB Water Quality Monitoring Guide, evaluate the water quality of each site – make sure that you include the “score” along with a short (one sentence) evaluation of the meaning of that score.
4. For each of the water quality parameters below, discuss whether you suspect they might be different between the two sites and WHY (or why not). If done well, your response should be at least 2-3 sentences for each parameter.
  - a. Temperature
  - b. pH
  - c. Dissolved oxygen
  - d. Turbidity
  - e. Chemical pollutants
5. For each site, calculate the percentage of organisms that fall into the categories of functional feeding groups listed below. Exclude organisms that we did not discuss in class (in other words, you should only concern yourself with caddis flies, true flies, mayflies, stoneflies, beetle larvae, and snails.) Organisms that fit into more than one functional feeding group should be counted for ALL groups in which they fit.

Category	Muddy	Rocky
Scrapers		
Shredders		
Collectors		
Predators		

6. According to your table above, which site has a more even distribution of functional feeding groups? Why might this be important information to know? (Your answer should be at least 2-3 sentences.)
7. In a few sentences each, summarize the overall water quality and ecological balance of the two sites we studied. In your response, be sure to discuss which site appears to be better suited to support aquatic macroinvertebrates and why you think so.