Date:	Name:	
PTI & OWEB Assessment of Ma		Class: CAM 7 –
Answer the following (use a separal) Describe the water quality for years	d you use to form your opinion?	
2) Examine the " Macroinvertebr ? Pollution Tolerance Index (PTI) o		st trip. Use it to complete the
a) What was the PTI scoreb) According to the score,	? what is the water quality?	
3) How did the PTI compare to yo		
Way off	Kinda Close	
, -	ertebrate Totals" handout from Water Quality on the attached	our last trip. Use it to complete the page.
5) Based on this score, what can ye		
6) How does the OWEB evaluation scale.) Way off	on of stream health compare wit	h the PTI evaluation ? (Put "X" on Right On
ž	ating your conclusion and (b) res	stating the results for the OWEB &
7) Which of these evaluations is co	onsidered more accurate? Why?	
	lentify one interesting, unexpecte le details) and provide a possible	ed, or inconsistent finding. Describe the explanation (inference).

Pollution Tolerance Index

Student Name	Class/Group #
Location	Date Time
Weather conditions	
Air Temperature	Water Temperature

Instructions: Place a checkmark in the box to indicate the presence of the following macroinvertebrates. Complete the calculations to determine the PTI for this location.

Sensitive	Somewhat Sensitive	Tolerant		
 □ caddisfly larva □ dobsonfly larva □ gilled snail (right-side opening) □ mayfly larva □ stonefly larva □ riffle beetle adult □ water penny 	□ alderfly larva □ beetle larva □ clam □ crane fly larva □ crayfish □ damselfly larva □ dragonfly larva □ scud □ sowbug (aquatic) □ water mite	 □ aquatic earthworm □ blackfly larva □ leech □ midge larva □ pouch snail (left-side opening) □ other snail (flat coil) □ water boatman □ backswimmers 		
Total checkmarks: X 3 pts =	Total checkmarks: X 2 pts =	Total checkmarks:		
Add: + + = (Somewhat Sensitive) (Tolerant) = (PTI Score)				

Water Quality Rating

(circle one of the following based on the PTI score above)

Excellent (>22)

Good (17-22)

Fair (11-16)

Poor (<11)

OWEB Level 2 Assessment of Water Quality*

The Level 2 assessment is based on family level identifications. The number of organisms in each family are counted and recorded. The family-level metrics and scoring criteria are:

Taxa Richness – total number of macroinvertebrate families identified from the sample.

Mayfly Richness – total number of mayfly families identified from the sample.

Stonefly Richness – total number of stonefly families identified from the sample.

Caddisfly Richness – total number of caddisfly families identified from the sample.

% Diptera – total number of diptera (true flies) in the sample divided by the total number of macros X 100.

% Dominance – total number of the three most abundant organisms divided by the total number of macros X 100.

Metric	Raw Score	5	3	1	Score (circle one)
Taxa Richness		>18	10 – 18	<10	5 3 1
Mayfly Richness		>4	2 – 4	<2	5 3 1
Stonefly Richness		>3	1 – 3	<1	5 3 1
Caddisfly Richness		>4	2 – 4	<2	5 3 1
% Diptera (diptera/total X 100)		<15	15 – 30	> 30	5 3 1
% Dominance (sum top 3/total X 100)		<30	30 – 50	> 50	5 3 1
				Sum the Score =	

Score Range	Stream Condition	
> 23	No Impairment : passes Level 2 assessment. Indicates good diversity of invertebrates and stream conditions with little disturbance. Further sampling will help confirm the site's condition as unimpaired.	
17 – 23	Moderate Impairment: Evidence of some water quality impairment exists. Requires further study and more detailed analysis.	
<17	Severe Impairment : Fails Level 2 assessment. Evidence of stream disturbance exits. Further study may be warranted to confirm level of impairment and potential causes.	

^{*} OWEB Level 2 Assessment as presented to Clark County educators by the Environmental Information Cooperative, Fall 2005