**Summative Assessment: Human Activity and Water Quality**

**ESS Standard Unit 2- The Hydrosphere**

**Name:**

For this summative assessment, in preparation for a short oral report you will give to the Town of Windham at next week’s Town Council meeting on Water Quality in Windham, you need to answer the following questions on what you learned about land use and water quality when you completed your water pollution graphs. Your report will include the following pieces of information:

1. What are the main pollutants found in your 1980 water sample?

2. What type of human activity upstream would have produced that specific 1980 collection of pollutants?

3. What are the main pollutants found in your 2018 water sample?

4. What type of human activity upstream would have produced that specific 2018 collection of pollutants?

5. Given the water pollution information that you have collected, explain the following:

 a. how did the water pollution change between 1980 and 2018?

b. how did land use upstream change between 1980 and 2018?

c. State your hypothesis about why the change in land use occurred.

d. Explain your reasoning for why your hypothesis makes sense.

e. Has this change in land use been better or worse for the water quality in Windham? Explain.

**ESS Standard Rubric for Water Summative**

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| **Points** | **Requirements** |
| 4 | A 4-point assessment:* ***clearly*** demonstrates an understanding of the assessment.
* completes all requirements of each question.
* For each question provides a ***correct***, ***insightful,*** and ***detailed*** explanation/opinion that includes evidence and reveals thinking.
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| 3 | A 3-point assessment:* demonstrates an understanding of the assessment.
* completes all requirements of each question.
* For each question provides a detailed explanation that reveals thinking, but answers are not correct.
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| 2 | A 2-point assessment:* demonstrates only a ***partial understanding*** of the assessment.
* ***Leaves some parts of questions unanswered***.
* Most answers are correct, but explanations are ***inconsistent*** or ***confusing***.
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| 1 | A 1-point assessment:* demonstrates ***minimal understanding*** of the assessment.
* ***does not complete*** all questions, leaves parts of questions unanswered
* Multiple answers are incorrect, no attempts made to explain thinking.
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| 0 | A 0-point assessment is completely ***confusing***, ***irrelevant*** or ***off-topic***. |