

Impaired Streams and Lakes Activity

Name: _____

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Introduction:

You and your partner will be learning about the streams, creeks, rivers and lakes of the Zumbro River Watershed. You will also be learning how to assess stream health. Using Google search, your team will find the meanings for the terms below. These terms are used to describe the health of bodies of water and are important for you to understand.

Terms to Define:

- **TMDL- Total Maximum Daily Load-** *A Total Maximum Daily Load (TMDL) specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards.*

- **Turbidity-**

*Turbidity is measured in two different ways based upon the water body. Secchi disks are used in lakes, reservoirs, and oceans. Turbidity tubes are used for streams and rivers. Explain with a drawing and description how both methods work on the back of the sheet.

- **Fecal Coliform Bacteria-**

- **Nutrient/eutrophication-**

- **Mercury-**

- **Dissolved Oxygen-**

- **Fish bio assess**

- **Macro invertebrate bio assess-**

- **PCB's in fish tissue-**

Analysis:

You and a partner are going to use the Impaired Waters Viewer (found at this link: http://www.pca.state.mn.us/index.php?option=com_k2&Itemid=250&id=871&layout=item&view=item) to analyze the major streams, creeks, rivers and lakes of the Zumbro River Watershed. When you find your body of water you are interested in click on it and data will pop up in a window. You will find information under the Water Quality Assessment link and the Overall Water Condition information.

Research Questions:

1. What is the overall condition of each of these waterways in Rochester?
 - a. Zumbro River, South Fork



b. Willow Creek

c. Bear Creek

d. Cascade Creek

e. Silver Creek

f. Silver Lake

g. Zumbro River, Middle Fork

h. Lake Zumbro

i. Zumbro River after the dam

2. What is the one issue that most of these streams have in common?

Extra:

This interactive website (<http://pca-gis02.pca.state.mn.us/CSW/index.html>) allows construction contractors to understand the restrictions for building near these bodies of water. This tool shows trout streams, fens and other interesting information. You can turn on different views including topography. Have fun.

