

Name: \_\_\_\_\_ Date: \_\_\_\_\_

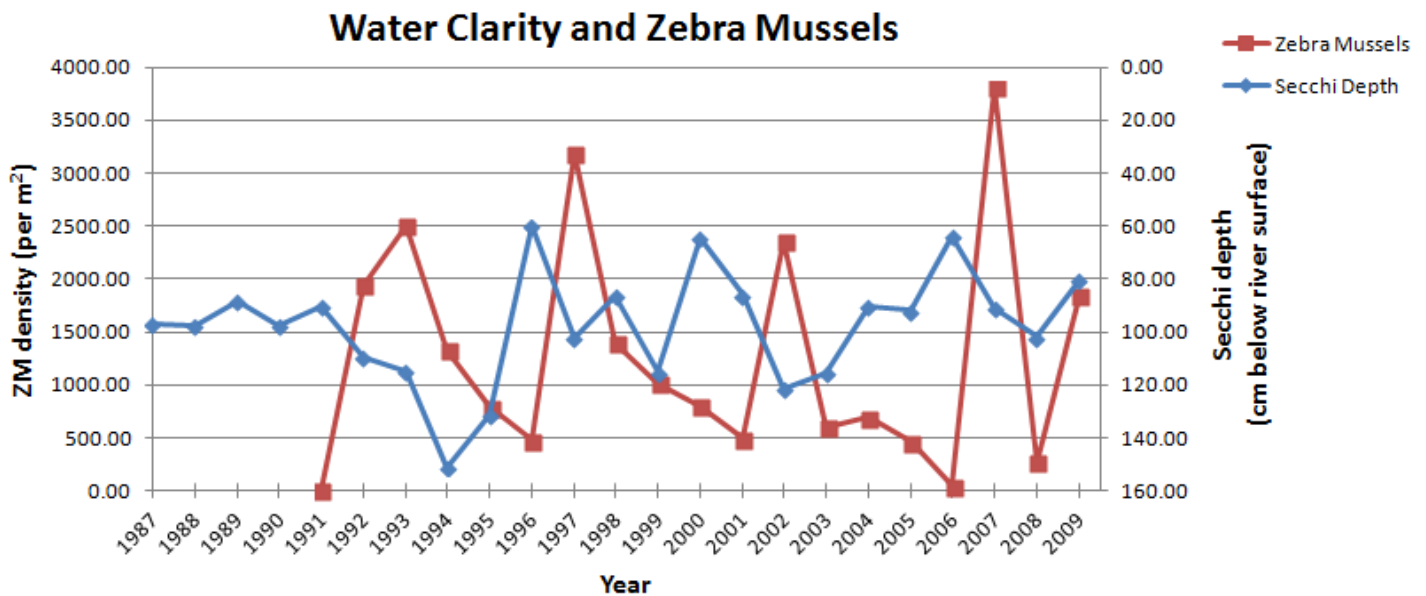
## Surrey Lake Scenario

Surrey Lake has historically been known as a clean, family-friendly lake. During the summer months, lake residents are often seen boating, fishing, and tubing. In June of 2017, a new family moved into a lakefront home. The Jones family was thrilled to finally be living on the lake and were eager to get their boat in the water and do some fishing. Unbeknownst to Mr. Jones, his boat had two stowaways. Two zebra mussels were tagging along on the underside of his boat. When Mr. Jones placed his boat in the water, these larvae became detached and made a new home in the water of Surrey Lake.

Your task is to predict the effects of zebra mussels on Surrey Lake over time. Use the following resources from this unit to develop an explanatory model that demonstrates your thinking.

- Coffee filter model
- “An Unwelcome Newcomer” article

It can be difficult to predict changes in systems. Scientists (and engineers) often research other places where similar situations may have occurred and look for patterns between the data sets. The graph below represents data collected from the Hudson River which also contains Zebra Mussels. Use the comparative data below to support your prediction for what will happen to Surrey Lake.



**NOTE:** In the graph above, ‘Secchi depth’ is a measure of how deep one can see an object in the water

Source: [Cary Institute of Ecosystem Studies](#)