

Name _____

Hudson River Investigation

We will test for dissolved oxygen, pH, and temperature levels in two locations at Norrie Point, shown below (the stars on the map):

Before we begin, make a prediction for each parameter. Do you expect DO, pH and temperature to be the same in both locations? Where would you expect levels to be higher? What variables might affect our results? What additional information would you like to have?



Predictions:

1) Will the dissolved oxygen be higher in the cove or in the marsh? Why?

2) Will the pH be higher in the cove or in the marsh? Why?

3) Will the temperature be higher in the cove or in the marsh? Why?

Find out when high tide and low tide is on your investigation day:

High tide: _____

Low tide: _____

Results

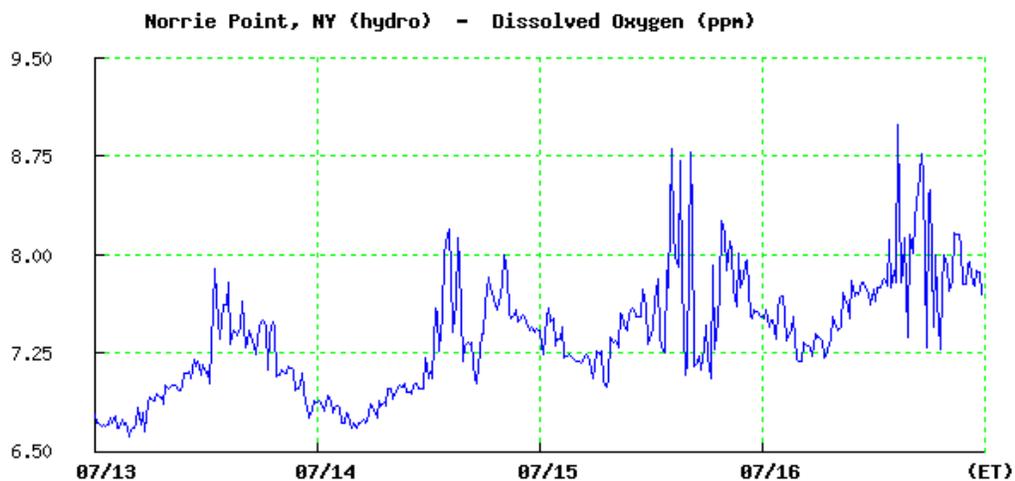
Location	DO	Temperature	pH
Cove			
Marsh			

1) Compare your results with your predictions. Were you surprised by any of your results? Why?

2) Do you think that the level of the tide had anything to do with your results? Why or why not?

3) What do you expect would happen to the dissolved oxygen levels if you came back in six hours? In six weeks? In six months?

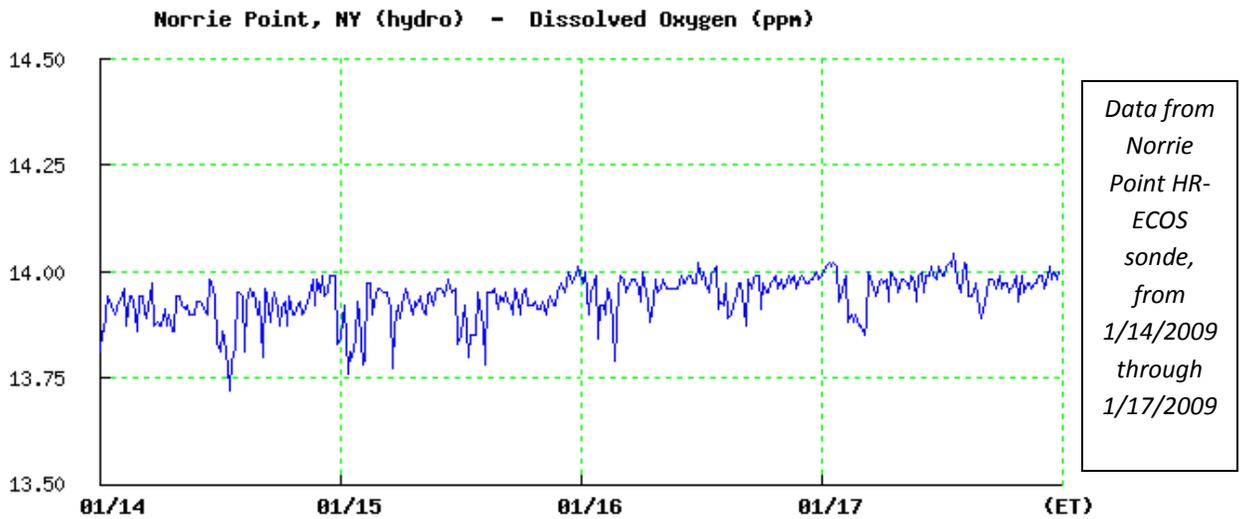
4) Use the graph below to help you answer the next question.



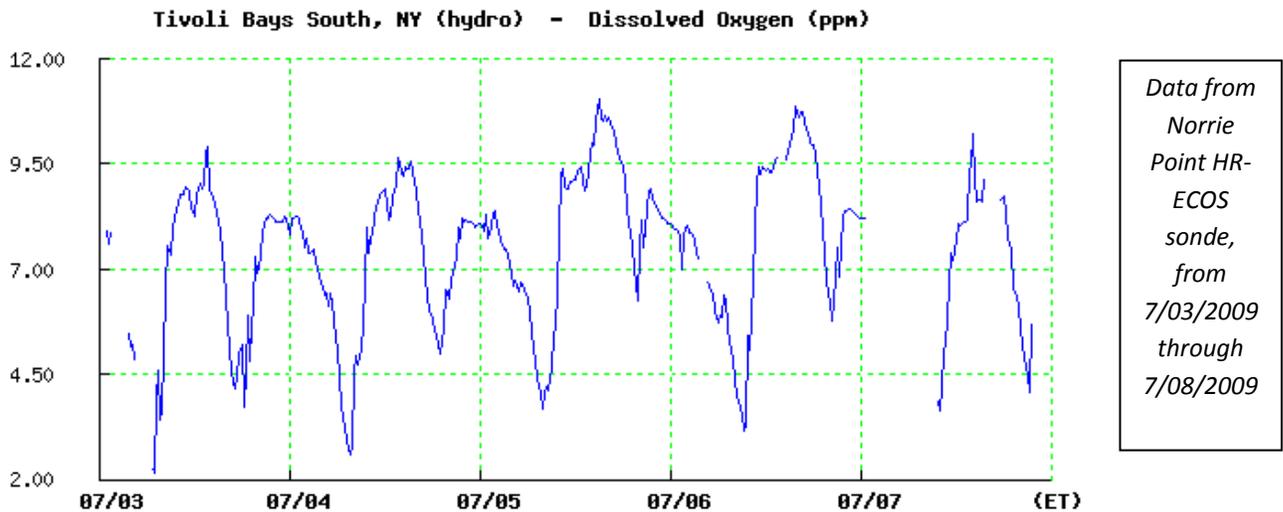
*Data from
Norrie
Point HR-
ECOS
sonde,
from
7/13/2008
through
7/16/2008*

How does this dissolved oxygen trend compare with the data you collected? Are the levels you saw higher or lower than the recorded data from July of 2008? Why?

- 5) Using the graph below, along with the graph from #4, answer the following: Why is the dissolved oxygen so different in January when compared with July? Explain.

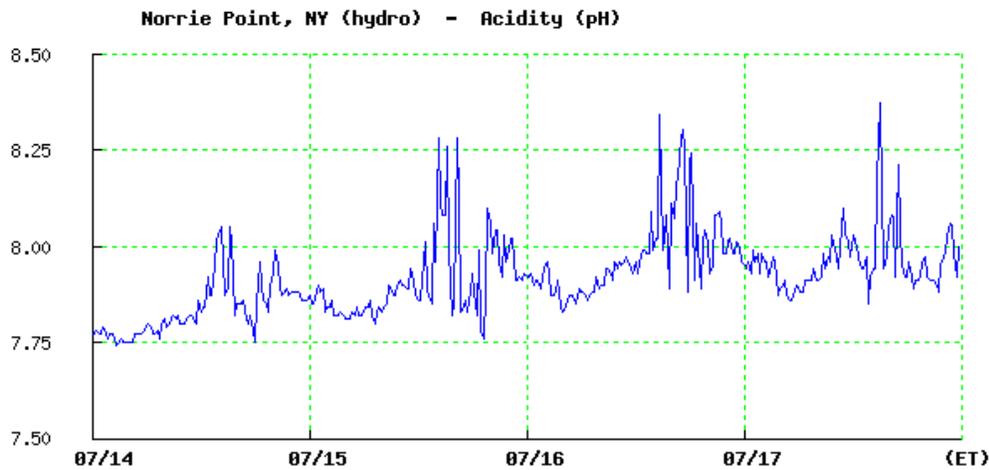


- 6) Why does the dissolved oxygen go up and down each day, as seen in the detailed graph below?



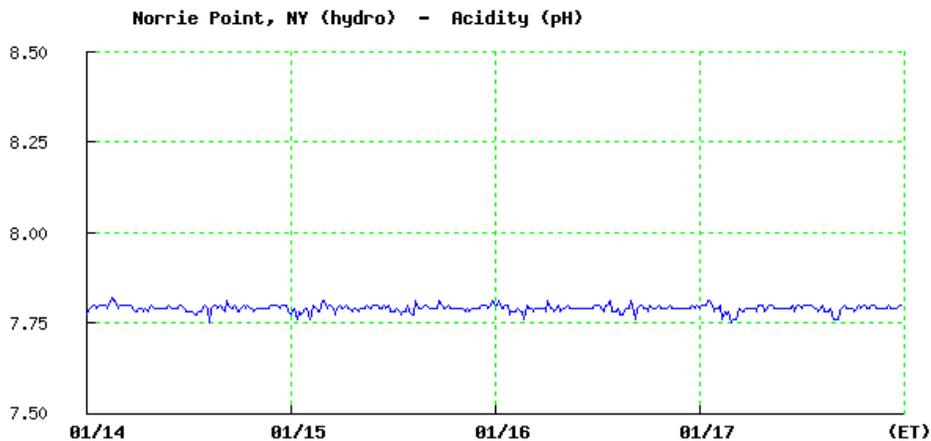
- 7) Think about the time of day when you collected your dissolved oxygen data. Based on the previous data, should your dissolved oxygen levels have been high or low? Why?

- 8) How does your acidity data compare with the recorded values from Norrie Point, shown below? Why do you think the pH level increases during the day, but drops back down at night?



Data from Norrie Point HR-ECOS sonde, from 7/14/08 through 7/17/08.

- 9) How do the pH levels in July (above) compare with the pH levels in January (below)? Why do you think this happens?



Data collected from Norrie Point HR-ECOS sonde from 1/14-1/18/09.