

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

## Using Real-Time Data: pH and Rainfall

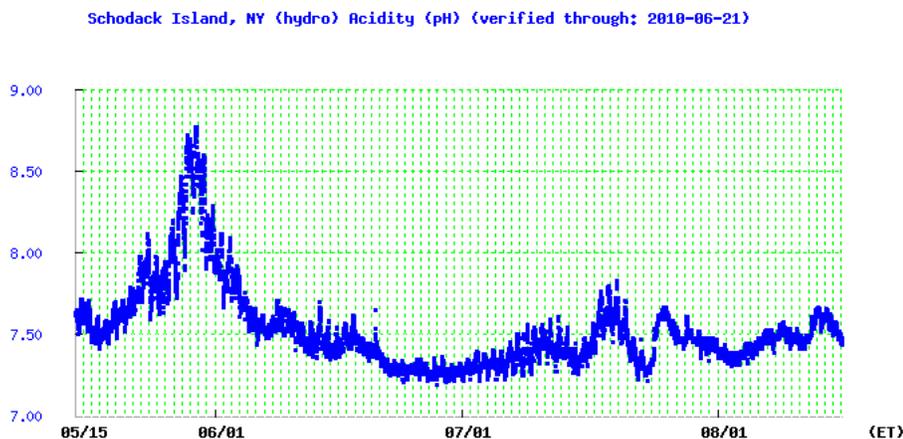
- Go to: [www.hrecos.org](http://www.hrecos.org)
- You are on the main HRECOS website. Where is Schodack Island? Use the map on the website to help you. Describe its location in the Hudson River watershed.

- Select the Current Conditions icon.  Set the following parameters:



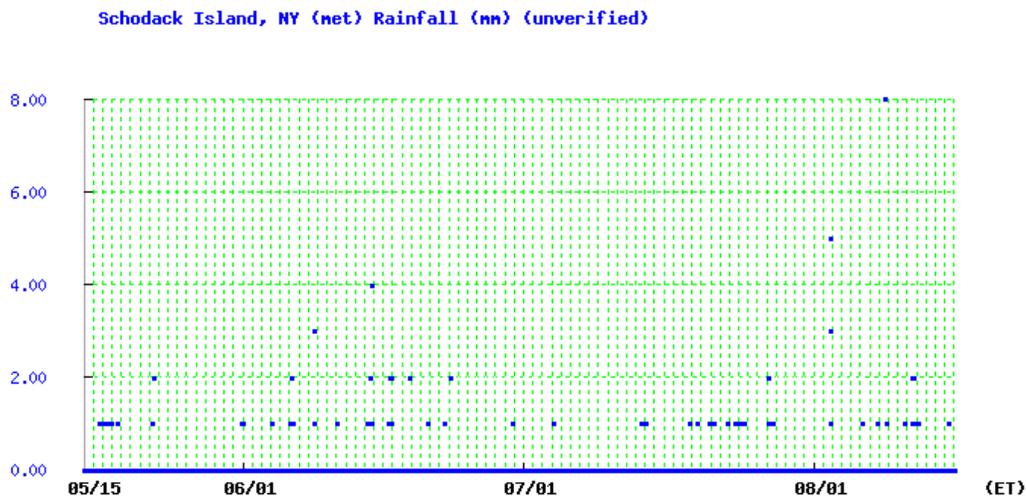
- Station1: Schodack Island, NY (hydro)
  - Parameter1: Acidity (pH)
  - We will not be using Station2 and Parameter2.
  - Units: **Metric** AND Continuous
  - Start Date: 2008-05-15
  - End Date: 2008-08-15
  - Time Zone: Eastern Time (EST/EDT)
- During this exercise, you are going to look at the relationship between pH and rainfall. Based on what you already know, what kind of relationship do you think exists between these two parameters? Explain your answer as much as you can.

- Now, hit "Plot". You should see a graph that looks like this:



- What does the X axis represent? \_\_\_\_\_ Y axis? \_\_\_\_\_

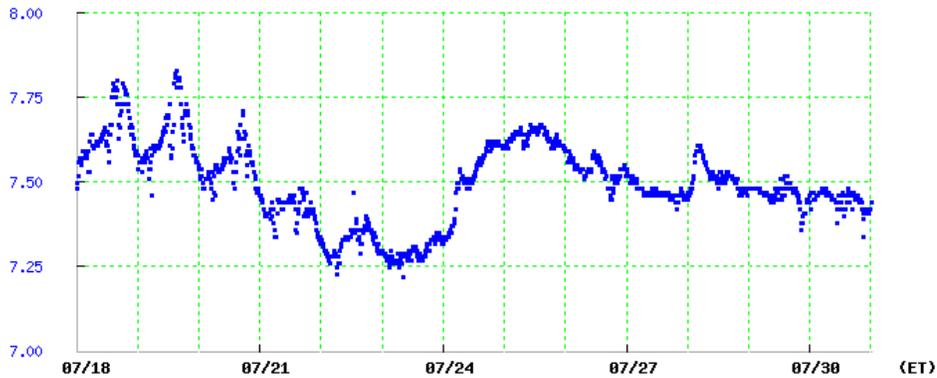
6. Which days had the highest pH? The lowest? Remember, the lower the pH, the more acidic the water.
7. How did the pH change during these three months at Schodack Island, NY? Explain what you think could have caused these changes.
8. Next, select Schodack Island, NY (met) for the same date range. “met” stands for meteorological. Graph rainfall. You should get a graph that looks like this:



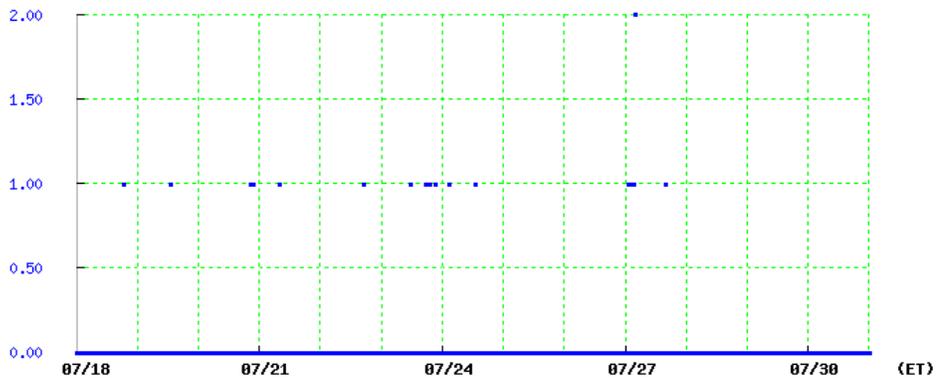
9. Which days had the highest amount of rainfall? The lowest?
10. Is this graph harder or easier to read than the pH graph? Why?
11. Is there a relationship between pH and rainfall at Schodack Island during this time period? Why or why not? Create a hypothesis that describes the relationship between pH and rainfall, based on the previous two graphs.

12. Let's look at some of the data more closely.

Schodack Island, NY (hydro) Acidity (pH) (verified through: 2010-06-21)



Schodack Island, NY (net) Rainfall (mm) (unverified)



Do these graphs support or refute your hypothesis? Explain your answer.

13. Based on these graphs, do you think you can *always* explain the relationship between pH and rainfall? What other information would you like to know? Are there other factors that might affect the pH? Explain your answer.