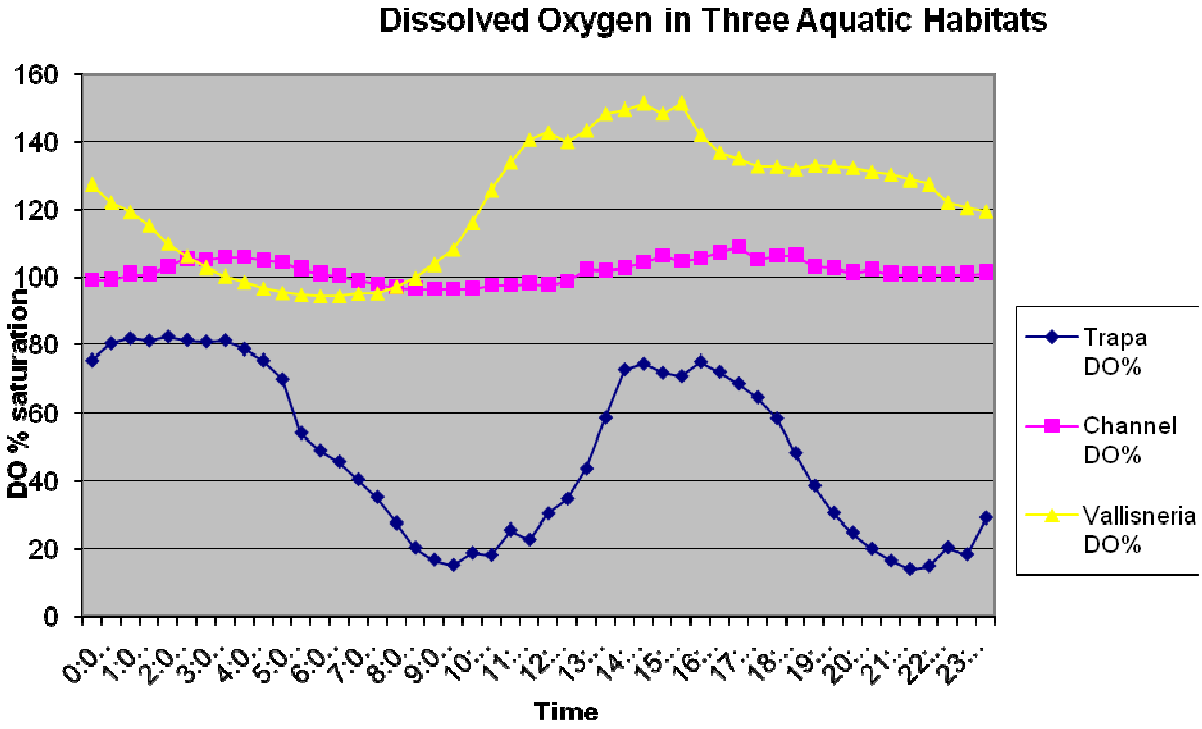
Name _____ Date _____

Water Chestnut Graphing

How has the water chestnut invasion changed the Hudson River ecosystem? By completing the following graphing activity, you should be able to answer this question to some degree. The graph shows dissolved oxygen levels during a 24 hour period in June, 2003. The line with the yellow triangles shows DO levels in *Vallisneria americana*, the native water celery plant bed. The line with the pink squares shows data taken from the middle of the Hudson River channel, where no submerged or floating plants grow. The line with the blue diamonds shows data from the water chestnut bed (*Trapa natans).* The numbers at the bottom refer to the time (military time; ie 15:00= 3:00pm). Based on the graph, answer the questions below.



1. What happens to the level of the dissolved oxygen saturation for each of the three sample sites: water chestnut, open channel, and water celery?
2. Where is there more dissolved oxygen? How might this affect the aquatic organisms in the Hudson River?
3. At about what time does the lowest percent of dissolved oxygen occur for all three samples sites? Why do you think this happened?
4. Why do you think the water chestnut beds fluctuate in dissolved oxygen more often than the water celery beds?
5. Do you think there could be any positive aspects of the water chestnut plant? How would you find out?
6. What do you think should be done about the plant in the Hudson River? Explain your reasoning.