

Turning the Tide, Saving the Chesapeake Bay: by Tom Horton

Part I: The Chesapeake Ecosystem (pp 1-35)

1. On page 5, you see Figure 1.1, The Shallow, Vulnerable Bay. This figure is very important in your understanding of the uniqueness of the Chesapeake Bay. From your reading, explain why the shallowness of the Bay is so important to its high productivity.
2. “If you harvest the Bay, pray for drought”, why would the author say this? What happens to the Bay when there is a drought and conversely when there is a lot of rainfall?

Part II: State of the Bay (pp 37-84)

3. Look at page 45, **Figure 2.1 “The Concentrations of Animals on Pennsylvania Farms”**. The amount of increase in farm animals between 1954 and 1997 is tremendous! What impact have these increases had in terms of pollution in the Chesapeake Bay? How do you as an individual contribute to this problem?
4. What is a “BMP” and how do they work? What is one BMP that has proven to be very effective in removing farm pollution from the water, but not yet widespread in its use in the Chesapeake Bay watershed? Why do you think this BMP has not gained widespread acceptance yet?
5. There is an old saying “*Dilution is not the solution to pollution*”, and nowhere is it more applicable than in the case of sewage in the Chesapeake Bay. In your own words, based on the reading, explain how this saying applies to sewage in the Bay and what Horton thinks we need to do to fix the problem.

Part III: State of the Bay (pp 94-105)

6. The Susquehanna River is tamed at one point by the 110 foot high Conowingo Dam. Go to Youtube and watch these two videos: https://www.youtube.com/watch?v=Cn23hlts_jg
<https://www.youtube.com/watch?v=g2oEKT6well>
You’ll get an idea of the enormous power of this engineering restriction on the river’s progress. What is the “time bomb” Horton talks about at Conowingo and what are some circumstances that can lead to the release of massive amounts of material from behind the dam?
7. Sediment is a major pollutant of the CB and it is a particularly difficult problem to deal with because of its source. Sediments wash into the estuary from runoff from both anthropogenic and natural sources. What human activities contribute sediment to the Bay and what natural processes add to this sediment load?

Part IV: State of the Bay (Dissolved Oxygen pp 134-139)

8. Why is dissolved oxygen “the Bay’s bottom line”?