

# **Carson**

## *Silent Spring:*

### **Chapter 4**

#### *Surface Waters and Underground Springs*

#### **Zoom Meeting**

#### **Questions for Analysis/Discussion**

**Instructions:** In your journal, record responses to the questions to which you are assigned alphabetically, to share with class in Zoom Discussion.

#### **A-D**

1. What are the sources of water pollution?
2. What are some of the problematic features of these pollutants? (40)
3. What evidence does Carson use related to the Pennsylvania incident? What are the relevant facts of the case? What were the implications for humans?
4. What is problematic about these “organic pollutants” for the “chemists who guard water purity?”

#### **E-H**

5. According to Carson, how widespread is this pollution?
6. What was the focus of the study by the US Fish and Wildlife Service (1960)? What was it trying to determine? What were the “really significant findings?”
7. What was “the only possible” conclusion to draw from these findings?
8. What are the pertinent facts of the Rocky Mountain Arsenal incident? What were the effects of the pollution?

#### **I-L**

9. What were the pollutants discovered & where were they discovered? How far did they travel and how long did it take?
10. What was the most “mysterious and . . . most significant feature of the episode?”

11. What conclusion was drawn from this?

12. What metaphor does Carson use—to what does she compare these “holding ponds”?

### **M-P**

13. What critical question does she then raise?

14.. What does this problem have to do with the nuclear waste problem? What are the implications of this case study for the storage of Nuclear Waste at Yucca Mountain?

15. What case study does she use to provide evidence of the pollution of surface water?

- What was the source of this pollution?
- What were the noticeable effects of it?
- What were the pollutants that were identified?
- What are the implications for wildlife & humans?

16. What critical question does she then raise (46)?

### **Q-T**

17. Where does she find the answer to this question—which case study?

- What problem was the pesticide designed to solve?
- Which chemical was chosen? Why?
- What dosages was used?
- What collateral effects were noticed?
- What dosages were discovered in the affected species? Where in this species were these concentrations discovered?
- What is Carson’s explanation for this toxic build-up?

18. Trace the build-up through the food chain, from plankton to carnivores? What concentrations are associated with each link in the food chain?

19. What startling findings were made regarding the longevity of this pollutant in the environment, despite its disappearance from the water?

20. What were the long term effects on the “nesting colonies of the grebes”?

### **U-Z**

21. What are the physiological effects of DDD?

22. How does Carson’s evidence help counter the argument that these pollutants are applied in low, “harmless” dosages, and therefore their use is justified.

23. How are these pollutants relevant to recreational, as well as agricultural, uses of the environment?

24. Who does Carson quote in this chapter?

25. This quote underscores the connection between the widespread use of these pollutants and which human disease? What specific carcinogenic pollutant does she mention, as culpable in causing this disease?