

Student Worksheet 5.3: Mapping It Out

Name: _____ **Date:** _____ **Period:** _____

1. Define pesticide: _____
2. Define OC pesticide: _____

Use the table and map to answer the following questions.

1979 SOIL SAMPLE DATA

Site	Toxaphene (ppm)	1979 Soil Standard (ppm)	Depth (ft)
A	860	55	0
B	315	55	1.0
B	95	55	0
C	2,340	55	1.2
D	1,400	55	3.3
E	1.47	55	2.0
F	319	55	1.2
F	160	55	0
G	436	55	2.0

3. On the map:
 - Identify the site of greatest surface concentration and draw a star.
 - Identify the site of greatest buried concentration, draw a star and note the depth.
 - Identify the site with the deepest concentration and note the depth.
 - Identify the site of the lowest concentration and draw a triangle.
 - X out any sites that fall below the standard.

4. Evaluate the drainage from the polluted areas on the map and consider the runoff that has already occurred causing the fish kill. Consider uncertainty in environmental factors. There might be more uncovered bags of pesticide in the landfill. These considerations could increase the clean up costs.
 - Draw a red line around the entire land area you think needs remediation based on whether the data exceeds the soil standard and the geography of the drainage around those sites.

5. Based on the data, how deep would you recommend excavating the soil? Explain.

6. Since the source of contamination is bags of buried pesticide, should more than the source be removed? _____

Why or why not? _____

7. If a large margin for error in individual tests is assumed, it is likely that a much larger area will need to be cleaned up and monitored in the future. This may be very expensive. On the other hand, it could be argued that a smaller margin for error increases the risk of health hazards, although it may be more cost effective in the short term since there is a smaller area to clean up.

What would you do? _____

8. Refer to the “product toxicity comparisons” on the Grow Green fact sheet for “Fleas.” Lindane is an OC Pesticide found at Mabel Davis park that is still in use. How does the Hi-Yield Lindane Spray compare in the toxicity ratings to other products on the market?

9. How would you apply this information in your daily life? _____