

Area IV Envirothon

Current Environmental Issue

1. We all live in a watershed. What is a watershed?
 - A. The small streams that are not named
 - B. An area of land that drains into lakes, rivers, and streams
 - C. Small tributaries that only flow into the Atlantic Ocean
 - D. Headwater streams that flow into larger watershed basins

2. Which of the following is a sub watershed of the Great Miami River?
 - A. Scioto River Basin
 - B. Whitewater River Watershed
 - C. Maumee River Basin
 - D. Muskingum River Watershed

3. Land use changes from permeable to impermeable cover presents what issue in the watershed?
 - A. A sharp increase in streamflow after a precipitation event
 - B. Rapid infiltration of the flow
 - C. Flow changes in direction
 - D. Less occurrences of flooding

4. We use water from the water cycle for our homes and communities, agriculture activities, and industrial activities. The amount of available water depends on:
 - A. Snowmelt, runoff, and streamflow
 - B. Evaporation, evapotranspiration, and precipitation
 - C. Infiltration and groundwater recharge
 - D. Springs and groundwater discharge

5. Frozen water found in the soil is known as:
 - A. Soil moisture
 - B. Glaciers
 - C. Permafrost
 - D. Atmospheric moisture

6. What source does **not** cause nonpoint source pollution?
 - A. Soil erosion,
 - B. Fertilizer runoff
 - C. Industrial pipe with specific drainage
 - D. Storm drain discharge

7. A clearcut has been performed. What land based BMPs should be in place to address nonpoint source pollution?
- A. Noise control BMPs
 - B. Forestry Management Plan
 - C. Erosion control BMPs
 - D. Construction site BMPs
8. Ohio EPA requires all municipal entities to write, implement, and enforce a plan to address nonpoint source pollution. What are these plans called?
- A. Watershed Plan
 - B. Manure Management Plan
 - C. Retention Pond Plan
 - D. Stormwater Management Plan
9. The carbon containing compounds in the soil can be washed into bodies of water through _____ . This water eventually enters the ocean.
- A. Runoff
 - B. Leaching
 - C. Weathering
 - D. Uplifting
10. BMPs (Best Management Practices) help to control the delivery of nonpoint source pollution to water bodies. Which of the following is **not true**:
- A. BMPs reduce pollutants available
 - B. BMPs slow the transport of pollutants by reducing water flow
 - C. BMPs are only installed by conservation agencies
 - D. BMPs may use chemical or biological means to treat polluted water
11. Why is it important to protect flood plains in the watershed?
- A. They provide grazing in the watershed
 - B. They are a good place to build houses
 - C. They slow water flow during heavy rain events and reduce flooding
 - D. They are a good place to store pollutants beside the stream
12. Where is the riparian corridor located in the watershed? does it serve?
- A. The only area that contributes nonpoint source pollution to the stream
 - B. The area at the highest elevation that drains to the stream
 - C. The area underground in the watershed that provides our drinking water
 - D. The area adjacent to the stream with natural vegetation

13. The porous and varied terrain of natural landscapes (such as grass) allow rainfall and snowmelt to slowly runoff or filter into the ground. In Urban areas where we have roads, parking lots, and rooftops the surfaces are impervious and the rainfall and snowmelt remains above the surfaces. What is the **most common** way Urban areas address this issue?
- A. Pass ordinances to address the amount of runoff
 - B. Install natural filters to slow the runoff
 - C. Install storm drain systems that carry the water directly to a water body
 - D. Ask residents to get involved to find solutions to nonpoint source pollution
14. What is one way to prevent nonpoint source pollution in an Urban environment?
- A. Pick up litter on your property to keep it out of the storm drain
 - B. Wash your car on the blacktop so the rinse water runs into the storm drain
 - C. Hose spilled oil into the street to allow it to enter the storm drain
 - D. Keep soils in your garden areas bare (no plants) until the spring rains have passed
15. Working together to address nonpoint source pollution in your community can be done through a watershed group. What's the best **first step** for this group to address the issues in their communities? A. Watershed group asks the local government to address the issues of the watershed
- B. Educate the watershed group with public meetings and brochures about the issues of the watershed
 - C. Ask citizens in the watershed to complete a survey for ideas to correct the problem
 - D. Assess the issues in the water bodies of the watershed to get a base line for improvement
16. Headwater streams are defined as:
- A. Where the stream goes into another stream
 - B. The end of the stream
 - C. The middle portion of the stream
 - D. The beginning of the stream
17. Pollution from nonpoint source pollution is the single largest remaining source of water quality impairments in the United States. How do leaders and communities begin to address this challenge?
- A. Pass ordinances in small towns to require citizens to recycle grass clippings
 - B. Blame the city residents and pass regulatory laws to address the problems
 - C. Start in smaller watersheds, assess water quality and engage citizens; everyone must do their part.
 - D. Blame the agricultural community and pass laws to ban pesticides and fertilizer

Site Specific Questions:

Using the Enviroscope watershed model:

18. Using the number tags on the model, which answer best displays **nonpoint** source pollution:
- A. 1
 - B. 2
 - C. 3
 - D. 4

19. Using the number tags on the model, which answer best displays **point** source pollution:
- A. 1
 - B. 2
 - C. 3
 - D. 4
20. On the model letter G is the road ditch. Left this way it will cause nonpoint source pollution from soil erosion. What BMP is best suited to address this issue?
- A. Provide cover by seeding the area
 - B. Leave the it alone for natural drainage
 - C. Plant wildflowers in the ditch
 - D. Let it naturally establish re-vegetation
21. On the model letter F is a pasture field where you see cows grazing. Which of the following is **not** something the SWCD office would address?
- A. The cows could get sick from the water
 - B. The cows could cause sedimentation in the stream
 - C. The cows could cause erosion of the streambanks
 - D. The cows could add animal waste in the river
22. Fred lives in a rural area and has concerns about runoff from his neighbor across the road flowing into his newly built garage. What solution did the SWCD office suggest (exhibit H photo) to make both landowners happy and prevent future nonpoint source pollution concerns?
- A. Suggest that Fred sue his neighbor to fix the problem
 - B. A natural diversion that directs the runoff to the ditch
 - C. Both do nothing and no longer speak to one another
 - D. Fred contacts the County Engineer to dig out the road ditch
23. If a house was built on this site, what resource would it impact the most? (exhibit H photo)
- A. Light
 - B. Stream
 - C. Air
 - D. Trees
24. What conservation practice should be in place to protect the Streams nearby? (exhibit H photo)
- A. Silt fence around the edges of the construction area
 - B. Concrete pad installed
 - C. Stone installed
 - D. Landscaping
25. If you were assessing the stream below our site for erosion, what concerns would you have if our site was **not** changed? (exhibit H photo)
- A. Shading of the water which takes oxygen from the stream
 - B. Polluted runoff entering the stream
 - C. Slope of the banks leading to the stream
 - D. A reduced amount of water entering the stream