

## Watershed Assessment

1. Define your watershed and create a watershed map. If possible, use USGS topographic maps to outline the watershed boundary (USGS, Reston, VA 22092 or ODNR-Geologic Survey); or use a county road maps(s)—but remember, watersheds don't stop at the county boundary.
2. Determine where you live in relation to the watershed. Plot your house location and the school location on the watershed map.
3. Clearly mark the stream channels on the watershed map.
4. Identify major highways in the watershed. Define and go look at points where roads cross the main (perennial, year round flow) streams. If there were a spill where a major highway crosses a stream, where would the spill go? Investigate to determine how much salt is spread on the roads each year—ask the highway department how many tons per mile?
5. Identify land uses in the watershed—in general, i.e., this part is agricultural, this part is forested and color code your watershed map (green for forested, gray for urban, etc.) Note: if you really want to get into this—contact a regional or county planning office to obtain a land use map, or an FSA or SWCD office in your county for aerial photograph.
6. Go out and look at streams and make a visual assessment. Keep records of your observations. Are the streams clear or muddy and yucky? Compare streams that appear to have good water quality with those that appear to have poor water quality. What might cause the differences? The places you identified where roads cross streams are a good place to start.
7. Identify potential pollution sources in the watershed, for example:
  - Cropland close to stream channels, especially where there are no trees along the channels to help intercept pollution (riparian corridor).
  - Livestock farms where the barn is close to the stream (200 feet), or where livestock have access to the stream.
  - Subdivisions and shopping centers—determine where the runoff goes from the parking lots.
  - Any kind of construction projects—determine if the runoff is going into streams or storm drains.
  - Developed urban areas—identify the outlets for storm drains.

- Sewer systems—get a map from your public works department to see where the sewer lines stop. Assume everyone not on the sewer system uses on-site septic systems to handle their household waste. Identify all wastewater treatment plants in watershed and where they discharge. Find out how the treatment plant disposes of sludge waste.
  - Industrial areas—identify and locate as many moderate to heavy industries as you can. Are pollution problems caused by the waste products the industry generates or by what they have stored outside their buildings.
8. Make a general classification of streams and sections of streams as to which are well protected from pollution, which have a good riparian corridor, and which have fewer sources of pollution in their subwatershed. Identify and rank streams according to water quality.
  9. Identify potential nonpoint source pollution problems in your home, such as oil disposal, phosphorus content of detergent, lawn fertilizer, hazardous household products, septic tank (when was it last cleaned and where is it located), landscaping or construction projects. If you have a well, determine its depth and location. A sample of the water can be tested at county health departments, Heidelberg College or private water quality laboratories.
  10. Begin a stream monitoring program to establish baseline conditions or determine how watershed stream are affected.
  11. Invite resource people to share their technical knowledge with the class.