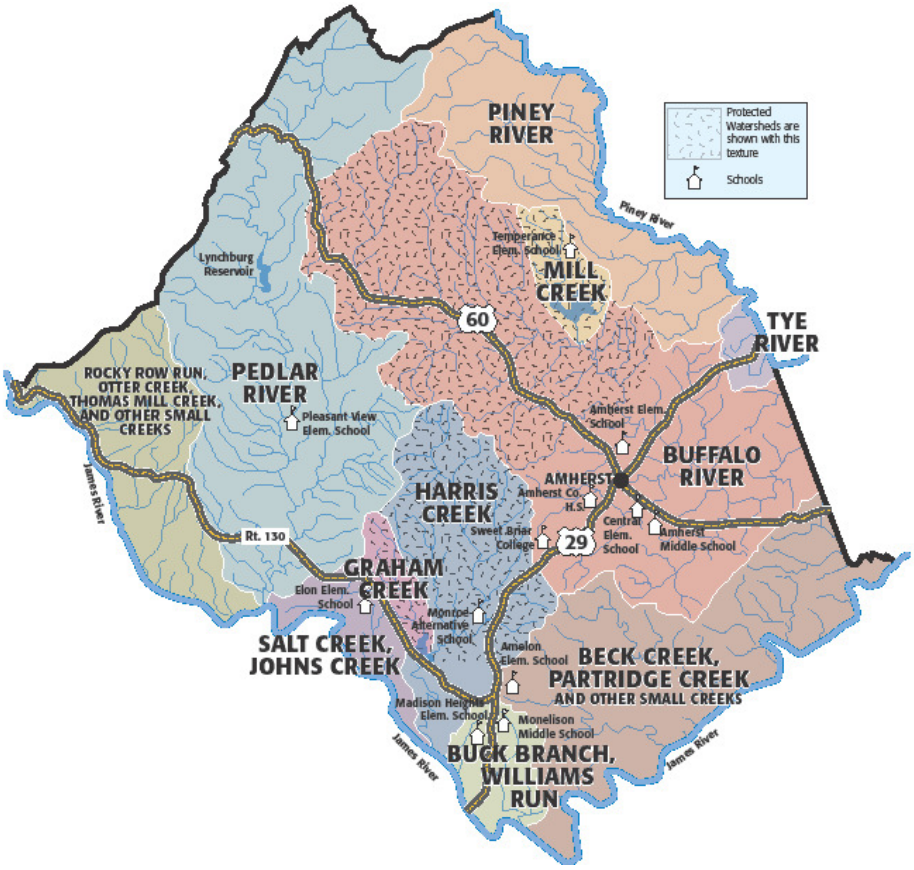
ROBERT E. LEE SOIL & WATER
CONSERVATION DISTRICT



Local water quality data is taken from 50 monitoring stations within the protected watersheds of Amherst County. They include the Buffalo River, Mill Creek, Harris Creek and Graham Creek watersheds shown with texture on the map above.

If your land is within these protected watersheds then the land drains to drinking water supply sources for the Town and County of Amherst.

The type of data collected by the Amherst Watershed Coordinator and local college interns include: pH, dissolved oxygen, temperature, turbidity, *e.coli* bacteria and benthic macro-invertebrates.

Here's an explanation of the types of data collected:

pH: Measures how acidic (pH<7) or basic (pH>7) the water is and affects aquatic life and important chemical reactions.

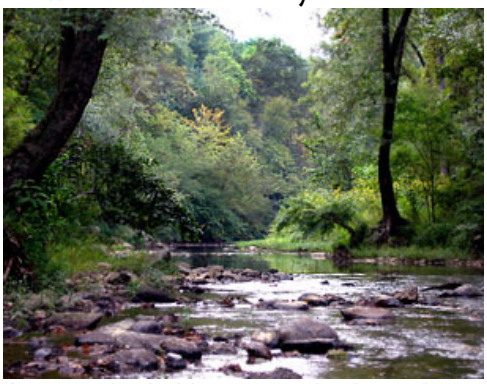
pH of 6.5-8.5 Ideal conditions for fish and other aquatic organisms.
pH of >6.0 -6.5 and 8.5-9.0 Some fish and aquatic organisms become stressed.
pH of <6.0 and >9.0 None or very few fish or aquatic organisms can survive.

Dissolved Oxygen: Measures how much oxygen is in the water for fish and other aquatic life to breathe.

Excellent: 91-110%
Good: 71-90%
Fair: 51-70%

Temperature: Measured in degrees Celsius.

<20 *C Ideal conditions for fish and other aquatic organisms.
20-32*C Some fish and aquatic organisms become stressed.
>32* C None or very few fish or aquatic organisms can survive.



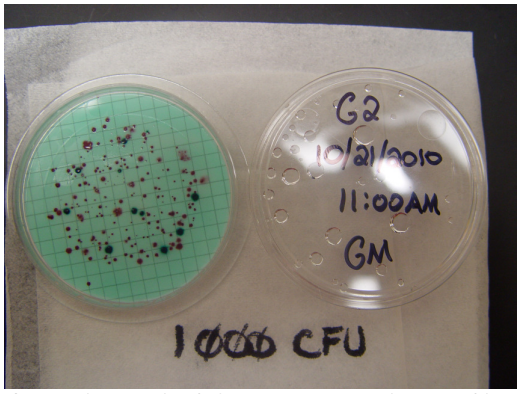
Streams shaded by native shrubs and trees decrease water temperature. Cool water holds more oxygen. Also, oxygen is created as the water rushes over the natural streambed of rocks.

Turbidity: Measures the cloudiness or the water or how much sediment is floating in the water column. Clearer water is better for aquatic life since it doesn't clog gills, smother habitats and block sunlight.

***e.coli* bacteria:** Measures the amount of *e.coli* bacteria in the water which is an indicator of other bacteria present either from wildlife, pets, live-stock or humans (i.e. septic system failure)

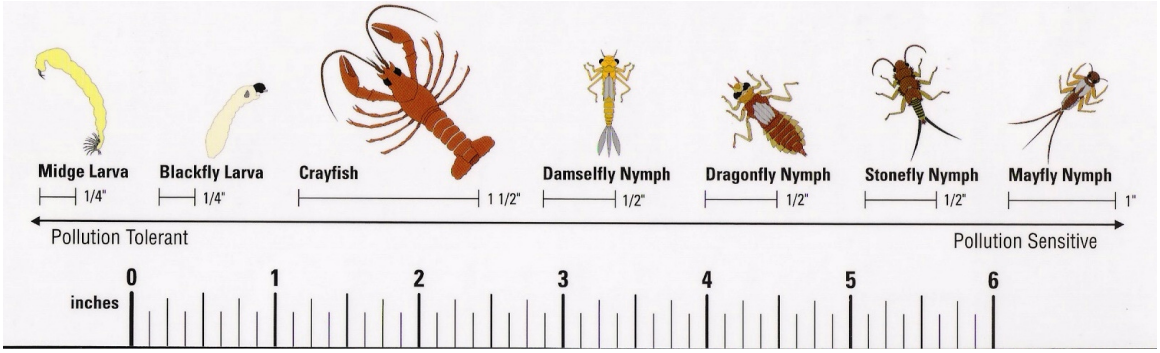
0 e.coli CFU/100 ml water sample for drinking water sources after treatment

<235 CFU/100 ml water sample for recreational waters (swimming, wading, fishing, etc…)



Example: 1 ml of the water sample was filtered with 99 ml of distilled water. 10 e.coli colony forming units (CFU) were counted therefore there are 1000 CFU in the total 100 ml used.

Benthic Macro-invertebrates: The type and abundance of bottom dwelling aquatic insects (link to macro page) can tell you the quality of the water, because they each have different tolerances to pollution levels.



Excellent: >22
Good: 17-22
Fair: 11-16
Poor: <11