

## TMDLs and Tributary Strategies

### Water Quality Issues in the Shenandoah Valley

- Many of our water resources do not meet Federal and State water quality standards.
  - 6,948 miles of “impaired” streams in Virginia.
  - 28 streams plus the Shenandoah River, a total of 573 stream miles, in Frederick, Clarke, Warren and Shenandoah counties
- Water quality monitoring shows that these “impaired” streams are not safe for swimming, fishing (fish consumption) and/or healthy aquatic life.
- TMDL studies and implementation plans are designed to address the water quality problems in “impaired” streams. TMDL stands for Total Maximum Daily Load. It refers to the total amount of pollution a water body can receive each day and still meet water quality standards.
- Pollution from our streams and others is also causing the Chesapeake Bay to be “impaired.” The Tributary Strategies are designed to address the Bay’s pollution problems.
- Primary water quality problems: fecal coliforms (bacteria), sediment (affecting benthic organisms), nutrients (phosphorus & nitrogen), toxics (PCBs from Avtex & mercury from Dupont).



Clarke County Water Body	Size	Impairment	Source
Upper Opequon Creek	24.9 mi.	Benthic, Fecal Coliform	Urban & Ag. NPS
Lower Opequon Creek	8.8 mi.	Benthic, Fecal Coliform	Urban & Ag. NPS
Shenandoah River (Main stem, N. Fork and S. Fork)	51.1 mi.	PCBs	Avtex site
Spout Run & Page Brook Run	12.5 mi.	Benthic, Fecal Coliform	NPS
Long Branch	3.6 mi.	Fecal Coliform	NPS
Total Miles	100.9 mi.		