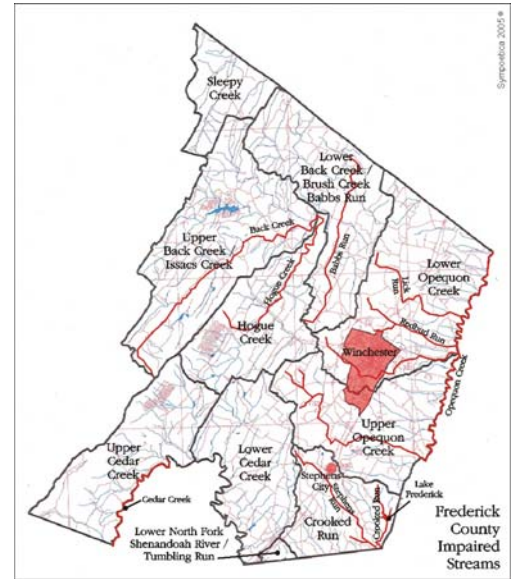


TMDLs and Tributary Strategies

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).



Frederick County Water Body	Size	Impairment	Source
Abrams Creek	10.8 mi.	Benthic, Fecal Coliform	Urban & Ag. NPS
Upper Opequon Creek	24.9 mi.	Benthic, Fecal Coliform	Urban & Ag. NPS
Lower Opequon Creek	8.8 mi.	Benthic, Fecal Coliform	Urban & Ag. NPS
Lake Frederick	115.2 ac.	Dissolved Oxygen	Natural conditions
Back Creek	18.7 mi.	Temperature	Natural conditions
Hogue Creek	16.8 mi.	Benthic, Coliform, Temperature	Unknown, natural conditions
Babbs Run	14.5 mi.	Fecal Coliform	NPS
Lick Run	8.9 mi.	Fecal Coliform	Unknown
Redbud Run	8.1 mi.	Fecal Coliform, Benthic	Unknown NPS
Crooked Run	12.8 mi.	Fecal Coliform	NPS
Stephens Run	7.9 mi.	Fecal Coliform	NPS
Total Miles	132.2 mi.		