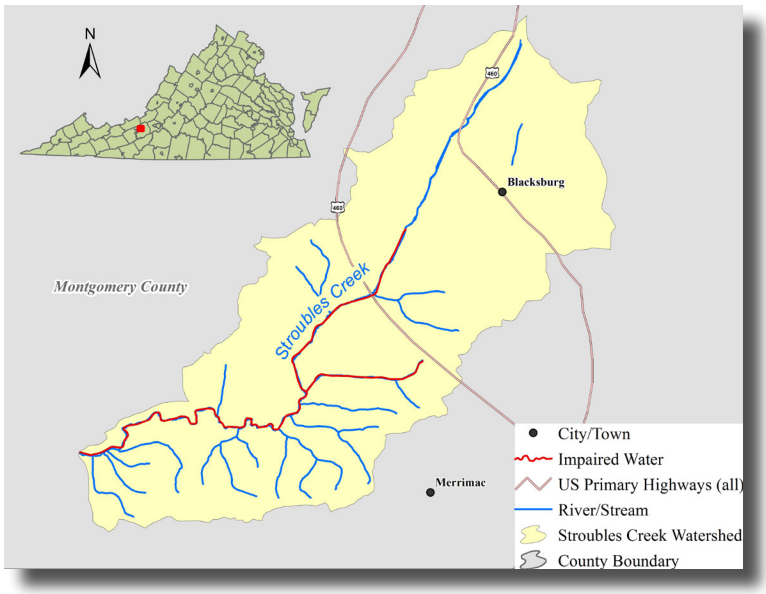
319H TMDL Implementation Project Report

STROUBLES CREEK

Virginia Nonpoint Source
MANAGEMENT PROGRAM

Project Location and Background



Stroubles Creek, located in Montgomery County, Virginia, is a tributary of the New River. It is formed from two main tributaries – Central Branch and Web Branch – and receives flow from a number of other unnamed perennial streams. The headwaters of the Stroubles Creek originate in the northeastern part of the town of Blacksburg, flowing in a generally southwestern direction. The 6,119 acres of Upper Stroubles Creek watershed, contributing to the impaired section of the creek, is mainly made up of urban/ residential (46%), forest (28%), pasture (21%) and cropland (5%). The urban and residential area is mainly in the northeastern (upstream) section of the watershed and the forested area is mainly downstream in the southwestern corner of the watershed. Stroubles Creek was initially listed in 1996 for aquatic life impairment on the Commonwealth of Virginia's Section 303(d) List of Impaired Waters and was subsequently included in 1998 and 2002 listings also. A TMDL development study was completed in 2004 and an implementation plan completed in 2006 to develop a course of action to meet sediment load reductions called for in the TMDL study.

Table 1. Stroubles Creek BMP Summary: June 2006 – June 2015

Control measure	Units	Needed	Installed	%
Agricultural				
Livestock exclusion fencing	F	13,937	9,260	66
Riparian buffer	A	30	4	11
Stormwater Management				
Infiltration trench retrofits	F^3	55	0	-
Urban riparian buffer	S	7	1	13
Additional infiltration BMPs	S	10	0	-
Additional bioretention BMPs	S	12	1.1	9
Stream Channel				
Stream channel restoration	F	6,881	6,336	92
Adopt-A-Stream cleanup	F	-	6,336	-

Note: A =Acres, S =System, F = Feet

Implementation Highlights

The Stroubles Creek TMDL implementation project is administered by the Virginia Tech Biological Systems Engineering Department in Blacksburg Virginia. The Section 319(h) funded grant did not start until January 2014; prior to that Virginia Tech and partners worked on implementing BMPs listed in the TMDL IP. The Department was contracted to manage the 319(h) grant and provide technical assistance and educational outreach watershed to residents, landowners and other stakeholders for agricultural, stormwater and stream channel BMPs implementations.

Table 1 shows BMPs implementation goals established for the watersheds and BMPs implemented since the implementation plan was completed in 2006; even though the Section 319(h) grant project

Implementation Highlights continued

did not begin until March 2014. Between July 2014 and June 2015, four watershed visits were made for potential stormwater retrofit BMP (rain garden) locations. Management plans were finalized for installing two rain gardens. Two bioretention cells to treat runoff from roofs and parking lots (1.1 acres treated) were installed at an apartment complex. Data transmission system was completed to route data automatically through existing STREAM Lab wireless system. Also, monthly water quality sampling and monitoring of precipitation and stream flow were conducted.

Prior to the implementation project in 2014, a number of agricultural and stormwater management BMPs were completed. These BMPs include:

- two stormwater pond stabilization projects,
- six bioretention ponds and a bio-cell
- 1.3 miles of stream restoration
- 0.22 miles of tree planting along retention ponds
- 1 infiltration trench
- 9,260 linear feet of livestock exclusion fencing
- forested buffer along one mile of stream length
- an Adopt-A-Stream program for 1.2 miles of Stroubles Creek.

This Virginia Nonpoint Source Management Program is managed by Virginia Department of Environmental Quality and is funded, in part, through grants from the U.S. Environmental Protection Agency, under the Clean Water Act Section 319.

For more information regarding Virginia's Nonpoint Source Management Program, please visit us on the web at: http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/NonpointSourcePollutionManagement.aspx

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