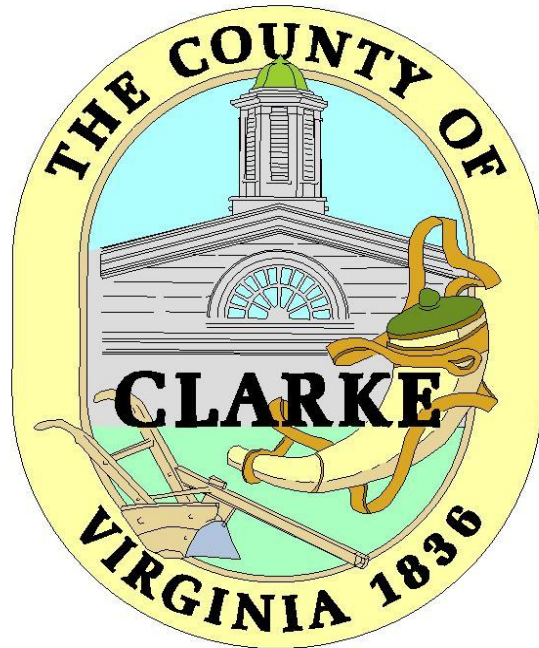


# Maintaining Healthy Watersheds in Clarke County, Virginia



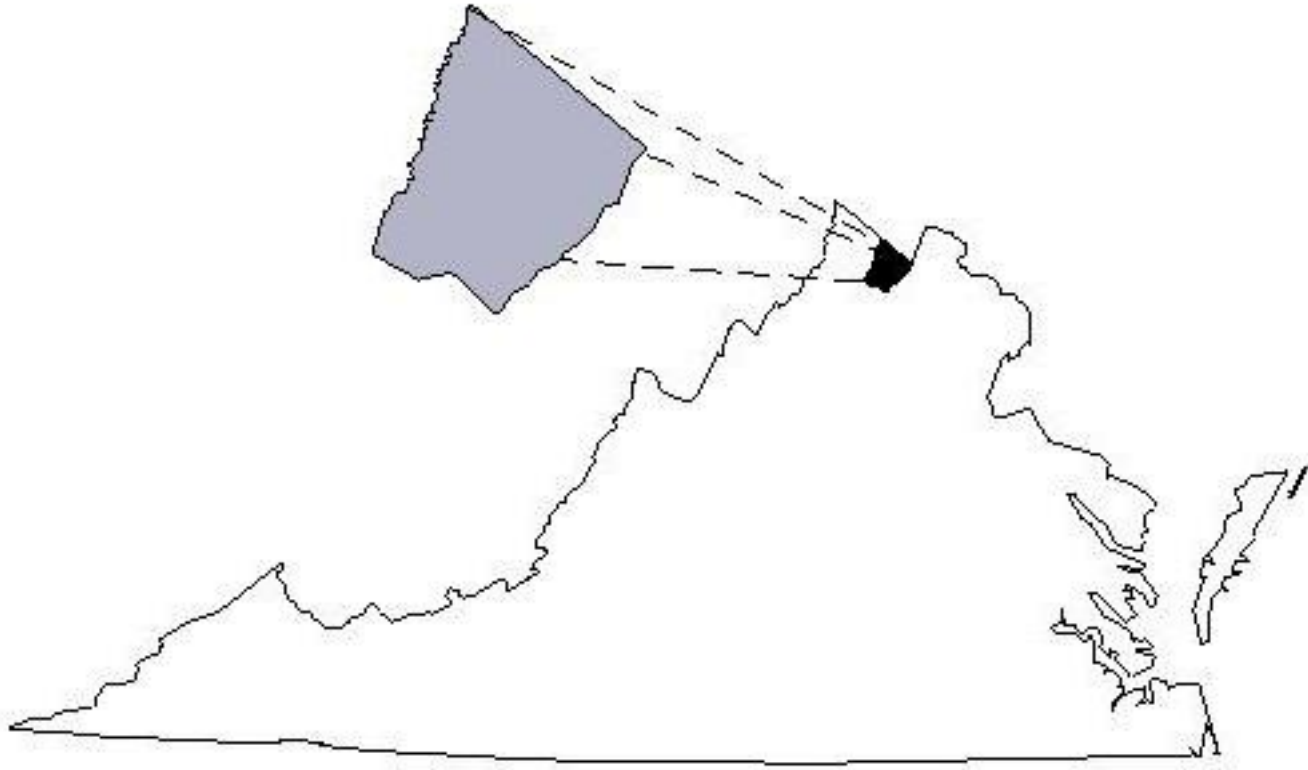
Alison Teetor  
Natural Resource Planner

# Overview

- County Demographics
- Planning and Zoning Policies
- Land Conservation
- Water Quality Improvement Efforts

# Clarke County, Virginia

## Demographics



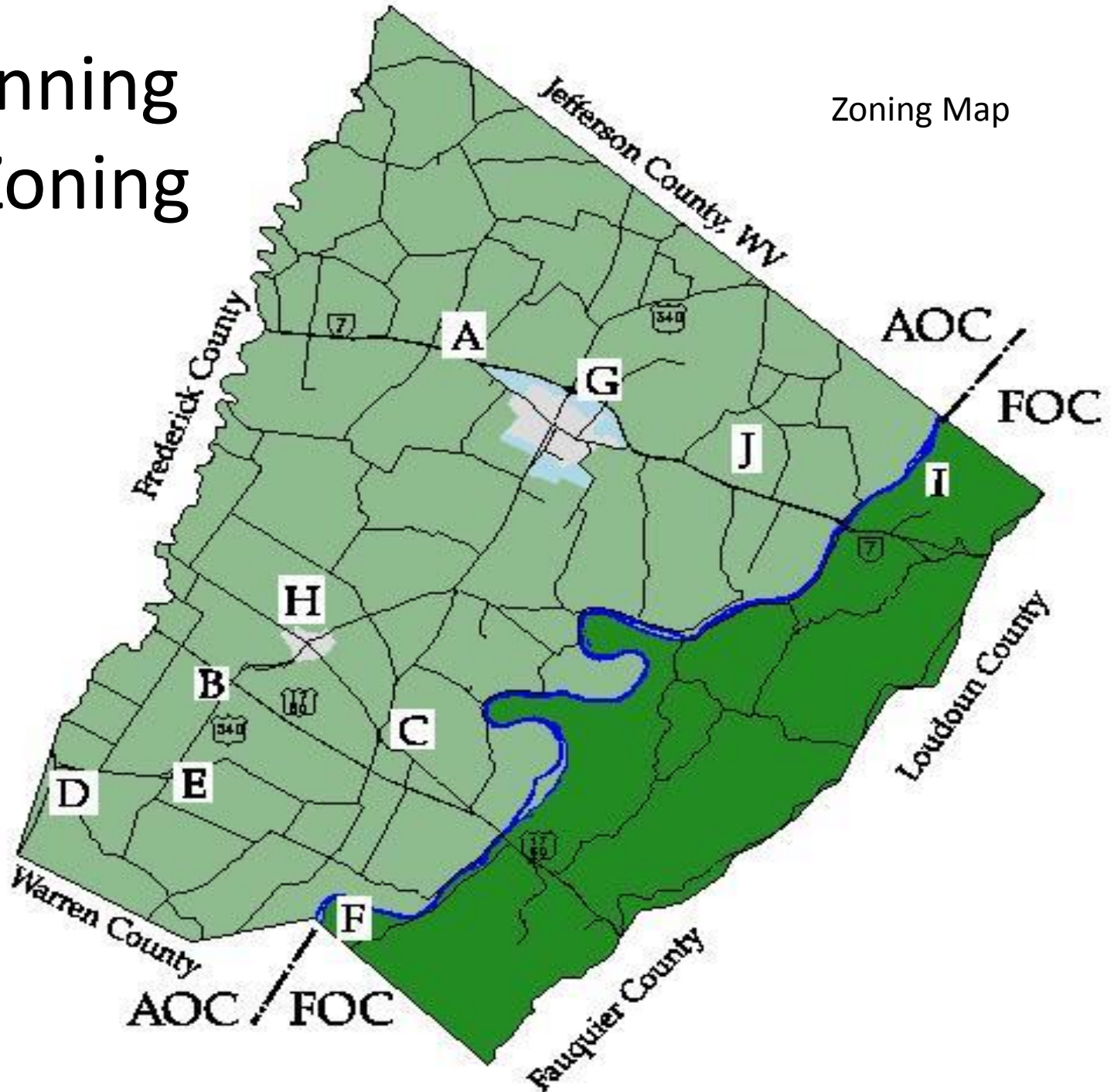
174 Square miles or 114,000 acres

Population – 14,600

County Seat - Berryville

# Planning & Zoning

Zoning Map







































## **Before 1980**

**5 acre subdivisions (20 houses per 100 acres)  
approved administratively**

**One acre lots approved with review by the  
Planning Commission and Board of  
Supervisors**

**Population growth was 23% (1970s average)**

**Most of the growth was in the rural areas of the  
County**



# **Goal**

## **Preserve Agriculture and Open Space**

**“5 to 10 acres is too large to mow  
and too small to farm”**

# **Goal**

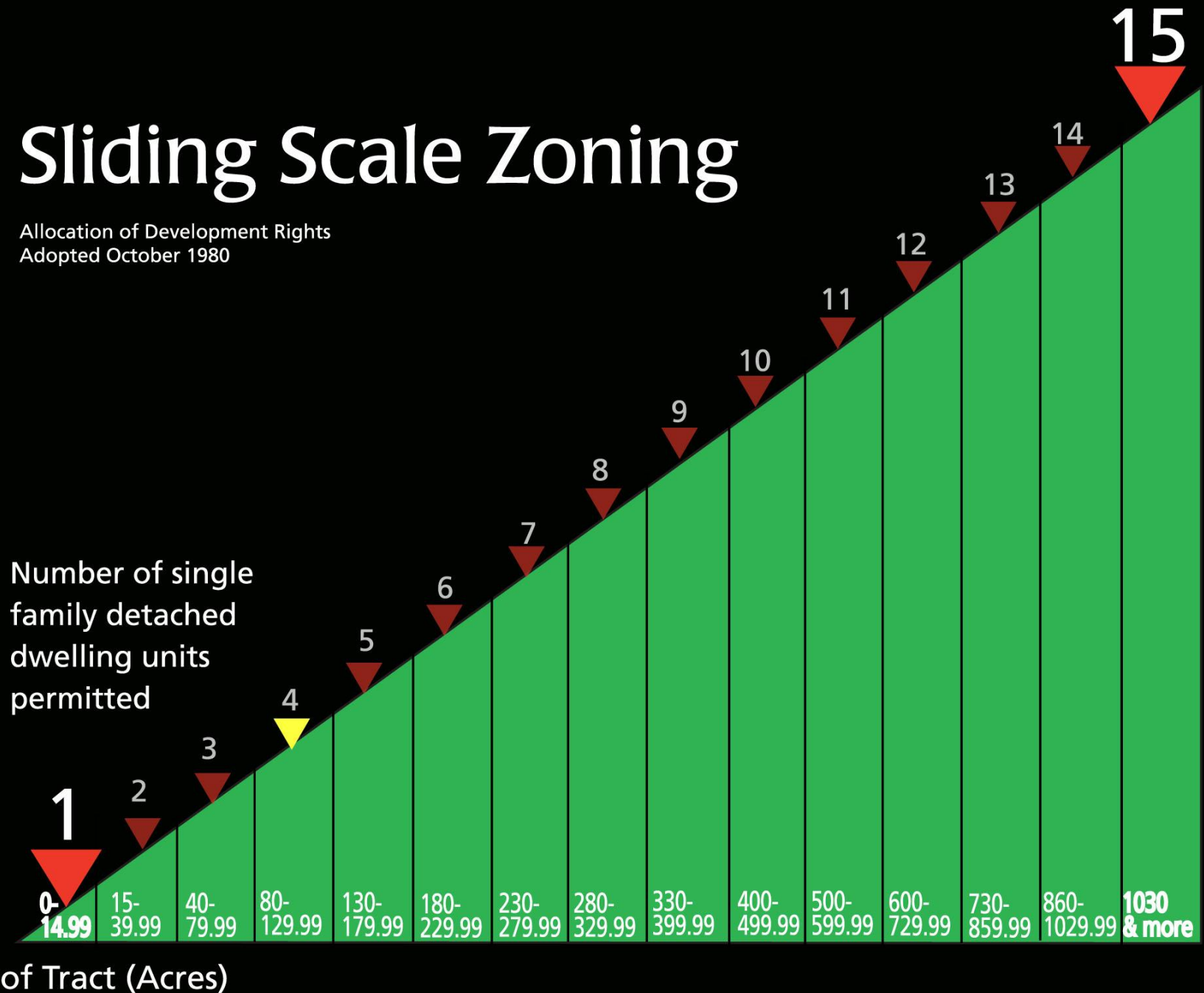
## **Concentrate growth**

- **in a walkable area**
- **close to services**  
**(schools, shopping, public utilities,**  
**etc.)**



# Sliding Scale Zoning

Allocation of Development Rights  
Adopted October 1980



3-3 Acre Lots  
With 1 DUR each

91 Acres  
1 DUR





# **Other Supporting Actions**

**Land Use Taxation** (still get \$1 in revenue for every 20¢ in cost)

**Agricultural Districts** (33,050 acres or 29% of the County)

**Scenic Byways** (55 miles)

**Scenic River designation on the Shenandoah** (22 miles)

**National Register Historic Districts**

(33,750 acres or 30% of the County)

**Clarke County's strategy will not work if**  
**Agriculture and Open Space are not deemed to**  
**be valuable**

**2002**

## **Clarke County establishes a Conservation Easement Authority**

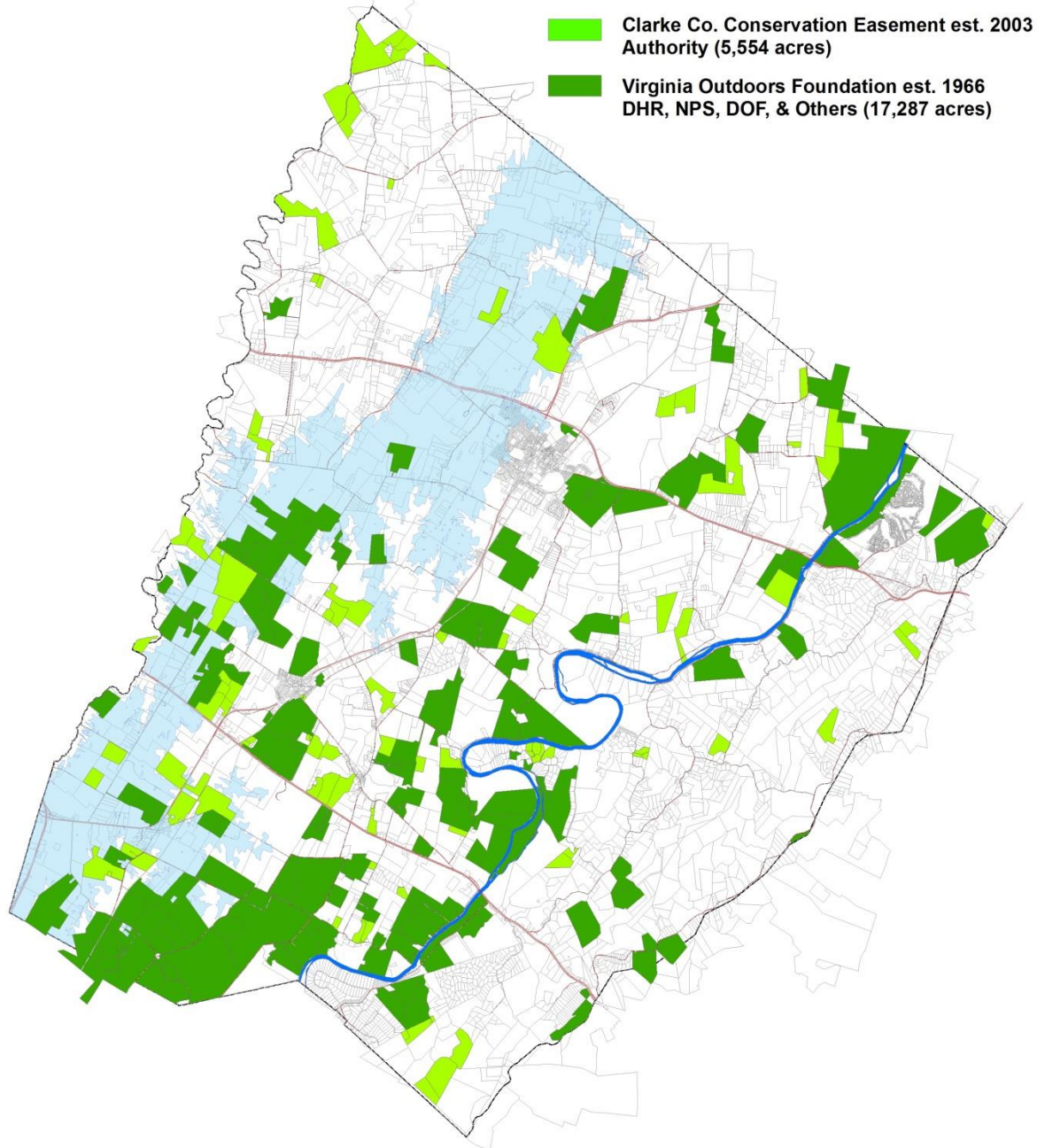
***Why?***

- **To purchase important easements**
- **To accept donated easements that might  
not be accepted by groups like VOF**
- **To access matching funds offered by  
State and Federal programs**



# Conservation Easements in Clarke County

Total Area Permanently Protected - 22,840 acres, 20% of land area



# What the County pays out for every tax dollar it receives



Open Space  
**23¢**



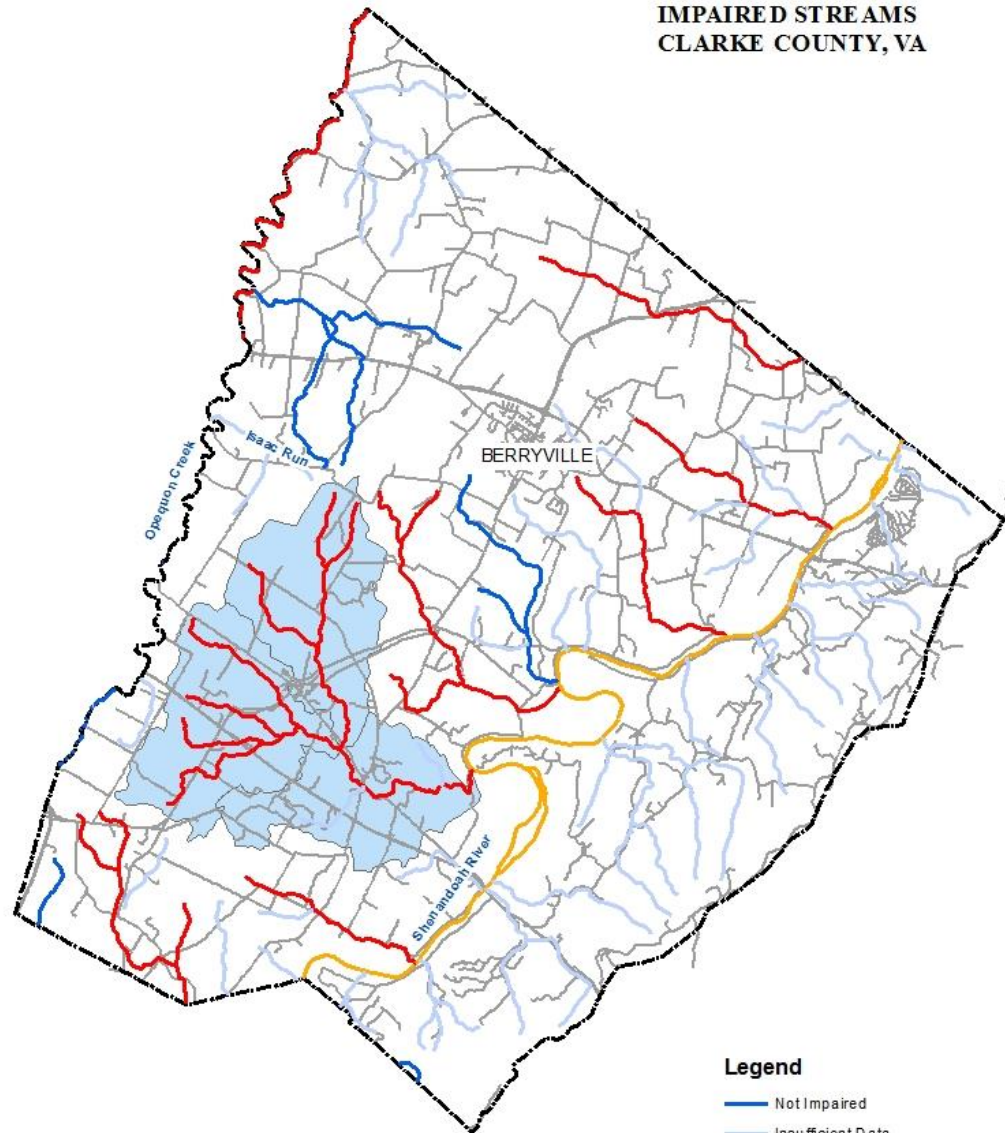
Commercial  
**46¢**



Residential  
**\$1.19**



# IMPAIRED STREAMS CLARKE COUNTY, VA



## Legend

- Not Impaired
- Insufficient Data
- Impaired (Benthic/Coliform)
- Impaired (Mercury/PCB)
- County Boundary
- Roads
- Spout Run Watershed



Date: 5/20/2014

Path: G:\aigle\_maps\Environmental\Water\_Resource\_Plan\_maps\IDEQ\_data.mxd

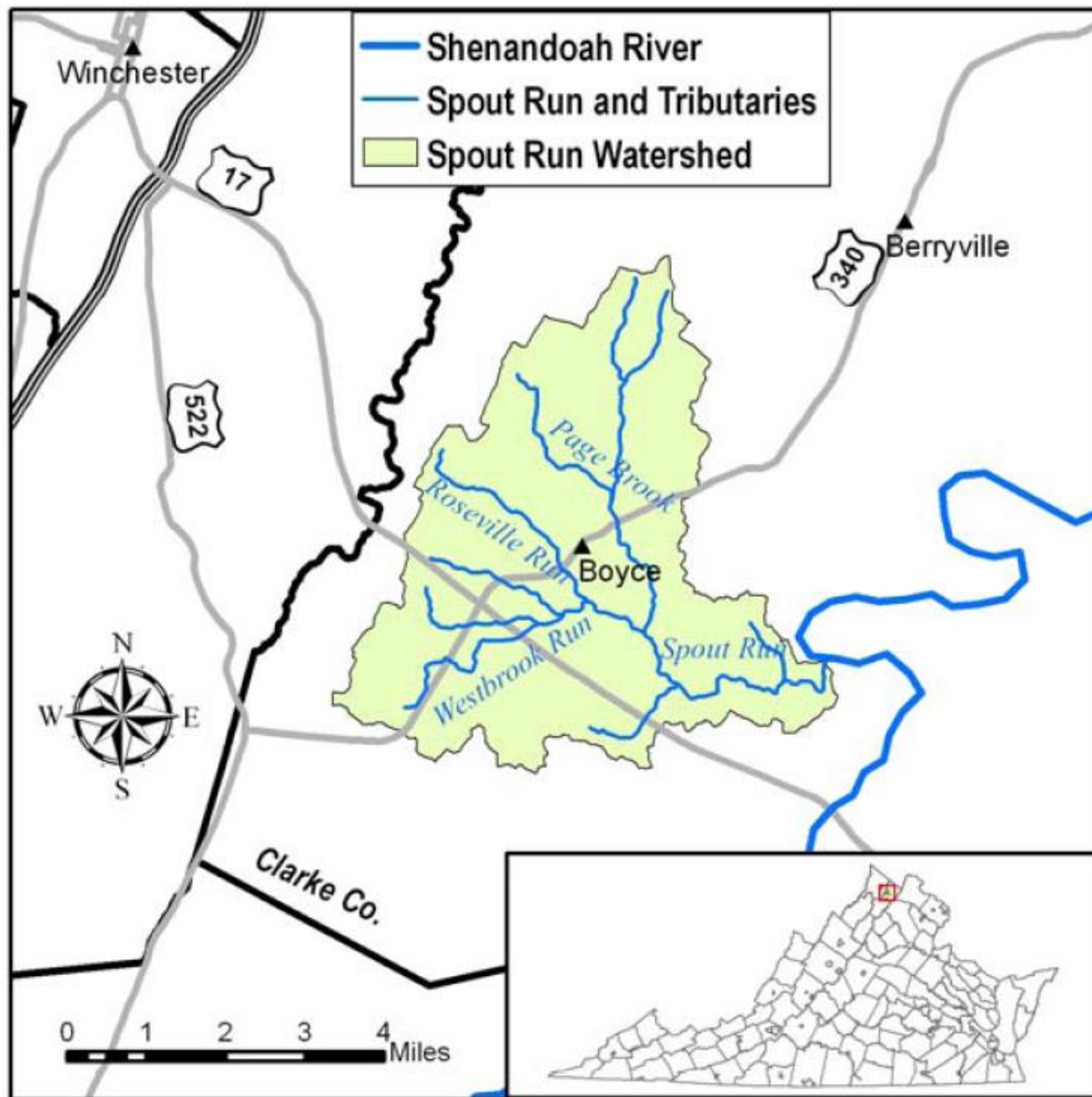


Figure 2-1. Location of Spout Run Watershed.







**Total Maximum Daily Load Development to  
Address Bacteria and Benthic Impairments  
in the Spout Run Watershed,  
Clarke County, Virginia**



*Prepared by:* Dr. Robert Brent; James Madison University

*Prepared for:* Virginia Department of Environmental  
Quality

February 2010



Water Quality Improvement Plan

# SPOUT RUN



Photo: Bill Howard, Downstream Project

A plan to reduce bacteria and sediment in the water

October 5, 2012

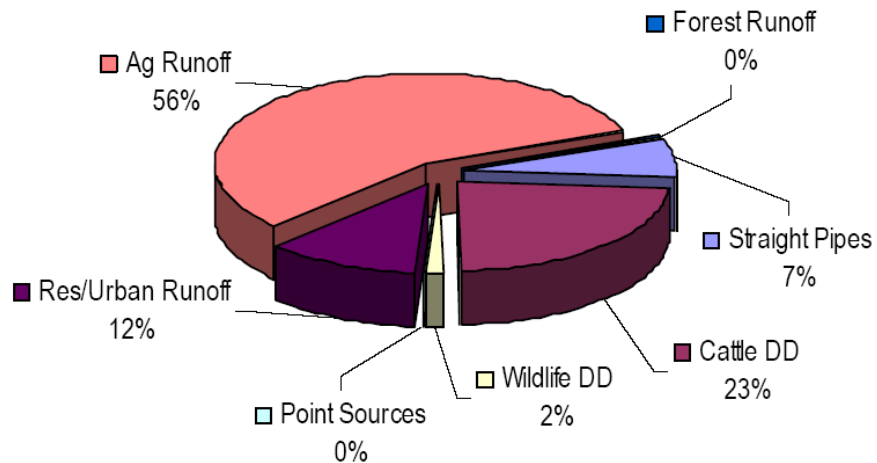
Prepared by  
The Virginia Department of Conservation and Recreation

In Cooperation with  
Local Stakeholders  
The Virginia Department of Environmental Quality  
Department of Biological Systems Engineering,  
Virginia Tech Center for Watershed Studies

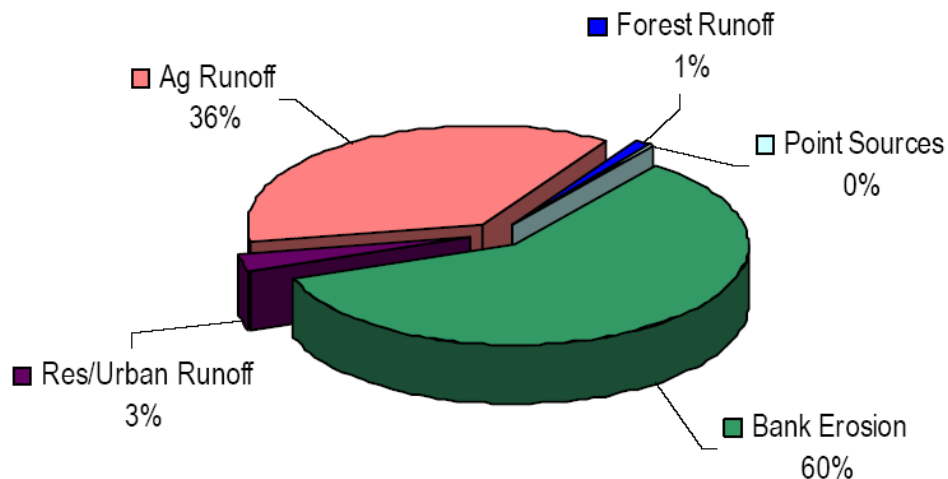


# Sources of Impairment

## Bacteria Sources



## Sediment Sources

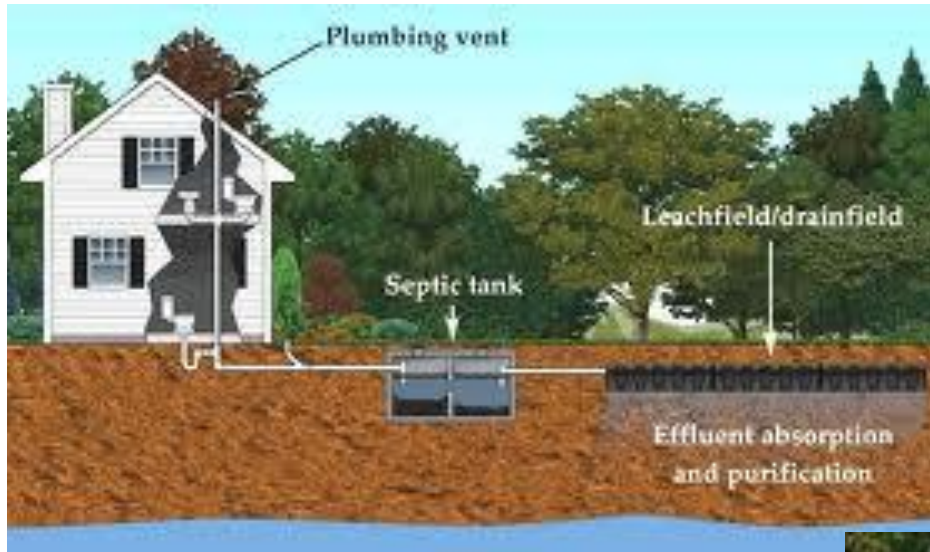


# Causes of Impairment





# Causes of Impairment



# Implementation Plan





# Implementation Plan



# CHALLENGES





# Grants

National Fish and Wildlife Foundation

\$141,600 grant award

\$ 87,800 non-fed match

319 Water Quality

\$292,666 grant award

\$216,718 non-fed match



# C-Spout Run: Restoring a Shenandoah Valley Spring Creek



Clarke County

Trout Unlimited

Soil & Water Conservation District

Friends of Shenandoah River

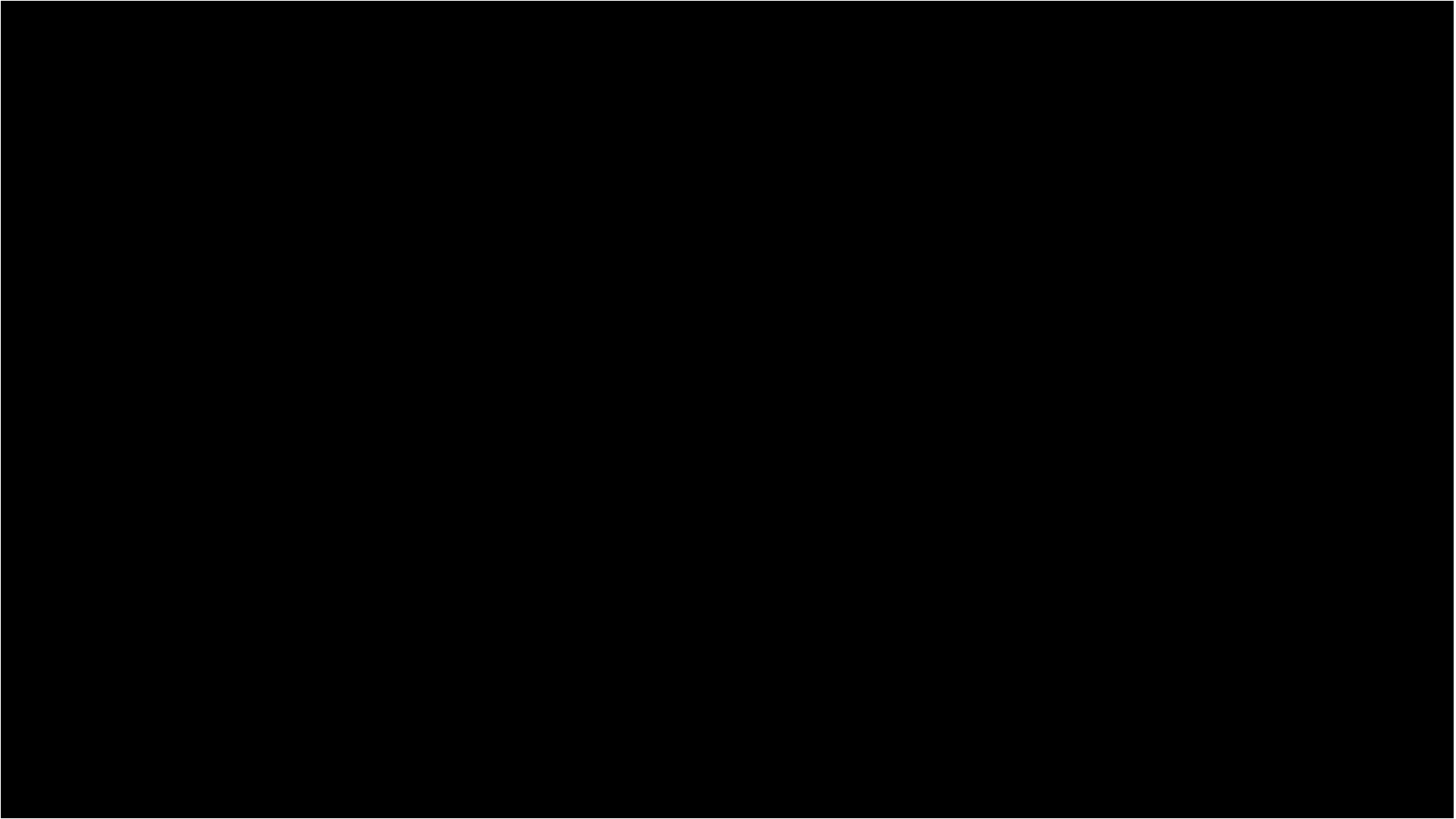
Piedmont Environmental Council

Regional Commission

The Downstream Project







[www.spoutrun.org](http://www.spoutrun.org)

# Questions

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