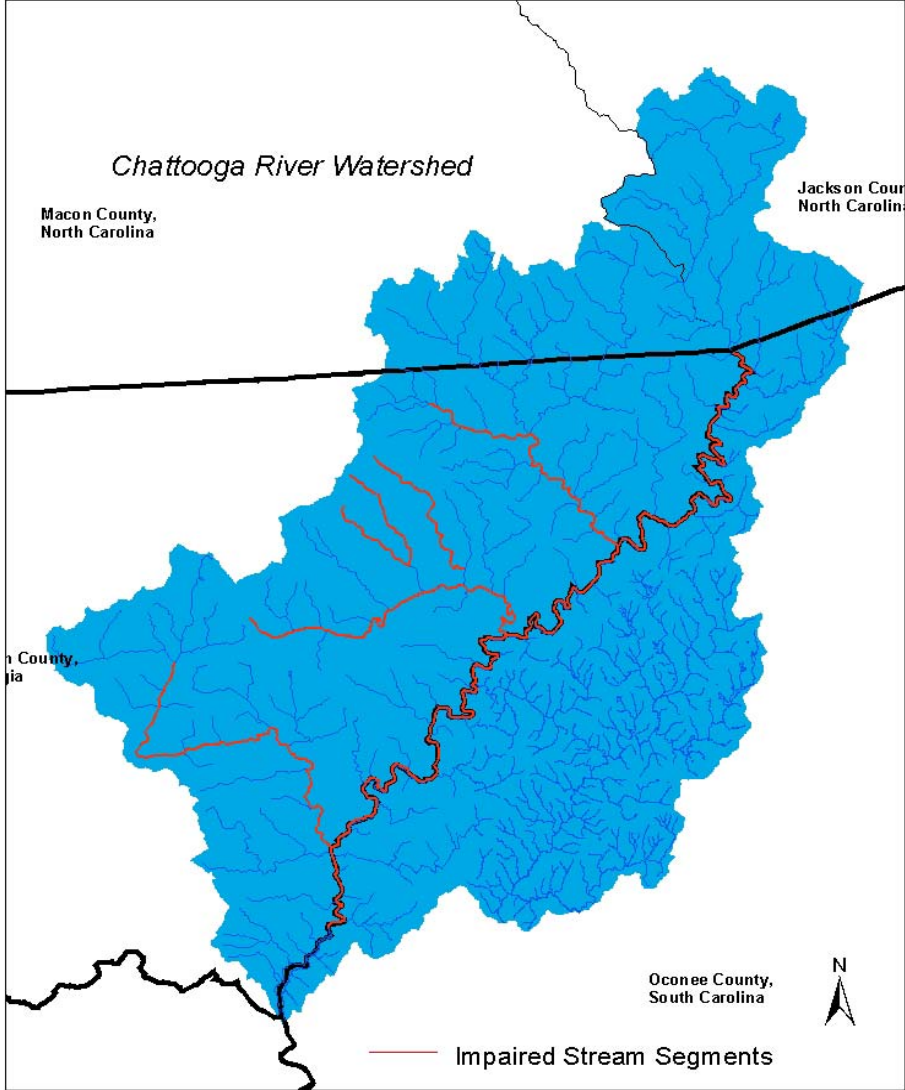


Chattooga River Watershed Plan

By Susan Varlamoff, University of Georgia
Jimmy Bramblett, Natural Resources Conservation Service



Impaired Stream Segments





Watershed Problems

- 32.4 miles of impaired streams - listed on EPD's 303(d) list of impaired streams
- Impairment due to fecal coliform and sediment
- In 1999, Georgia EPD estimated that over 85% of impairments due to agricultural related activities

Watershed Problems

Visual inspection by stakeholders and others

- Suspected fecal coliform sources
 - City of Clayton's aging waste water facility
 - land application of animal waste, livestock access to streams



Watershed Problems — visual inspection

- Suspected sources of sediment

Unprotected stream banks with livestock access
roads adjacent to streams, development






Watershed Problems

Modeling activities - U.S. EPA and Ga EPD

Fecal coliform – Clayton's waste water facility, agriculture livestock and poultry operations, marginal septic tanks, and wildlife

Sediment – rural unpaved roads, road banks, development, streambanks, streambeds, agricultural and silviculture operations



Land cover	Acres	Percent
Cropland	849	0.34
Pasture	5,623	2.27
Grazed Woodland	650	0.26
Forest – private	78,061	31.45
Forest – public	152,053	61.26
Forest – harvest	7,096	2.86
Wetlands	88	0.04
Open Water	871	0.35
Urban	1,781	0.72
Other Lands	1,156	0.47
TOTAL	248,228	100



Project Location

- 248,228 acres – 679 miles of streams
 - 16.5 % N. Carolina
 - 42 % S. Carolina
 - 41.4% in North Georgia
- **Headwaters** – Nantahala Forest in N. Carolina
- **Termination** – Lake Tugalo, Georgia



Project features

- National Wild and Scenic River - $\frac{1}{4}$ mile buffer
- 1996 Olympic white water rafting venue-
Class 4 & 5 rapids
- Made famous in the movie *Deliverance*
- Popular tourist attraction with many recreational opportunities
- Population – 40,892 - increase of 17% since 1990



Planning Process

- In 1990s, citizens within the Chattooga River Watershed recognized water quality problems and the need to do something.
- Since they felt most of problems were agriculture related. They approached NRCS for help.
- NRCS looked at EPA and EPD data and agreed to take the project and with citizens applied for 319(h) grant.



Planning Process

- Sponsors were secured –
 - Blue Ridge Soil and Water Conservation District (Georgia)
 - Oconee County Soil and Water Conservation District (South Carolina)
 - Macon County Soil and Water Conservation District (North Carolina)
 - Stekoa Creek Watershed Group



Planning Process

The following were established:

- **Planning Team**
- **Technical Advisory Team**
- **Public Participation Mechanism**



Planning Process

Planning Team

- Provided administration of project
- Pursue the 9-step NRCS planning process
- Complete Resource Inventory
- Analyze data
- Evaluate alternatives
- Write watershed plan



Planning Process

Technical Advisory Team members

- Chattooga River Watershed Coalition
- Georgia Forestry Commission
- Georgia State Historic Preservation Officer
- Georgia Soil and Water Conservation Commission
- Georgia Department of Natural Resources
 - Watershed Protection Branch
 - Wildlife Resources Division
 - Game and Fisheries Management Sections



Planning Process

Technical Advisory Team members

Georgia State Historic Preservation Office

Georgia Soil and Water Conservation Commission

South Carolina Forestry Commission

U.S. Environmental Protection Agency

University of Georgia Cooperative Extension

USDA, Natural Resource Conservation Service

USDA, U.S. Forest Service

USDA, Fish and Wildlife Service

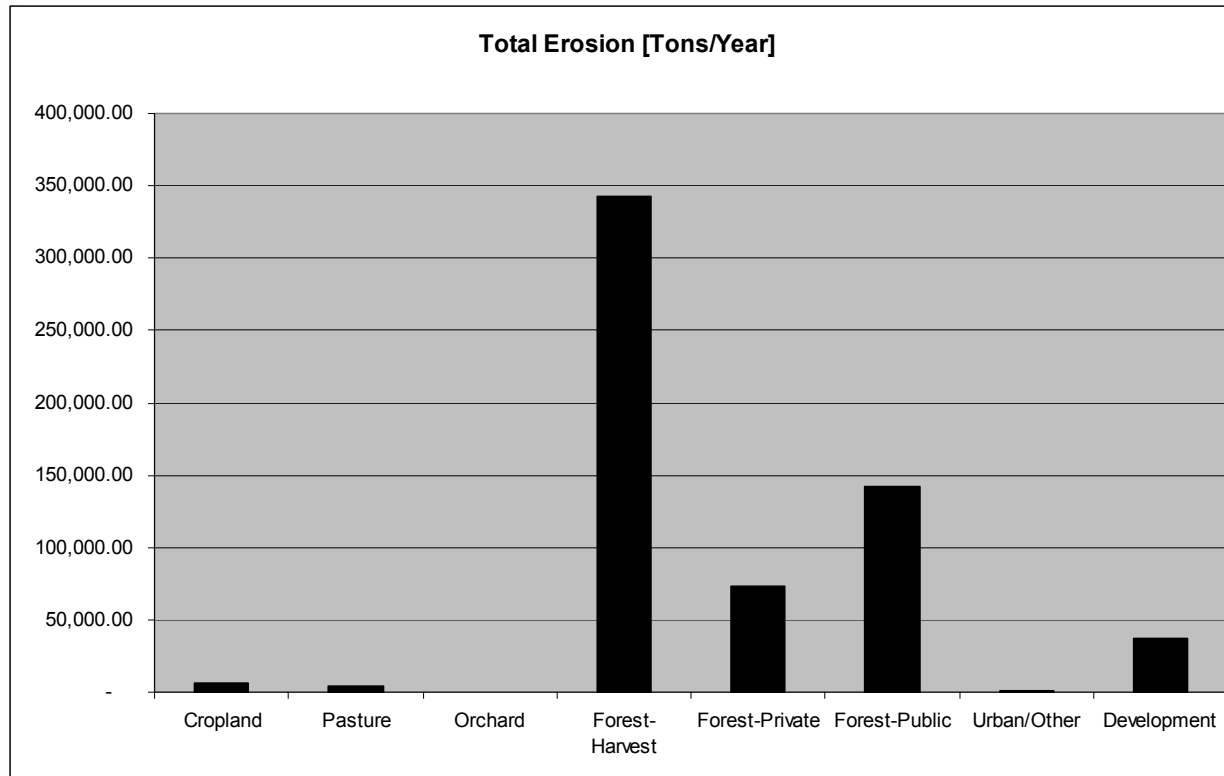


Planning Process

Public Participation

- A public meeting was held June 21, 2004 to scope the problems and concerns and explain the impact of the program.
- Areas of high concern were:
 - water supply and water quality
 - local economy and human health
 - property values

Survey and Research Results - Sediment





Survey and Research Results

- Average erosion rate for cropland in watershed of 7.06 tons/acre/yr exceeds soil tolerance levels of 5.0 tons/acre/yr.
- Modeling results showed agricultural runoff contains 100.48 col/100ml – below accepted standard of 200 col/100ml.
- Water quality tests showed waste water treatment plant source of fecal coliform – repaired.



Selected Plan

- **No Action Plan** – provides technical and financial assistance for BMPs on 5,623 acres of pasture and 849 acres of cropland and animal waste management practices on 42 beef operations and 12 poultry operations.

Blue Ridge Mountain Soil and Water Conservation District, through support of ongoing NRCS programs such as EQIP and CRP, will provide assistance to develop the conservation plans to include fencing, wells for an alternative water source, and nutrient management.



Selected Plan

- **Minimum Action Alternative** — to decrease erosion rates from forest land —

Accelerate land treatment on 8,250 acres/yr of harvested forestland and developing lands. Cost-share provision would be directed at 7,096 of private harvested forestland.

Land treatment would include harvest management, forest road construction, riparian forest buffers, stream crossings, and wildlife upland habitats.



Conclusion

Implementing the plans will:

- Improve surface water quality to support its designated use by reducing erosion rates
- Decrease potential for negative impacts from agricultural sources by reducing sediment deposition from agricultural lands and controlling nutrients from agricultural sources.
- DOES NOT address contaminant sources from development or industry.

For more information:

- Jimmy Bramblett – jimmy.bramblett@ga.usda.gov
Natural Resources Conservation Service



- Susan Varlamoff – varlamof@uga.edu
University of Georgia



The University of Georgia