

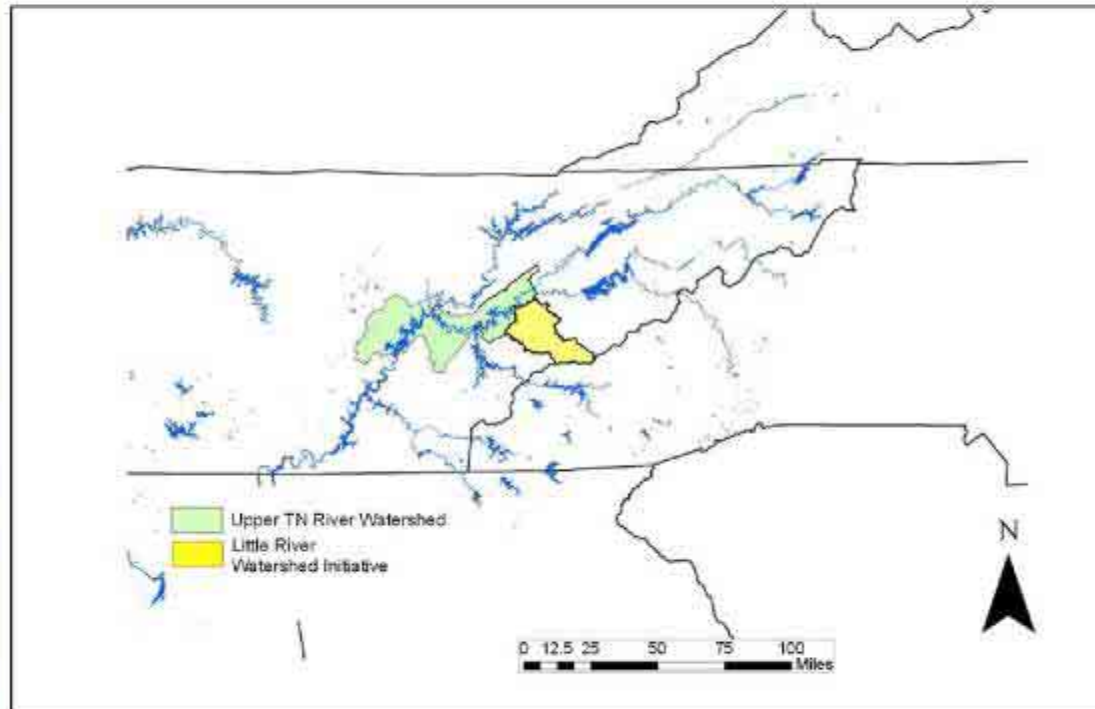


Little River Watershed Initiative

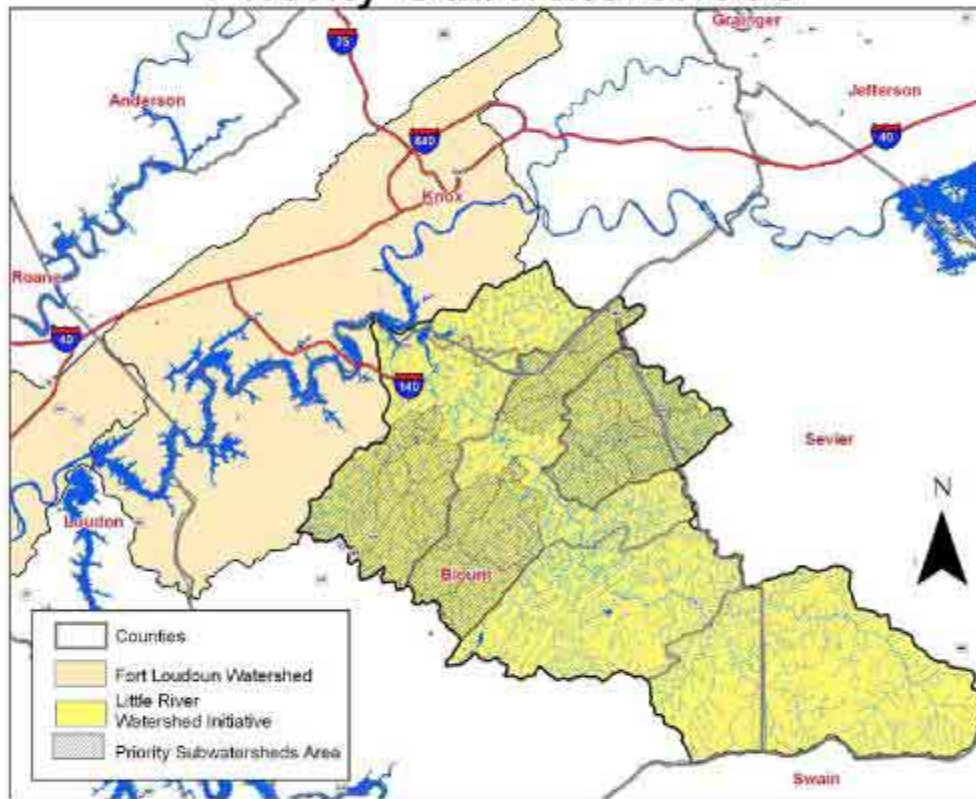
***Keri Johnson
Tennessee Valley Authority***

***Erich Henry
Blount County Soil Conservation
District***

Upper Tennessee River Watershed
(Fort Loudoun and Watts Bar Reservoirs)
TN HUC Code - TN06010201



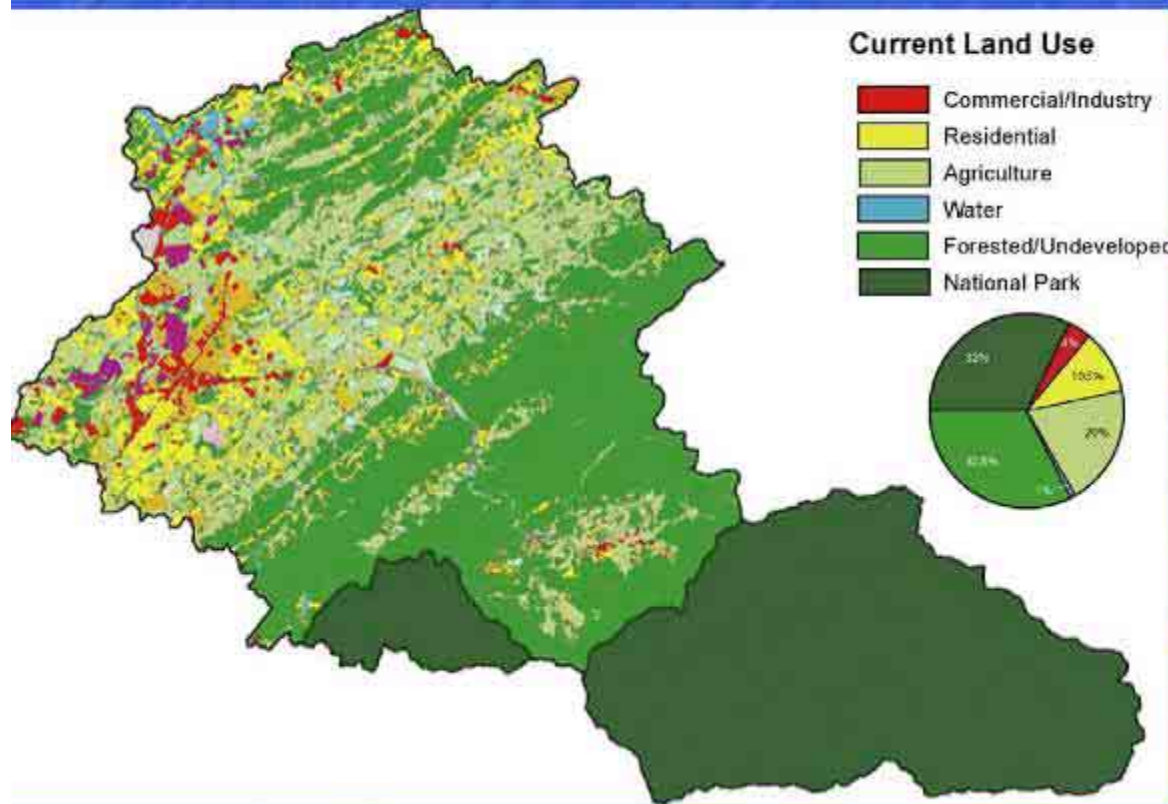
Little River Watershed Priority Subwatersheds



Little River Watershed



Little River Watershed Characteristics



- *Origin: Great Smoky Mountains National Park*
- *Area: 380 Square Miles*
- *Counties:*
 - *Blount*
 - *Knox*
 - *Sevier*
- *Ag is dominant pollution source but shifting to urban in 20 years*

Tangerine Darter





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Non-point Source Pollution Impacts



**Non-point
Source Pollution**

Fertilizers, herbicides, and insecticides



Erosion and Sedimentation



Pathogens and nutrients



Oil, grease, and toxic chemicals



Habitat Alteration



Coalition Ability to Act

LRWQF Members

- **Blount County Soil Conservation District**
- **Knox County Soil Conservation District**
- **Keep Blount Beautiful**
- **Blount County**
- **Knox County**
- **City of Alcoa**
- **City of Maryville**
- **Little River Watershed Association**
- **Natural Resources Conservation Service**
- **University of Tennessee**
- **Tennessee Dept. of Environment and Conservation**
- **Tennessee Dept. of Agriculture**
- **Great Smoky Mountain Resource Conservation and Development Council**
- **Conservation Fisheries Incorporated**
- **US Fish and Wildlife Service**
- **US Geologic Service**
- **Blount County Livestock Association**
- **Blount County Chamber of Commerce**
- **Blount County Environmental Health Action Team**

Little River Watershed Initiative Structure

Initiative Start	Plan	TWI Implementation	Adaptive Management
1996	1999	2006	2009
<ul style="list-style-type: none"> Established network of contacts Established Little River Water Quality Forum Determined Cause and Source Formed Little River Watershed Association Initiated planning meetings 	<ul style="list-style-type: none"> Began significant monitoring efforts to further define cause and source Developing Watershed Action Plan Little River, Big Future Watershed Public Input Meetings Blount County Water Quality Plan 	<ul style="list-style-type: none"> Implement Watershed Action Plan 	<ul style="list-style-type: none"> Action Plan Review and Update every 5 years Evaluate progress and adapt Watershed Action Plan Post Implementation Monitoring

COMMUNICATION: Direct citizen input was integrated into each planning effort and communication plan update annually

FUNDING: Since 1998, approximately 3 million dollars have been spent for watershed improvements in the Little River Watershed through various grants and partnerships

2005 Targeted Watershed Grant

- I. Agricultural Best Management Practices
- II. Septic System Repair For Low-Income Households
- III. Homeowner Outreach Program
- IV. Monitoring

BLOUNT COUNTY



SOIL CONSERVATION DISTRICT

Conservation Practices Implemented

- Riparian Buffers
- Cross-Fencing
- Alternative Watering Systems
- Stream Crossings
- Streambank Stabilization
- Grassed Waterways
- Pasture Renovation
- Heavy Use Areas
- Beef Dry-Stack Facilities
- Critical Area Treatment



Agricultural BMP Implementation Livestock Exclusion



Agricultural BMP Implementation Alternative Water Systems



Agricultural BMP Education

- Agricultural Districts
- Pasture Walks (Producer Led)
- Conservation Tours
- Field Days and Seminars
- Customer Appreciation Days
- Awards Banquet
- Conservation Calendars



Septic System Repair Financial Assistance

- Included in TWGP proposal
- Restricted to low-income households
- Average 25 systems per year



Homeowner Education

- Restoration and stewardship of wetlands and riparian buffers
- Native plants
- Master Gardener Program
- "Safe Lawn BMPs"
Educational Workshops for Landowners



Monitoring and Assessment

- TWI Implementation Monitoring
 - Collaborate with University of Tennessee to sample main stem and tributary sites for bacteria and sediment
 - DNA source ID for bacteriological sources
 - NPS Inventory and pollutant loading model (Integrated Pollution Source Identification)
- Post-initiative monitoring to be conducted by Tennessee Dept. of Environment and Conservation in 2008
- Assess initiative success
- Reevaluate strategies and modify plans



Water Quality Goals

Bacteria

- At least one tributary can be removed from the 303(d) list
- Bacteriological Standards are met at all main channel Little River sites
- Geometric Mean bacteria concentrations are reduced by an average of 30% in priority tributary watersheds

Sediment

- TSS concentrations and turbidity levels are reduced by an average of 25% in priority tributary watersheds
- Reduce turbidity by 20% at Maryville Water Treatment Plant

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